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Radioactive Materials Released from Nuclear Power Plants

Annual Report 1992

Prepared by
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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.
9. "Radioactive Materials Released from Nuclear Power Plants, 1980," NUREG/CR-2907, BNL-NUREG-51581, Vol. 1, January 1983.
10. "Radioactive Materials Released from Nuclear Power Plants, 1981," NUREG/CR-2907, BNL-NUREG-51581, Vol. 2, June 1984.
11. "Radioactive Materials Released from Nuclear Power Plants, 1982," NUREG/CR-2907, BNL-NUREG-51581, Vol. 3, February 1986.
12. "Radioactive Materials Released from Nuclear Power Plants, 1983," NUREG/CR-2907, BNL-NUREG-51581, Vol. 4, August 1986.
13. "Radioactive Materials Released from Nuclear Power Plants, 1984," NUREG/CR-2907, BNL-NUREG-51581, Vol. 5, August 1987.
14. "Radioactive Materials Released from Nuclear Power Plants, 1985," NUREG/CR-2907, BNL-NUREG-51581, Vol. 6, January 1988.
15. "Radioactive Materials Released from Nuclear Power Plants, 1986," NUREG/CR-2907, BNL-NUREG-51581, Vol. 7, November 1988.
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17. "Radioactive Materials Released from Nuclear Power Plants, 1988," NUREG/CR-2907, BNL-NUREG-51581, Vol. 9, July 1991.
18. "Radioactive Materials Released from Nuclear Power Plants, 1989," NUREG/CR-2907, BNL-NUREG-51581, Vol. 10, September 1992.
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20. "Radioactive Materials Released from Nuclear Power Plants, 1991," NUREG/CR-2907, BNL-NUREG-51581, Vol. 12, May 1994.

ABSTRACT

Releases of radioactive materials in airborne and liquid effluents from commercial light water reactors during 1992 have been compiled and reported. The summary data for the years 1973 through 1991 are included for comparison. 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 1992 release data are summarized in tabular form. Data covering specific radionuclides are summarized.

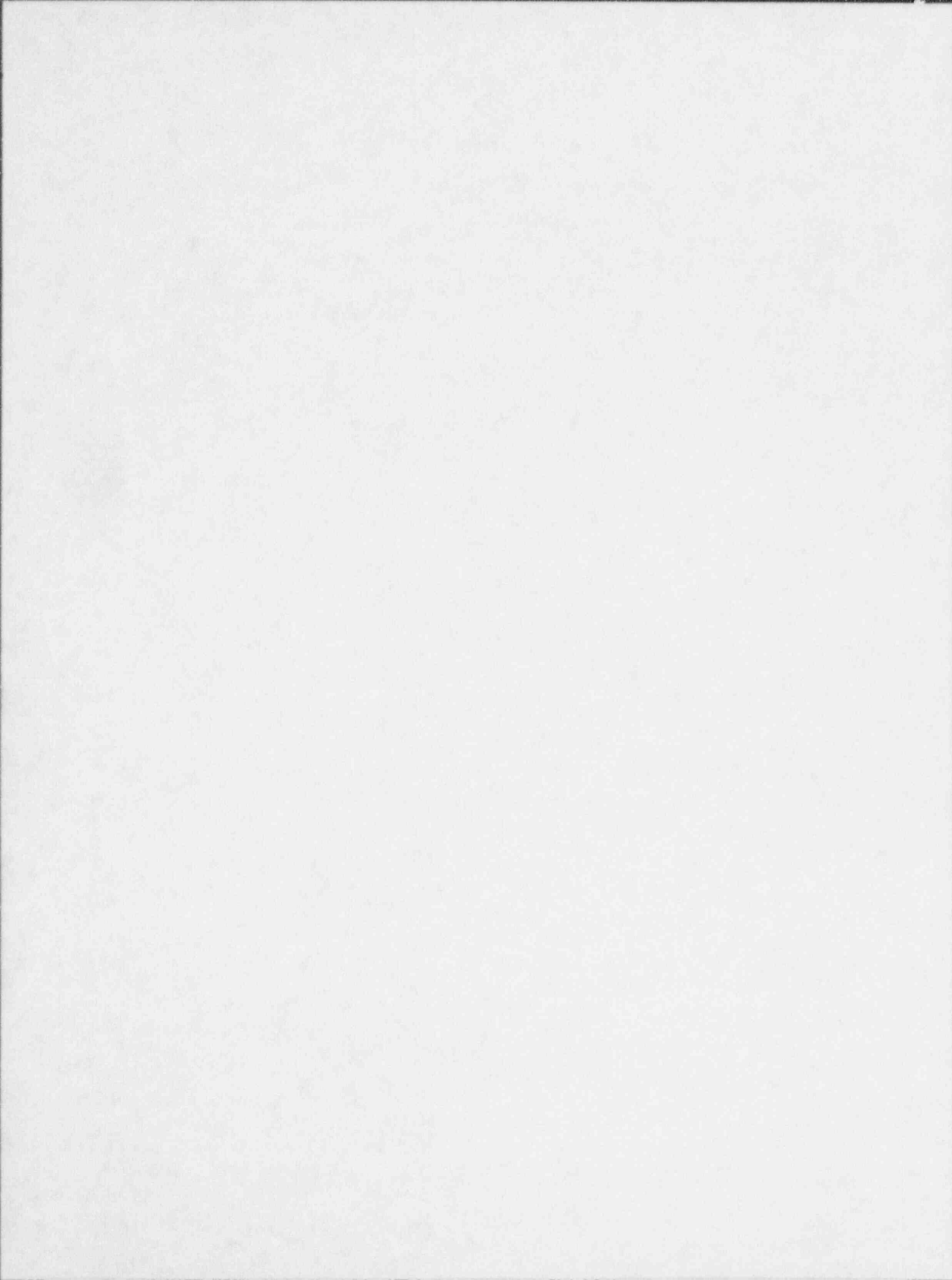


TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT.....	iii
LIST OF TABLES.....	xi
ACKNOWLEDGEMENT.....	xiii
1.0 Introduction.....	1
1.1 Purpose.....	1
1.2 Scope.....	1
1.3 Source of Data.....	1
2.0 Tabulated Data.....	1
2.1 Airborne and Liquid Effluents.....	1
2.2 Solid Waste.....	2
2.3 Energy Generation.....	2
2.4 Individual Plant Summaries.....	2
2.5 Numerical Notation.....	3
3.0 Summary.....	3
 Appendix A - Individual Plant Summaries	
Arkansas 1 - Unit 1.....	A-1
Arkansas 1 - Unit 2.....	A-3
Beaver Valley 1.....	A-7
Beaver Valley 2.....	A-8
Beaver Valley 1 & 2.....	A-9
Big Rock Point 1.....	A-14
Braidwood 1.....	A-16
Braidwood 2.....	A-18
Browns Ferry 1, 2 & 3.....	A-22
Brunswick 1 & 2.....	A-26

Page

Byron 1	A-30
Byron 2	A-32
Callaway 1.....	A-36
Calvert Cliffs 1 & 2.....	A-40
Catawba 1.....	A-44
Catawba 2.....	A-46
Clinton 1.....	A-50
Comanche Peak 1.....	A-52
Cook 1 & 2.....	A-56
Cooper.....	A-58
Crystal River 3.....	A-61
Davis Besse 1.....	A-66
Diablo Canyon 1 & 2.....	A-68
Dresden 1.....	A-72
Dresden 2 & 3.....	A-73
Dresden 1, 2 & 3.....	A-74
Duane Arnold.....	A-77
Joseph M. Farley 1.....	A-80
Joseph M. Farley 2.....	A-82
Fermi 2.....	A-86
J.A. Fitzpatrick.....	A-88
Fort Calhoun 1.....	A-90
Fort St. Vrain.....	A-93
R.E. Ginna.....	A-95
Grand Gulf 1.....	A-98
Haddam Neck.....	A-101

	Page
Harris 1.....	A-104
Edwin I. Hatch 1 & 2.....	A-108
Hope Creek 1.....	A-112
Humboldt Bay 3.....	A-115
Indian Point 1 & 2.....	A-117
Indian Point 3.....	A-121
Kewaunee.....	A-124
LaCrosse.....	A-127
LaSalle 1 & 2.....	A-129
Limerick 1.....	A-132
Limerick 2.....	A-133
Limerick 1 & 2.....	A-134
Maine Yankee.....	A-138
McGuire 1.....	A-142
McGuire 2.....	A-144
Millstone 1.....	A-149
Millstone 2.....	A-153
Millstone 3.....	A-157
Monticello.....	A-161
Nine Mile Point 1.....	A-165
Nine Mile Point 2.....	A-168
North Anna 1 & 2.....	A-171
Oconee 1, 2 & 3.....	A-175
Oyster Creek 1.....	A-179
Palisades.....	A-182
Palo Verde 1.....	A-183

	Page
Palo Verde 2.....	A-184
Palo Verde 3.....	A-185
Peach Bottom 2 & 3.....	A-188
Perry 1.....	A-191
Pilgrim 1.....	A-195
Point Beach 1 & 2.....	A-198
Prairie Island 1 & 2.....	A-201
Quad-Cities 1 & 2.....	A-205
Rancho Seco 1.....	A-208
River Bend 1.....	A-210
H.B. Robinson 2.....	A-214
Salem 1.....	A-217
Salem 2.....	A-219
San Onofre 1.....	A-223
San Onofre 2 & 3.....	A-229
Seabrook 1.....	A-237
Sequoyah 1 & 2.....	A-238
Shoreham 1.....	A-242
South Texas 1.....	A-245
South Texas 2.....	A-247
St. Lucie 1.....	A-250
St. Lucie 2.....	A-252
Summer 1.....	A-256
Surry 1 & 2.....	A-259
Susquehanna 1 & 2.....	A-261
Three Mile Island 1.....	A-264

	Page
Three Mile Island 2.....	A-266
Trojan 1.....	A-268
Turkey Point 3.....	A-272
Turkey Point 4.....	A-274
Vermont Yankee 1.....	A-278
Vogtle 1 & 2.....	A-281
Waterford 3.....	A-284
WNP-2.....	A-288
Wolf Creek 1.....	A-292
Yankee Rowe 1.....	A-296
Zion 1 & 2.....	A-299

LIST OF TABLES

		<u>Page</u>
TABLE 1	Airborne Effluent Comparison by Year, Noble Gases, Boiling Water Reactors.....	6
TABLE 2	Airborne Effluent Comparison by Year, Noble Gases, Pressurized Water Reactors.....	8
TABLE 3	Airborne Effluent Comparison by Year, I-131 and Particulates, Boiling Water Reactors.....	12
TABLE 4	Airborne Effluent Comparison by Year, I-131 and Particulates, Pressurized Water Reactors.....	14
TABLE 5	Liquid Effluent Comparison by Year, Tritium, Boiling Water Reactors.....	18
TABLE 6	Liquid Effluent Comparison by Year, Tritium, Pressurized Water Reactors.....	20
TABLE 7	Liquid Effluent Comparison by Year, Mixed Fission and Activation Products, Boiling Water Reactors.....	24
TABLE 8	Liquid Effluent Comparison by Year, Mixed Fission and Activation Products, Pressurized Water Reactors.....	26
TABLE 9	Solid Waste Summary 1992, Boiling Water Reactors.....	30
TABLE 10	Solid Waste Summary 1992, Pressurized Water Reactors.....	31
TABLE 11	Solid Waste Comparison by Year, Boiling Water Reactors.....	32
TABLE 12	Solid Waste Comparison by Year, Pressurized Water Reactors.....	36
TABLE 13	Net Electrical Energy Generation Comparison by Year, Boiling Water Reactors.....	40
TABLE 14	Net Electrical Energy Generation Comparison by Year, Pressurized Water Reactors.....	42
TABLE 15	Thermal Energy Generation Comparison by Year, Boiling Water Reactors.....	46
TABLE 16	Thermal Energy Generation Comparison by Year, Pressurized Water Reactors.....	48

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Carmen Benkovitz was responsible for the original design of the computer data base in which the effluent data, beginning with the 1978 data, is stored. She was involved in the redesign of the data base when, in 1982, the decision was made to transfer the data base from one computer to another and to change the data base management system being used.

1.0 Introduction

1.1 Purpose

This report, prepared annually for the staff of the U.S. Nuclear Regulatory Commission, presents measured data on radioactive materials in effluents released from licensed commercial reactor power plants. These data were reported by licensees for plant operations during 1992. 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 Nuclear Reactor Regulation, 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 licensed nuclear power plants that were declared by the utilities to be in commercial operation as of December 31, 1992. Data are included for several licensed facilities which are permanently or indefinitely shut down (Browns Ferry 1,3, Dresden 1, James A. Fitzpatrick, Fort St. Vrain, Humboldt Bay, Indian Point 1, LaCrosse, Rancho Seco 1, Three Mile Island 2, Yankee Rowe 1) and Shoreham which was never in commercial operation.

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, Geiman Building, 2120 L Street, 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.

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

2.0 Tabulated Data

2.1 Airborne and Liquid Effluents

Tables 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 1973 through 1992. Tables 5 and 6 list the total measured quantities of tritium released in liquid effluents in each of the years. Tables 7 and 8 list the mixed fission and activation products not including noble gases, tritium and alpha released in liquid effluents in each of the years.

¹ Previous reports in this series are listed on page ii.

2.2 Solid Waste

The total volumes, activity and the number of shipments of solid waste for each plant during 1992 are summarized in Tables 9 and 10. A comparison for the years 1977 through 1992 is made in Tables 11 and 12.

2.3 Energy Generation

Tables 13 and 14 present a summary of net electrical energy generated by each plant during 1979-1992. Tables 15 and 16 present a summary of the thermal energy generated by each plant during 1992 and previous years from 1979. The reader is cautioned against making simplistic comparisons of radioactive releases with the energy generated because of the many factors which affect the amount of radioactive materials released; factors include the condition of the fuel, primary system integrity, effluent and radioactive waste treatment systems, maintenance activities 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. When the only type of solid waste reported is type "A", this may be because the plant did not break solid waste into different types but reported all types together. The activity released for each nuclide for the year for both airborne and liquid effluents is calculated by summing releases for each quarter. More detailed summaries in the format of Regulatory Guide 1.21 such as were used in the 1978 report² can be made available since all the data for 1978-1992 are stored in digital form.

A wide variation exists in the lists of specific radionuclides reported by utilities (licensees). Individual licensee Technical Specifications require the measurement and reporting of specific sets of radionuclides and "any others identified." The disparities result because of differing analytical methods used by various licensees for their measurements, and their differing operating histories and effluent and emission control methods.

Copies of the summaries included in this report as well as the more detailed summaries maintained in the computer data base were submitted to the licensees for verification before publication. In most cases, the licensees responded either verifying the included data for their plants or providing corrections. Individuals interested in obtaining the more detailed summaries should contact the Office of Nuclear Reactor Regulation of the Nuclear Regulatory Commission.

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:

$$1.86\text{E}+06 = 1.86 \times 10^6$$

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

N/R = Not Reported

N/D = Not Detected

N/A = Not Applicable

< may actually mean ≤

3.0 Summary

Nearly all of the radioactive material reported as being released in effluents are from planned releases. Planned releases result from normal operation or from anticipated operational occurrences. The latter include unplanned releases of radioactive materials from miscellaneous actions such as equipment failure, operator error or procedure error; these releases are not of such consequence 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, many of which were required to be installed to meet the provisions of Appendix I to 10CFR Part 50, which was promulgated by the NRC in May 1975.

TABLES

Table 1

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Boiling Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Big Rock Point 1	2.30E+05	1.88E+05	5.06E+04	1.52E+04	1.34E+04	1.89E+04	6.67E+03	2.15E+04	1.97E+04	1.29E+04
Browns Ferry 1,2 & 3		6.40E+04	9.24E+04	< 8.05E+04	< 1.66E+05	1.57E+05	< 2.71E+05	< 1.66E+05	4.52E+04	2.76E+05
Brunswick 1&2			1.90E+02	1.90E+04	2.46E+05	9.14E+04	1.16E+05	6.93E+04	5.22E+05	4.65E+05
Clinton 1										
Cooper		2.00E+03	1.98E+04	3.80E+04	1.27E+03	4.09E+03	3.04E+04	5.03E+03	2.48E+03	1.42E+04
Dresden 1	8.40E+05	9.80E+04	5.20E+05	4.52E+05	5.20E+05	8.50E+05	1.83E+02	7.03E+01	N/D	N/D
Dresden 2-3	8.80E+05	6.27E+05	3.69E+05	3.23E+04	3.13E+05	4.06E+04	6.91E+04	4.30E+04	3.74E+04	1.04E+04
Duane Arnold			1.58E+03	5.26E+03	3.87E+03	1.56E+03	8.71E+03	2.70E+05	< 4.87E+02	9.99E+01
Fermi 2										
James A. Fitzpatrick			4.08E+03	4.41E+04	2.33E+04	5.88E+03	3.38E+03	7.68E+04	2.00E+05	2.11E+05
Grand Gulf 1										
Edwin 1, Hatch 1			2.70E+02	2.80E+03	1.90E+03	1.62E+03	1.71E+03	3.82E+04	2.77E+04	4.23E+03
Edwin 1, Hatch 2								2.95E+02	2.06E+02	1.04E+03
Hope Creek 1										
Humboldt Bay 3	3.50E+05	5.72E+05	2.97E+05	9.30E+04	4.40E+05	4.40E+05	< 4.40E+05	< 4.40E+05	< 4.40E+05	N/D
LaCrosse	9.10E+04	4.90E+04	5.71E+04	1.24E+05	4.25E+04	8.45E+03	1.04E+04	4.71E+03	5.03E+03	4.26E+03
LaSalle 1&2										3.46E+00
Limerick 1&2										
Millstone 1	7.90E+04	9.12E+05	2.97E+06	5.07E+05	6.20E+05	5.66E+05	2.06E+04	1.19E+04	1.43E+04	8.33E+03
Monticello	8.70E+05	1.57E+06	1.55E+05	1.14E+04	6.87E+03	6.42E+03	4.03E+03	3.83E+03	3.74E+03	7.22E+03
Nine Mile Point 1	8.72E+05	5.56E+05	1.30E+06	1.76E+05	3.53E+03	3.02E+03	1.04E+03	5.87E+02	6.10E+02	5.11E+01
Nine Mile Point 2										
Oyster Creek 1	8.10E+05	2.79E+05	2.06E+05	1.67E+05	1.77E+05	9.98E+05	1.01E+06	3.12E+04	5.28E+04	2.29E+04
Peach Bottom 2&3	< 1.00E+03	< 1.00E+00	1.30E+04	2.09E+05	7.11E+04	3.85E+04	1.90E+05	1.53E+04	1.58E+04	1.31E+04
Perry 1										
Pilgrim 1	2.30E+05	5.46E+05	4.60E+04	1.83E+05	4.13E+05	3.27E+04	1.39E+04	2.62E+04	< 5.30E+03	< 1.94E+04
Quad-Cities 1&2	9.00E+05	9.50E+05	1.10E+05	3.36E+04	2.56E+04	3.24E+04	3.48E+04	2.15E+04	3.20E+04	1.17E+04
River Bend 1										
Shoreham 1										
Susquehanna 1&2										< 5.61E+02
Vermont Yankee 1	1.80E+05	6.40E+04	4.08E+03	3.03E+03	3.35E+03	4.94E+03	< 8.08E+03	1.63E+03	< 3.17E+03	< 3.07E+03
WNP-2										
Total	< 6.33E+06	< 6.48E+06	6.22E+06	< 2.20E+06	< 2.65E+06	2.86E+06	< 1.80E+06	< 5.40E+05	< 9.86E+05	< 1.09E+06
* Fort St. Vrain							9.30E+01	9.13E+01	4.34E+01	2.96E+02

* High temperature gas cooled reactor
N/D = Not Detectable

Table 3

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Boiling Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Big Rock Point 1	1.10E+04	1.41E+05	6.26E+04	6.79E+04	8.35E+03	7.77E+03	7.08E+03	5.55E+03	4.50E+03	1.79E+03
Browns Ferry 1,2,& 3	4.79E+05	< 6.64E+05	< 2.64E+04	< 2.26E+03	3.22E-01	N/D	N/D	N/D	2.10E+03	1.67E+04
Brunswick 1&2	4.87E+05	1.67E+05	1.75E+04	4.51E+04	2.64E+04	1.58E+03	1.36E+03	1.12E+03	6.77E+02	4.88E+02
Clinton 1					6.83E+00	4.34E+00	1.29E+01	1.09E+01	7.08E-01	7.38E+00
Cooper	1.54E+03	< 1.44E+03	< 1.39E+03	1.72E+03	1.20E+03	1.81E+03	3.44E+02	1.87E+02	2.58E+01	1.40E+01
Dresden 1	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dresden 2-3	8.43E+03	1.81E+03	2.94E+03	4.38E+02	2.77E+02	1.68E+02	3.67E+01	2.04E+01	1.26E+01	1.32E+01
Duane Arnold	4.81E+02	4.16E+02	2.51E+02	3.10E+02	2.19E+02	7.06E+02	4.38E+01	4.57E+01	3.30E+01	4.74E+01
Fermi 2				N/D	N/D	1.11E+00	1.64E+02	1.61E+02	6.22E+01	2.08E+02
James A. Fitzpatrick	8.57E+04	3.41E+04	1.46E+04	2.65E+03	4.72E+03	3.89E+03	5.60E+02	1.35E+03	2.05E+03	1.71E+02
Grand Gulf 1	4.51E+01	1.14E+02	1.51E+02	1.34E+02	2.08E+02	9.44E+01	1.44E+02	1.36E+02	3.17E+01	2.12E+02
Edwin I. Hatch 1	1.96E+04	1.02E+04	9.86E+03	8.95E+03	7.40E+03	**	**	**	**	**
Edwin I. Hatch 2	1.28E+04	2.36E+03	2.76E+03	1.09E+04	1.37E+04	3.46E+03	5.02E+02	1.10E+03	2.80E+02	1.05E+03
Hope Creek 1				3.80E+01	1.19E+03	1.76E+02	3.34E+02	8.30E+02	1.92E+02	1.39E+02
Humboldt Bay 3	N/D	N/D	N/D	N/D	N/D	< 6.48E+01	< 6.40E+01	N/D	N/D	N/D
LaCrosse	7.08E+03	1.09E+04	8.58E+03	3.53E+03	2.33E+03	N/D	N/D	N/D	N/D	N/D
LaSalle 1&2	1.17E+01	5.66E+02	1.95E+02	2.98E+03	6.51E+03	3.79E+03	1.08E+03	6.87E+02	1.06E+02	1.18E+02
Limerick 1&2		N/D	N/D	3.70E-01	2.41E+01	1.69E+02	2.58E+02	3.44E+01	7.11E+01	8.57E+02
Millstone 1	6.34E+03	2.80E+03	1.11E+03	3.31E+03	5.84E+03	8.76E+02	1.81E+02	1.17E+02	2.35E+01	4.46E+00
Monticello	3.21E+03	5.15E+02	2.72E+03	2.53E+03	3.95E+03	5.88E+03	3.98E+03	2.96E+03	1.99E+03	1.30E+03
Nine Mile Point 1	2.68E+02	1.02E+03	9.84E+02	4.92E+02	1.97E+02	1.80E+01	1.52E-04	N/D	5.05E+01	3.43E+02
Nine Mile Point 2					6.00E+00	4.03E+01	8.42E+01	1.63E+02	1.00E+02	3.11E+01
Oyster Creek 1	2.14E+03	3.93E+03	4.15E+04	7.67E+04	3.39E+03	5.05E+03	3.24E+02	7.35E+02	4.60E+02	4.10E+02
Peach Bottom 2&3	3.48E+04	8.09E+04	1.29E+05	2.78E+04	1.15E+04	1.19E+03	2.64E+03	1.12E+04	2.40E+04	8.43E+03
Perry 1				1.23E+00	1.06E+01	1.25E+03	1.92E+02	8.37E+01	1.11E+02	3.28E+02
Pilgrim 1	2.01E+04	< 1.84E+01	3.26E+03	1.26E+02	N/D	N/D	6.78E+02	9.07E+02	2.22E+03	1.18E+03
Quad-Cities 1&2	1.20E+04	6.02E+03	2.95E+03	1.48E+03	3.73E+02	3.77E+02	2.87E+02	7.96E+01	4.21E+01	4.93E+01
River Bend 1				1.70E+03	1.39E+00	2.05E+00	8.31E-01	1.03E+03	1.12E+03	4.66E+02
Shoreham 1				N/D	N/D	N/D	N/D	N/D	N/D	N/D
Susquehanna 1&2	1.03E+02	1.18E+02	5.15E+02	2.35E+02	1.23E+02	7.25E+01	1.19E+02	7.21E+01	5.76E+01	5.72E+01
Vermont Yankee 1	< 3.13E+03	< 3.18E+03	< 3.44E+03	< 1.56E+03	N/D	N/D	1.03E+03	5.07E+03	3.02E+03	5.94E+03
WNP-2		2.28E+02	2.12E+02	1.66E+02	5.35E+02	9.03E+02	5.46E+03	8.90E+02	7.23E+02	1.51E+02
Total	< 1.19E+06	< 1.13E+06	< 3.33E+05	< 2.63E+05	9.85E+04	< 3.90E+04	< 2.70E+04	3.45E+04	4.41E+04	4.05E+04
* Fort St. Vrain	1.51E+02	1.17E+02	2.03E+00	5.57E+01	2.03E+02	2.60E+02	1.96E+02	N/D	N/D	N/D

* High temperature gas cooled reactor

** Included with Edwin I. Hatch 2 total

N/D = Not Detectable

Table 2

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Arkansas One 1		1.96E+02	1.03E+03	5.69E+03	1.39E+04	7.50E+03	8.51E+03	3.80E+04	3.73E+03	2.10E+03
Arkansas One 2							4.53E+03	9.37E+03	4.35E+03	9.78E+03
Beaver Valley 1&2				1.07E+00	4.73E+01	3.90E+02	1.75E+03	8.64E+01	8.06E+02	1.31E+02
Braidwood 1										
Braidwood 2										
Byron 1&2										
Callaway 1										
Calvert Cliffs 1&2			7.72E+03	9.40E+03	2.23E+04	2.76E+04	1.02E+04	2.96E+03	2.18E+03	8.00E+03
Catawba 1										
Catawba 2										
Comanche Peak 1										
Donald C. Cook 1&2			2.64E+00	9.75E+02	3.80E+03	4.85E+04	1.09E+04	3.76E+03	5.42E+03	3.88E+03
Crystal River 3					3.35E+03	6.86E+03	7.26E+04	3.65E+04	3.96E+04	6.85E+03
Davis-Besse 1					1.27E+03	2.10E+03	< 1.68E+03	< 3.35E+03	1.01E+03	5.35E+02
Diablo Canyon 1&2										
Joseph M. Farley 1						3.53E+03	3.18E+03	1.92E+04	2.21E+02	3.81E+04
Joseph M. Farley 2									2.60E+00	3.54E+03
Fort Calhoun 1	6.70E+01	3.03E+02	4.29E+02	1.94E+03	3.81E+03	1.36E+03	7.06E+02	2.97E+02	1.22E+03	3.46E+02
R. E. Ginna	5.76E+02	7.57E+02	1.04E+04	5.52E+03	3.20E+03	9.72E+02	7.62E+02	8.61E+02	5.46E+02	1.95E+03
Haddam Neck	3.20E+01	7.00E+00	4.80E+02	4.52E+02	3.12E+03	2.14E+03	5.53E+03	2.68E+03	1.83E+03	7.54E+02
Harris 1										
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	9.38E+03	9.13E+03	7.27E+03
Indian Point 3				Shown with	Other Unit	8.09E+02	2.47E+02	1.11E+03	6.57E+03	2.58E+03
Kewaunee		3.35E+03	2.45E+03	1.40E+03	2.43E+03	4.44E+02	1.52E+02	1.22E+02	1.18E+02	1.66E+02
** Maine Yankee	1.61E+02	6.36E+03	4.09E+03	1.30E+03	3.57E+03	1.55E+03	2.09E+03	4.07E+03	3.28E+02	1.53E+03
McGuire 1									1.58E-01	1.65E-03
McGuire 2										
Millstone 2				1.57E+03	2.28E+03	7.64E+02	3.59E+02	1.33E+03	2.24E+03	9.09E+03
Millstone 3										
North Anna 1&2						1.51E+04	6.28E+03	3.50E+03	5.30E+03	4.34E+03
Oconee 1,2,& 3	9.30E+03	1.94E+04	1.51E+04	4.39E+04	3.56E+04	4.33E+04	4.79E+04	1.92E+04	1.63E+04	2.41E+04
Palisades	4.54E+02 <	1.00E+00	2.61E+03	2.99E+01	5.99E+01	3.23E+02	6.84E+01	1.40E+02	3.00E+03	7.38E+03
Palo Verde 1										
Palo Verde 2										
Palo Verde 3										
Point Beach 1&2	5.75E+03	9.74E+03	4.45E+04	1.91E+03	1.13E+03	5.16E+02	9.68E+02	6.41E+02	6.11E+02	9.93E+02
Prairie Island 1&2	8.72E+00	3.62E+02	2.17E+03	1.74E+03	6.73E+02	1.26E+03	6.97E+02	2.60E+02	4.65E+01	5.47E+02
Rancho Seco 1			1.18E+02	1.27E+02	2.00E+03	7.10E+03	8.81E+03	1.55E+03	1.37E+03	1.48E+03
H. B. Robinson 2	3.10E+03	2.31E+03	1.17E+03	6.40E+02	4.76E+02	8.84E+02	1.52E+03	5.82E+02	5.13E+02	1.75E+02
Salem 1				< 1.00E-02	1.96E+01	1.02E+01	2.49E+02	7.82E+01	1.06E+03	2.34E+02
Salem 2								7.74E+00	6.09E+02	1.11E+03
San Onofre 1	1.10E+04	1.78E+03	1.11E+03	4.16E+02	1.54E+02	1.81E+03	6.37E+02	1.05E+03	4.17E+02	8.61E+01
San Onofre 2-3										6.40E+00
Seabrook 1										
Sequoyah 1&2								3.01E+03	9.03E+03	5.74E+03
South Texas 1										
South Texas 2										
St. Lucie 1				1.72E+03	2.54E+04	2.93E+04	1.54E+04	8.97E+03	2.30E+04	2.33E+04
St. Lucie 2										
Summer 1										1.40E+02
Surry 1&2	8.66E+02	6.86E+03	8.04E+03	1.91E+04	1.90E+04	4.36E+03	1.78E+03	6.17E+03	1.41E+04	2.11E+04
Three Mile Island 1		9.16E+02	3.63E+03	2.76E+03	1.66E+04	1.57E+04	2.24E+03	4.64E-03	5.81E-02	7.56E-03
Three Mile Island 2						8.73E+00	9.97E+06	4.72E+04	2.88E+02	4.89E+02
TMI 2/Epicor								2.16E+00	1.84E+02	4.26E+02
* Trojan				7.66E+02	4.45E+03	3.26E+02	9.47E+02	4.10E+02	1.24E+03	9.02E+02

* Changes to the entries for Trojan for 1976 - 1987 represent corrections which were reported and explained in the Trojan July-December 1990 Effluent and Waste Disposal Report.

** Changes to the entries for Maine Yankee for 1977 - 1988 represent corrections which were reported and explained in the Maine Yankee report "Revised Semiannual Effluent Release Report for 770131 - 901231" Docket Date 92/01/08.

Table 2

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Turkey Point 3&4	5.30E+02	4.66E+03	1.34E+04	1.56E+04	2.33E+04	2.35E+04	1.06E+04	4.24E+03	4.33E+03	2.00E+04
Turkey Point 3										
Turkey Point 4										
Vogtle 1&2										
Waterford 3										
Wolf Creek 1										
Yankee Rowe 1	3.50E+01	4.00E+01	2.24E+01	2.57E+01	1.25E+02	6.56E+02	1.82E+02	7.07E+01	1.72E+02	1.55E+02
Zion 1&2	4.00E+00	2.99E+03	4.88E+04	1.14E+05	3.22E+04	6.77E+04	3.41E+04	5.78E+03	6.91E+03	1.61E+04
Total	3.19E+04 <	6.56E+04	1.75E+05 <	2.43E+05	2.40E+05	3.30E+05 <	1.02E+07 <	2.36E+05	1.68E+05	2.25E+05

Table 2

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Pressurized Water Reactors Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Arkansas One 1	9.53E+02	2.90E+03	8.10E+03	1.71E+03	3.26E+02	1.24E+03	2.33E+03	7.00E+02	4.95E+02	8.93E+02
Arkansas One 2	1.34E+03	3.26E+03	8.91E+03	3.46E+03	2.06E+02	2.16E+03	2.76E+03	1.89E+02	1.59E+03	1.70E+03
Beaver Valley 1&2	1.98E+02	1.16E+03	3.92E+01	7.57E+01	2.25E+02	9.41E+01	1.57E+02	8.17E+01	1.49E+02	1.55E+02
Braidwood 1					2.81E-01	4.19E+01	1.17E+03	1.42E+03	5.24E+03	7.71E+01
Braidwood 2						3.82E+01	5.07E+02	1.02E+03	5.28E+03	1.56E+02
Byon 1&2			2.79E+02	6.36E+02	1.30E+03	1.78E+03	8.16E+02	1.24E+03	1.04E+02	3.77E+02
Callaway 1		2.00E+02	1.67E+03	5.19E+03	2.90E+03	6.89E+02	7.22E+02	9.02E+02	1.36E+02	4.01E+02
Calvert Cliffs 1&2	9.75E+03	3.83E+03	3.98E+03	7.65E+03	4.55E+03	5.70E+03	3.28E+03	6.72E+02	2.57E+03	5.87E+03
Catawba 1			2.77E+02	1.36E+03	2.41E+03	1.56E+03	3.15E+02	5.33E+02	4.01E+02	4.28E+02
Catawba 2				1.36E+03	2.41E+03	1.56E+03	3.15E+02	5.33E+02	4.01E+02	4.28E+02
Comanche Peak 1								9.06E+02	5.89E+03	1.76E+03
Donald C. Cook 1&2	3.28E+02	3.50E+03	4.94E+03	3.29E+02	8.75E+02	2.58E+02	1.15E+02	1.88E+02	8.10E+01	2.04E+02
Crystal River 3	3.38E+03	1.96E+03	1.05E+03	2.76E+03	1.10E+03	3.41E+03	4.54E+03	7.31E+03	1.41E+03	7.86E+02
Davis-Besse 1	9.15E+02	5.02E+02	1.18E+02	5.09E+04	3.80E+02	1.09E+02	3.78E+02	1.09E+03	1.16E+03	3.62E+01
Diablo Canyon 1&2		5.86E-02	5.72E+02	2.32E+03	7.14E+02	3.27E+02	3.35E+02	5.63E+01	4.62E+01	2.46E+00
Joseph M. Farley 1	2.20E+04	3.73E+03	1.70E+03	1.28E+03	1.30E+03	9.60E+02	9.92E+01	8.72E+01	1.09E+02	6.82E+02
Joseph M. Farley 2	8.47E+02	3.99E+03	6.63E+02	1.84E+03	7.22E+02	5.92E+02	1.60E+02	3.38E+01	3.56E+02	2.68E+01
Fort Calhoun 1	8.79E+02	1.52E+03	1.48E+03	5.68E+02	4.23E+02	7.85E+02	1.64E+02	4.59E+02	3.58E+02	1.51E+02
R. E. Ginna	7.12E+02	2.96E+02	4.06E+02	2.09E+02	1.77E+02	5.17E+01	5.11E+02	5.95E+02	5.14E+02	5.41E+02
Haddam Neck	2.76E+03	7.52E+03	2.76E+03	2.33E+03	3.58E+03	2.55E+03	1.71E+04	1.46E+03	6.11E+03	2.79E+00
Harris 1					1.71E+03	2.25E+03	1.15E+03	5.96E+02	8.62E+02	1.36E+03
Indian Point 1&2	9.58E+03	3.78E+03	1.88E+03	2.05E+03	4.68E+03	2.27E+02	8.77E+01	2.23E+03	1.41E+03	5.25E+03
Indian Point 3	5.60E+02	1.88E+02	1.54E+03	1.93E+03	1.82E+03	3.10E+02	3.14E+02	6.26E+02	6.05E+01	2.15E+01
Kewaunee	< 2.25E+02	< 4.04E+01	< 4.97E+01	< 6.55E+01	< 3.19E+01	< 6.52E+01	2.31E+00	1.81E+00	1.60E+00	1.60E+00
** Maine Yankee	5.07E+01	1.54E+02	4.41E+02	1.07E+03	8.34E+02	9.19E+01	2.02E+01	9.46E+02	1.13E+03	4.01E+02
McGuire 1	1.60E+03	2.28E+03	1.93E+03	1.05E+03	2.04E+03	1.95E+03	7.19E+02	5.18E+02	4.49E+02	4.05E+02
McGuire 2	1.60E+03	2.28E+03	1.93E+03	1.05E+03	2.04E+03	1.95E+03	7.19E+02	5.18E+02	4.49E+02	4.05E+02
Millstone 2	9.06E+03	4.19E+03	4.00E+02	1.02E+02	3.97E+02	6.34E+02	2.46E+02	2.89E+03	3.89E+02	6.36E+02
Millstone 3				2.39E+01	1.05E+02	8.44E+01	2.96E+02	2.11E+02	1.25E+02	1.13E+00
North Anna 1&2	2.22E+04	1.76E+04	8.05E+03	5.71E+03	1.05E+03	4.83E+02	1.44E+03	9.52E+02	2.24E+03	1.23E+03
Oconee 1,2, & 3	2.40E+04	2.28E+04	2.35E+04	2.43E+04	1.05E+04	2.59E+04	8.97E+03	8.84E+03	3.45E+03	3.29E+03
Palisades	3.00E+03	2.84E+01	3.68E+03	1.73E+02	1.75E+03	2.43E+03	1.52E+02	1.21E+02	6.26E+01	7.46E+01
Palo Verde 1			2.53E+02	2.67E+03	1.27E+03	1.84E+03	6.41E+02	7.08E+02	2.91E+03	2.22E+03
Palo Verde 2				1.97E+03	5.47E+03	2.97E+03	4.29E+02	6.76E+02	5.29E+02	2.01E+02
Palo Verde 3					2.52E-02	1.36E+02	8.34E+02	1.20E+03	4.38E+02	4.35E+01
Point Beach 1&2	7.68E+02	9.30E+01	1.16E+02	2.78E+01	4.82E+01	8.08E+01	1.50E+01	8.03E+00	2.00E+01	5.06E+01
Prairie Island 1&2	2.76E+02	7.58E+01	4.59E+01	3.03E+01	8.77E-01	1.42E-01	1.73E+02	8.28E+01	5.60E+01	2.54E+01
Rancho Seco 1	6.89E+02	3.83E+03	4.67E+03	9.30E+01	2.16E+02	1.52E+03	2.00E+03	2.20E-01	N/D	6.93E-02
H. B. Robinson 2	2.93E+02	4.90E+01	2.14E+03	9.59E+02	7.70E+02	1.04E+03	2.79E+01	7.20E+00	2.28E+00	7.59E+00
Salem 1	1.25E+02	1.95E+02	1.68E+03	1.39E+03	3.64E+03	5.29E+02	1.39E+03	3.13E+02	3.66E+02	6.75E+02
Salem 2	7.44E+02	1.81E+03	1.15E+03	8.56E+02	1.06E+03	1.18E+03	7.30E+01	1.49E+02	1.92E+02	2.68E+02
San Onofre 1	1.06E+01	8.62E+01	3.83E+03	4.11E+02	9.81E+02	2.99E+03	9.05E+02	1.80E+03	2.49E+03	4.12E+03
San Onofre 2-3	7.43E+03	4.00E+04	2.53E+04	8.25E+03	2.18E+04	5.12E+03	2.46E+03	1.16E+03	1.30E+03	1.41E+03
Seabrook 1							N/D	1.07E+02	2.92E+01	9.13E-01
Sequoyah 1&2	3.92E+03	6.68E+03	4.57E+03	1.21E+00	N/D	2.25E+02	3.85E+03	6.07E+03	1.42E+03	2.07E+02
South Texas 1						8.64E+02	4.45E+02	1.72E+02	8.55E+01	2.89E+02
South Texas 2							1.16E+02	1.09E+02	4.67E+01	6.23E+02
St. Lucie 1	2.16E+04	3.53E+04	5.08E+04	3.33E+04	6.21E+03	1.42E+03	4.53E+03	6.19E+02	2.05E+03	3.30E+02
St. Lucie 2	1.25E+03	7.68E+03	9.55E+03	9.98E+03	8.60E+03	9.16E+03	2.22E+03	5.34E+02	4.90E+02	6.59E+02
Summer 1	3.88E+02	1.64E+01	1.40E+02	1.39E+01	6.34E+02	3.32E+02	1.82E+03	7.51E+02	4.34E+02	3.38E+02
Surry 1&2	5.49E+03	6.95E+03	2.07E+03	1.99E+03	3.08E+02	3.66E+02	1.37E+02	4.51E+02	3.54E+01	1.61E+01
Three Mile Island 1	2.01E+01	3.62E-01	1.08E+02	3.80E+03	7.89E+02	1.87E+03	2.10E+03	6.66E+02	1.22E+02	5.73E+02
Three Mile Island 2	1.73E+02	2.07E+02	N/D	2.80E-01	N/D	4.40E-01	N/D	N/D	4.18E-05	5.81E-05
TMI 2/Epicor	3.61E+01	3.99E+01	**	**	**	**	**	**	**	**
* Trojan	2.29E+02	8.98E+02	1.10E+03	9.42E+02	2.55E+02	4.25E+02	5.94E+02	2.06E+02	1.66E+02	2.07E+02

* Changes to the entries for Trojan for 1976-1987 are corrections which were reported and explained in the Trojan July-December 1990 Effluent and Waste Disposal Report.

** Changes to the entries for Maine Yankee for 1977-1988 are corrections which were reported and explained in the Maine Yankee Revised Semiannual Effluent and Release Reports for 770131-901231. Docket Date 92/01/08.

** Included with Three Mile Island 2 total

N/D = Not Detectable

Table 2

Airborne Effluents Comparison By Year

Fission and Activation Gases (Total Curies)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turkey Point 3&4	1.61E+04	1.16E+04								
Turkey Point 3			1.32E+03	3.64E+03	9.38E+02	1.25E+03	1.70E+03	6.88E+02	8.95E+00	6.15E+01
Turkey Point 4			1.80E+03	1.01E+03	7.86E+02	1.31E+03	1.71E+03	5.92E+02	9.49E+00	6.22E+01
Vogtle 1&2					1.07E+02	1.15E+02	5.46E+02	1.88E+02	3.58E+02	1.13E+02
Waterford 3			8.21E+03	1.12E+04	5.63E+03	5.30E+03	5.59E+02	5.73E+03	2.15E+03	6.93E+02
Wolf Creek 1			1.72E+02	3.15E+01	1.73E+02	7.92E+02	6.40E+02	9.99E+02	3.00E+03	3.08E+02
Yankee Rowe 1	7.51E+02	1.74E+03	1.47E+03	5.11E+02	3.84E+02	2.06E+02	1.21E+02	1.13E+02	2.15E+02	N/D
Zion 1&2	6.34E+03	3.61E+03	3.88E+03	3.18E+03	1.18E+02	1.39E+03	1.12E+03	1.10E+02	2.76E+02	3.35E+02
Total	< 1.83E+05	< 2.10E+05	< 2.05E+05	< 1.57E+05	< 1.11E+05	< 1.03E+05	8.11E+04	6.21E+04	6.22E+04	4.16E+04

Table 3

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)

(Half-Life Equal To or Greater Than 8 Days)

Boiling Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Big Rock Point 1	4.60E+00	1.60E-01	1.20E-01	5.00E-02	1.00E-02	8.91E-03	1.90E-03	2.94E-02	6.10E-03	4.71E-03
Browns Ferry 1,2 & 3		1.20E-01	2.70E-01	< 7.00E-02	1.04E-01	2.27E-01	5.03E-02	1.05E-01	N/D	1.89E-01
Brunswick 1&2			< 1.00E-02	4.60E-01	9.32E-01	4.07E-01	9.52E-01	2.12E+00	8.89E-01	1.99E+00
Clinton 1										
Cooper		2.40E-01	5.00E-02	< 4.00E-02	< 1.91E-02	5.41E-03	< 1.79E-01	< 1.52E-01	< 1.09E-02	< 1.55E-01
Dresden 1	4.00E-02	6.80E-01	9.60E-01	8.40E-01	4.93E+00	2.28E+00	2.38E-02	1.46E-02	9.94E-03	3.36E-04
Dresden 2-3	6.70E+00	6.50E+00	4.31E+00	5.49E+00	6.86E+00	3.13E+00	6.97E+00	1.10E+01	9.87E+00	9.50E-01
Duane Arnold			1.10E-03	8.18E-02	2.29E-02	3.65E-02	3.35E-02	8.50E-02	3.25E-02	1.03E-02
Ferri 2										
James A. Fitzpatrick			< 4.00E-02	6.80E-01	1.73E-01	2.79E-01	1.42E-02	1.25E-01	2.80E-01	7.71E-01
Grand Gulf 1										
Edwin I. Hatch 1			< 1.00E-02	< 1.00E-02	5.67E-03	4.13E-03	2.59E-02	4.29E-01	2.12E-01	1.84E-01
Edwin I. Hatch 2								1.33E-02	9.42E-03	6.83E-02
Hope Creek 1										
Humboldt Bay 3	2.90E-01	8.40E-01	1.06E+00	8.36E-02	4.04E-03	7.26E-04	1.07E-04	5.11E-04	< 3.82E-04	1.09E-04
LaCrosse	2.00E-01	4.00E-02	1.00E-01	< 7.06E-02	1.67E-01	2.79E-02	2.53E-02	1.32E-02	1.69E-02	8.35E-03
LaSalle 1&2										4.16E-03
Limerick 1&2										
Millstone 1	2.00E-01	3.26E+00	9.98E+00	2.33E+00	4.86E+00	4.55E+00	5.90E-01	3.32E-01	1.48E-01	2.09E-01
Monticello	1.20E+00	5.70E+00	3.71E+00	1.71E-01	8.51E-02	5.49E-02	3.39E-02	2.83E-02	3.45E-02	8.85E-02
Nine Mile Point 1	1.98E+00	8.90E-01	2.78E+00	2.20E+00	1.99E-01	1.35E-01	4.71E-02	2.55E-02	1.49E-02	2.71E-02
Nine Mile Point 2										
Oyster Creek 1	7.02E+00	3.51E+00	5.64E+00	6.39E+00	9.05E+00	1.81E+01	9.32E+00	1.25E+00	2.24E+00	1.04E+00
Peach Bottom 2&3	< 1.00E-02	1.00E-02	4.00E-02	9.75E-01	2.73E-01	9.62E-02	2.58E-01	2.94E-02	< 4.19E-02	3.90E-02
Perry 1										
Pilgrim 1	4.70E-01	1.45E+00	2.58E+00	6.74E-01	6.90E-01	1.81E-01	1.45E-01	1.04E-01	< 6.87E-02	< 4.44E-02
Quad-Cities 1&2	5.50E+00	8.88E+00	1.31E+00	1.33E+00	1.69E+00	2.15E+00	1.57E+00	5.90E-01	1.27E+00	4.12E-01
River Bend 1										
Shoreham 1										
Susquehanna 1&2										< 8.70E-04
Vermont Yankee 1	7.00E-02	3.60E-01	1.00E-02	< 1.00E-02	1.44E-02	2.18E-01	4.43E-01	1.70E-02	4.53E-03	1.45E-03
WNP-2										
Total	< 2.83E+01	3.26E+01	< 3.30E+01	< 2.20E+01	< 3.01E+01	3.19E+01	< 2.07E+01	< 1.65E+01	< 1.52E+01	< 6.20E+00
* Fort St. Vrain							6.89E-07	1.25E-06	1.40E-06	2.61E-01

* High temperature gas cooled reactor

N/D = Not Detectable

Table 3

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)

(Half-Life Equal To or Greater Than 8 Days)

Boiling Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Big Rock Point 1	3.35E-03	1.32E-01	8.25E-02	7.56E-02	2.94E-02	5.07E-02	4.87E-03	5.71E-03	3.07E-03	4.99E-03
Browns Ferry 1,2 & 3	2.83E-01 <	1.72E-01 <	2.49E-02 <	2.73E-03	1.78E-03	1.76E-03	1.86E-04	1.88E-04	2.84E-02	4.66E-02
Brunswick 1&2	6.25E+00	3.49E-01	6.32E-02	4.69E-02	1.82E-01	1.77E-01	4.84E-02	4.83E-02	1.91E-02	7.43E-03
Clinton 1					2.58E-04	5.94E-02	9.52E-03	8.71E-03	9.10E-03	2.52E-03
Cooper	< 2.30E-02 <	1.15E-02 <	2.29E-02 <	1.16E-02	2.67E-02	2.04E-02	5.26E-03	3.53E-04	5.64E-04	9.09E-05
Dresden 1	7.56E-04	1.69E-03	9.23E-05	+	+	+	1.07E-04	2.59E-04	4.19E-03	3.32E-05
Dresden 2-3	6.32E-01	1.30E-01	1.56E-01	7.11E-02	1.45E-01	2.35E-01	1.15E+00	1.51E-01	3.69E-02	2.37E-02
Duane Arnold	1.50E-02	1.53E-02	8.89E-03	7.32E-02	1.37E-01	1.55E-02	3.16E-03	4.45E-03	2.64E-03	2.98E-03
Fermi 2				2.68E-07	8.56E-03	2.78E-03	1.67E-02	1.54E-02	5.66E-03	6.89E-03
James A. Fitzpatrick	3.80E-01	2.10E-01	1.67E-01	8.66E-02	1.36E-01	7.00E-02	7.12E-02	1.91E-02	2.50E-02	4.23E-04
Grand Gulf 1	4.50E-05	1.86E-04	7.53E-04	4.85E-04	4.28E-03	4.90E-04	1.08E-03	9.98E-04	4.29E-03	8.77E-03
Edwin I. Hatch 1	6.96E-02	6.57E-02	3.98E-02	1.50E-02	2.54E-01	**	**	**	**	**
Edwin I. Hatch 2	1.95E-02	1.15E-02	3.47E-02	1.79E-02	1.16E-01	4.29E-02	5.73E-03	7.64E-03	5.57E-03	4.06E-02
Hope Creek 1				N/D	N/D	N/D	N/D	5.47E-03	4.44E-04	2.67E-03
Humboldt Bay 3	2.68E-04	2.68E-04	7.62E-05	1.64E-04	6.78E-05	1.49E-04	3.67E-05	3.85E-05	6.68E-05	2.70E-05
LaCrosse	1.08E-02	6.90E-03	9.62E-03	5.91E-03	2.31E-03	1.11E-05	1.29E-05	1.80E-04	3.64E-06	3.69E-05
LaSalle 1&2	1.80E-02	1.06E-02	2.32E-02	7.09E-02	4.97E-02	1.34E-02	8.23E-03	3.44E-03	6.84E-03	2.70E-03
Limerick 1&2		N/D	N/D	7.45E-03	1.17E-03	6.67E-03	7.60E-03	7.64E-04	1.13E-04	1.48E-03
Millstone 1	6.25E-02	6.24E-02	5.20E-02	4.71E-02	2.50E-02	7.60E-03	9.35E-03	2.60E-03	2.64E-03	1.49E-03
Monticello	4.10E-02	2.93E-02	9.95E-02	6.86E-02	1.73E-01	7.90E-02	1.14E-01	4.34E-02	3.62E-02	4.01E-02
Nine Mile Point 1	1.07E-02	1.75E-02	3.46E-02	1.75E-02	1.61E-02	1.89E-03	3.02E-03	2.72E-03	7.19E-03	4.42E-03
Nine Mile Point 2					5.17E+00	6.90E-04	5.04E-03	4.95E-03	1.38E-02	6.70E-03
Oyster Creek 1	1.90E-02	4.37E-01	3.04E-00	7.00E-01	1.04E-01	6.35E-02	5.08E-02	3.14E-02	3.25E-02	5.71E-02
Peach Bottom 2&3	4.60E-02	1.02E-01	6.88E-02	5.20E-02	2.00E-02	1.50E-03	3.45E-03	1.82E-02	4.26E-02	3.19E-02
Perry 1				1.13E-06	4.87E-05	4.62E-02	8.54E-03	1.11E-02	1.42E-02	1.52E-01
Pilgrim 1	< 4.69E-02 <	5.17E-03 <	5.68E-02 <	1.24E-02 <	8.43E-04	3.82E-04	5.62E-03	1.02E-02	4.71E-02	4.61E-02
Quad-Cities 1&2	4.36E-01	3.86E-02	6.06E-01	1.11E-01	9.40E-02	2.46E-02	4.06E-02	3.34E-02	1.19E-02	3.07E-02
River Bend 1				4.62E-05	4.03E-04	9.66E-04	4.13E-04	5.17E-02	4.44E-02	9.34E-03
Shoreham 1				N/D	N/D	N/D	N/D	N/D	N/D	N/D
Susquehanna 1&2	9.43E-04	1.48E-02	2.65E-02	3.39E-03	6.08E-03	1.82E-03	1.11E-03	8.63E-04	2.43E-04	4.71E-03
Vermont Yankee 1	4.14E-03	6.87E-03 <	5.87E-03 <	1.29E-02	1.27E-02	6.58E-03	8.92E-03	7.24E-02	8.26E-02	6.41E-02
WNP-2		2.49E-01	1.89E-01	6.35E-02	6.87E-02	4.48E-01	1.14E-01	1.50E-01	6.27E-02	4.33E-02
Total	< 8.37E+00 <	2.13E+00 <	4.81E+00 <	1.57E+00 <	6.79E+00	1.38E+00	1.70E+00	7.05E-01	5.50E-01	6.44E-01
* Fort St. Vrain	7.40E-07	2.78E-06	6.31E-07	N/D	N/D	< 1.79E-05	N/D	N/D	N/D	N/D

+ Included with Dresden 2-3 total

* High temperature gas cooled reactor

** Included with Edwin I. Hatch 2 total

N/D = Not Detectable

Table 4

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)
(Half-Life Equal To or Greater Than 8 Days)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Arkansas One 1		5.00E-02	7.40E-01	5.73E-02	9.04E-03	3.19E-03	4.47E-03	1.66E-01	5.58E-03	9.07E-04
Arkansas One 2							4.65E-03	6.90E-03	1.41E-02	4.92E-03
Beaver Valley 1&2				* < 1.00E-02	1.52E-04	7.21E-02	4.07E-04	1.91E-03	6.85E-03	4.56E-03
Braidwood 1										
Braidwood 2										
Byron 1&2										
Callaway 1										
Calvert Cliffs 1&2			7.00E-02	1.38E-01	3.07E-01	1.35E-01	2.05E+00	7.44E-02	4.69E-02	1.84E-01
Catawba 1										
Catawba 2										
Comanche Peak 1										
Donald C. Cook 1&2			< 1.00E-02	< 1.00E-02	7.45E-02	1.10E-01	7.36E-02	6.88E-02	3.55E-01	1.28E-01
Crystal River 3					2.53E-03	1.05E-03	1.88E-02	6.77E-03	1.76E-02	3.22E-03
Davis-Besse 1					2.57E-04	4.30E-04	5.69E-03	2.01E-03	5.79E-02	5.28E-03
Diablo Canyon 1&2										
Joseph M. Farley 1						4.11E-02	2.20E-02	2.37E-03	6.24E-01	9.09E-02
Joseph M. Farley 2									3.22E-03	6.51E-05
Fort Calhoun 1	< 1.00E-02	< 1.00E-02	< 1.00E-02	< 2.04E-02	1.34E-02	8.30E-03	1.58E-03	2.42E-03	3.63E-03	1.59E-03
R. E. Ginna	< 1.00E-02	< 1.00E-02	2.00E-02	3.17E-02	2.55E-02	1.04E-02	1.88E-02	9.00E-03	5.88E-03	1.36E-02
Haddam Neck	5.00E-02	< 1.00E-02	< 1.00E-02	< 1.00E-02	1.74E-03	5.21E-03	4.77E-02	8.01E-03	< 1.26E-02	< 5.41E-04
Harris 1										
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	6.42E-02	4.42E-02	4.17E-02
Indian Point 3				Shown With	Other Unit	1.29E-02	3.89E-03	2.53E-02	3.63E-03	< 4.28E-03
Kewaunee		2.00E-02	6.60E-01	< 1.00E-02	2.40E-02	5.48E-03	6.18E-04	2.61E-04	1.21E-04	5.97E-05
** Maine Yankee	9.40E-01	5.00E-02	< 1.00E-02	< 1.00E-02	1.07E-02	4.39E-03	1.16E-01	3.67E-03	1.21E-03	2.55E-04
McGuire 1									1.21E-11	9.51E-04
McGuire 2										
Millstone 2			1.00E-02	1.25E-02	4.47E-03	2.97E-03	9.79E-03	1.94E-02	1.06E-01	3.19E-01
Millstone 3										
North Anna 1&2						3.19E-02	5.71E-02	1.26E-02	4.81E-01	3.49E-02
Oconee 1,2,& 3	1.00E-02	3.00E-02	1.00E-02	2.72E-01	5.35E-01	2.22E-01	2.28E-01	1.33E-01	3.24E-01	2.55E-01
Palisades	3.10E-01	1.00E-02	3.80E-01	4.16E-02	1.63E-02	2.07E-02	2.46E-02	2.76E-02	4.15E-02	2.30E-02
Palo Verde 1										
Palo Verde 2										
Palo Verde 3										
Point Beach 1&2	5.50E-01	1.60E-01	7.00E-02	1.85E-02	5.02E-03	2.83E-02	1.35E-02	1.28E-03	2.03E-01	8.46E-03
Prairie Island 1&2	< 1.00E-02	< 1.00E-02	2.12E-02	1.14E-02	7.56E-03	8.96E-04	3.86E-03	1.83E-03	4.49E-04	3.74E-03
Rancho Seco 1			< 1.00E-02	< 1.00E-02	5.02E-03	3.21E-02	5.75E-03	9.96E-03	4.65E-03	2.62E-02
H. B. Robinson 2	3.00E-01	5.00E-02	2.00E-02	9.96E-02	3.88E-03	9.26E-04	4.10E-04	1.13E-03	3.32E-04	5.70E-04
Salem 1				N/D	2.34E-07	4.01E-02	7.68E-03	2.17E-01	4.84E-01	7.85E-03
Salem 2								5.44E-05	6.31E-03	4.54E-03
San Onofre 1	1.61E+00	< 1.00E-02	4.00E-02	< 1.00E-02	1.86E-04	2.71E-03	1.43E-04	8.41E-01	1.18E-02	4.66E-07
San Onofre 2-3										3.35E-05
Seabrook 1										
Sequoyah 1&2								1.57E-03	1.30E-02	1.23E-01
South Texas 1										
South Texas 2										
St. Lucie 1				< 1.00E-02	1.48E-01	5.17E-01	2.02E-01	6.20E-02	7.69E-02	4.15E-01
St. Lucie 2										
Summer 1										N/D
Surry 1&2	4.00E-02	1.40E-01	5.00E-02	3.46E-01	1.20E-01	6.49E-02	7.61E-03	1.85E-03	6.53E-02	5.96E-02
Three Mile Island 1		< 1.00E-02	< 1.00E-02	1.07E-02	3.39E-02	1.35E-01	1.24E-02	2.93E-04	5.05E-04	1.65E-04
Three Mile Island 2						2.30E-03	1.42E+01	5.67E-04	3.69E-05	6.46E-05
TMI 2/Epicor								6.83E-06	2.63E-06	3.71E-06
* Trojan				2.84E-02	3.56E-02	8.28E-03	2.48E-02	1.84E-02	4.97E-02	1.09E-02

* Changes to the entries for Trojan for 1976-1987 are corrections which were reported and explained in the Trojan July-December 1990 Effluent and Waste Disposal Report.

I-131 not detected

** Changes to the entries for Maine Yankee for 1977-1988 are corrections which were reported and explained in the Maine Yankee report "Revised Semiannual Effluent Release Reports for 770131-901231" Docket Date 92/01/08.

N/D = Not Detectable

Table 4

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)
 (Half-Life Equal To or Greater Than 8 Days)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Turkey Point 3&4	6.00E-02	3.63E+00	4.30E-01	4.22E-01	1.04E+00	4.59E-01	7.91E-02	7.05E-02	2.94E-02	2.20E-01
Turkey Point 3										
Turkey Point 4										
Vogtle 1&2										
Waterford 3										
Wolf Creek 1										
Yankee Rowe 1	1.90E-01	5.30E-01	1.00E-02 < 1.00E-02	8.70E-05	2.25E-04	2.49E-04	9.56E-05	2.13E-04 < 5.75E-04		
Zion 1&2	< 1.00E-02	1.00E-02	1.40E-01	9.00E-02	5.38E-02	8.91E-02	6.74E-02	3.00E-03	1.25E-02	8.57E-02
Total	< 4.11E+00 < 5.17E+00 < 4.35E+00 < 1.93E+00				2.53E+00	2.27E+00	1.78E+01	1.88E+00 < 3.11E+00 < 2.08E+00		

Table 4

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)
(Half-Life Equal To or Greater Than 8 Days)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Arkansas One 1	1.15E-03	1.14E-03	3.50E-03	4.01E-03	3.05E-04	1.03E-03	8.17E-04	8.94E-04	2.51E-03	4.99E-02
Arkansas One 2	5.78E-03	2.54E-04	3.27E-03	2.36E-04	5.12E-05	4.21E-04	5.87E-04	2.03E-04	4.27E-02	7.89E-04
Beaver Valley 1&2	5.25E-02	6.21E-03	1.58E-03	7.83E-03	1.36E-02	3.54E-03	1.11E-02	3.20E-04	1.02E-02	1.27E-03
Braidwood 1					1.34E-05	2.44E-02	2.54E-04	1.56E-03	6.01E-03	2.91E-05
Braidwood 2						9.52E-05	2.86E-04	5.61E-04	5.07E-03	7.55E-06
Byron 1&2			2.18E-03	5.45E-02	9.45E-03	1.28E-02	7.93E-04	4.08E-03	1.81E-04	4.36E-04
Callaway 1		9.41E-07	3.23E-04	1.18E-03	4.46E-04	3.36E-04	1.66E-04	1.46E-04	9.16E-06	4.87E-04
Calvert Cliffs 1&2	1.02E-01	6.02E-02	5.36E-02	8.73E-02	9.18E-02	1.38E-01	4.81E-02	1.69E-03	1.32E-02	1.68E-02
Catawba 1			5.71E-04	6.69E-03	7.42E-03	4.05E-03	7.46E-04	8.60E-04	1.39E-03	7.71E-04
Catawba 2				6.69E-03	7.42E-03	4.05E-03	7.46E-04	8.60E-04	1.39E-03	7.71E-04
Comanche Peak 1								N/D	1.85E-05	8.31E-04
Donald C. Cook 1&2	5.75E-02	2.09E-02	1.78E-01	2.29E-02	6.44E-02	8.92E-03	3.44E-02	7.35E-02	2.41E-03	9.38E-03
Crystal River 3	1.58E-03	2.07E-04	7.31E-04	1.02E-03	3.49E-03	1.25E-03	2.02E-03	7.68E-04	4.57E-03	5.59E-04
Davis-Besse 1	7.37E-03	1.66E-03	5.13E-04	N/D	1.24E-03	4.78E-04	3.06E-03	2.38E-03	8.70E-03	9.57E-04
Diablo Canyon 1&2		1.20E-05	2.40E-04	1.44E-03	2.36E-03	1.29E-03	9.75E-04	5.94E-05	5.90E-04	2.57E-03
Joseph M. Farley 1	4.60E-02	5.87E-03	5.60E-03	7.96E-04	3.81E-04	1.60E-03	3.64E-05	N/D	1.60E-03	3.80E-04
Joseph M. Farley 2	5.06E-05	1.54E-03	2.97E-04	1.35E-03	1.49E-04	2.51E-06	7.89E-07	3.15E-06	1.43E-05	4.66E-05
Fort Calhoun 1	9.32E-04	1.25E-02	7.29E-03	1.48E-03	5.11E-03	3.10E-04	1.27E-04	1.81E-03	3.22E-04	5.66E-04
R. E. Ginna	1.53E-02	1.62E-03	9.74E-04	4.04E-04	8.71E-03	5.69E-05	8.38E-04	5.14E-03	1.65E-03	1.40E-03
Haddam Neck	< 1.02E-02	5.72E-02	1.13E-03	9.36E-03	1.35E-03	3.69E-02	1.50E-02	4.71E-03	2.60E-02	5.39E-03
Harns 1					4.43E-06	4.59E-05	1.79E-06	7.72E-05	4.71E-05	8.16E-04
Indian Point 1&2	2.06E-02	< 1.51E-01	1.44E+00	4.59E-01	1.57E-02	9.18E-03	3.88E-03	5.36E-03	2.10E-03	1.32E-02
Indian Point 3	< 1.53E-04	2.04E-02	1.90E-03	4.01E-03	2.07E-03	3.42E-03	1.36E-03	1.81E-04	2.44E-05	8.26E-05
Kewaunee	< 2.16E-04	< 4.05E-03	2.77E-04	< 5.58E-03	< 1.23E-02	< 1.05E-02	1.75E-02	3.24E-03	1.93E-03	1.79E-06
** Maine Yankee	1.48E-04	7.14E-03	8.17E-04	4.60E-03	5.05E-03	5.10E-04	2.39E-04	1.81E-02	7.22E-03	5.24E-03
McGuire 1	1.89E-03	1.25E-02	1.29E-02	3.03E-02	6.08E-02	6.14E-03	3.76E-03	1.02E-03	9.78E-04	1.16E-03
McGuire 2	1.89E-03	1.25E-02	1.29E-02	3.03E-02	6.08E-02	6.14E-03	3.76E-03	1.02E-03	9.78E-04	1.16E-03
Millstone 2	5.73E-02	3.71E-02	6.48E-03	5.37E-03	6.51E-03	5.13E-02	3.78E-02	2.08E-02	1.27E-02	7.87E-03
Millstone 3				< 3.69E-04	5.09E-03	9.89E-03	1.28E-02	2.46E-03	4.60E-03	9.71E-04
North Anna 1&2	3.28E-01	8.65E-02	8.57E-02	2.27E-02	1.73E-02	2.30E-03	4.33E-03	7.05E-03	2.70E-03	1.36E-02
Oconee 1,2 & 3	1.13E-01	1.07E-01	4.92E-03	4.34E-02	1.46E-01	1.63E-01	3.56E-02	9.02E-03	2.90E-02	1.41E-02
Palisades	3.44E-02	9.92E-04	4.92E-02	3.03E-03	2.77E-02	2.65E-02	1.73E-02	2.13E-03	3.02E-04	9.52E-04
Palo Verde 1			1.43E-03	7.78E-03	5.81E-02	1.82E-03	7.58E-04	2.69E-03	1.15E-02	1.20E-02
Palo Verde 2				3.49E-03	1.34E-02	4.67E-02	3.03E-03	2.66E-03	2.08E-02	1.77E-05
Palo Verde 3					N/D	1.24E-04	6.45E-03	6.34E-04	3.32E-03	1.91E-03
Point Beach 1&2	1.82E-02	1.25E-03	9.05E-03	1.69E-03	3.08E-03	2.23E-03	3.27E-03	3.02E-04	3.46E-03	6.75E-03
Prairie Island 1&2	1.40E-02	1.44E-03	7.35E-03	2.22E-03	2.33E-04	7.74E-05	2.10E-05	1.50E-03	4.87E-04	2.53E-04
Rancho Seco 1	2.26E-03	2.37E-02	7.84E-03	1.49E-03	1.54E-06	4.74E-04	2.76E-04	N/D	N/D	N/D
H. B. Robinson 2	1.31E-02	2.47E-04	1.37E-02	9.92E-03	2.08E-02	1.10E-03	1.41E-04	1.34E-04	1.73E-04	1.39E-04
Salem 1	6.25E-02	5.16E-04	4.45E-02	1.17E-03	1.66E-03	2.13E-03	3.62E-03	1.20E-03	1.66E-03	3.79E-04
Salem 2	3.53E-02	5.41E-03	8.95E-02	3.23E-03	1.52E-03	9.91E-04	8.70E-04	2.06E-04	7.13E-04	7.10E-05
San Onofre 1	5.44E-06	9.49E-06	1.17E-03	2.09E-04	4.17E-04	1.08E-02	2.22E-03	7.25E-03	1.94E-03	1.57E-02
San Onofre 2-3	1.56E-01	4.12E-01	4.47E-01	1.62E-01	4.20E-01	7.75E-02	4.73E-01	7.05E-03	1.14E-02	2.32E-02
Seabrook 1							N/D	N/D	1.08E-03	1.11E-03
Sequoyah 1&2	2.22E-03	2.12E-02	3.17E-03	1.56E-03	5.04E-04	1.90E-04	4.22E-04	2.65E-04	5.66E-04	9.23E-05
South Texas 1						8.26E-04	4.02E-03	1.15E-03	1.85E-03	2.52E-03
South Texas 2							1.42E-03	5.75E-04	2.72E-04	4.63E-05
St. Lucie 1	2.13E-01	2.60E-01	7.91E-01	2.69E-01	3.95E-02	6.40E-03	5.75E-03	8.36E-03	2.69E-03	1.03E-03
St. Lucie 2	1.27E-02	2.84E-01	1.92E-01	4.20E-02	5.51E-02	2.86E-02	8.27E-03	5.79E-03	4.86E-03	4.88E-03
Sumner 1	4.74E-05	9.00E-06	2.55E-05	2.99E-05	7.04E-04	2.33E-03	1.61E-03	5.57E-04	2.84E-04	2.14E-04
Surry 1&2	8.34E-02	5.87E-02	2.67E-02	2.09E-02	2.09E-02	2.02E-02	2.37E-03	2.93E-03	1.10E-03	8.04E-04
Three Mile Island 1	6.55E-05	1.27E-09	2.86E-05	3.97E-04	1.28E-04	1.26E-03	8.22E-03	1.53E-03	9.89E-04	4.95E-03
Three Mile Island 2	2.79E-05	1.61E-05	4.59E-05	1.67E-04	7.27E-05	6.78E-05	3.50E-06	3.74E-06	7.80E-05	5.49E-06
TMI 2/Epicor	1.80E-06	7.93E-07	*+	*+	*+	*+	*+	*+	*+	*+
* Trojan	5.57E-03	4.65E-03	5.75E-03	8.62E-03	2.61E-03	3.97E-03	4.30E-03	1.64E-03	5.81E-04	2.44E-04

* Changes to the entries for Trojan for 1976-1987 are corrections which were reported and explained in the Trojan July-December 1990 Effluent and Waste Disposal Report.

** Changes to the entries for Maine Yankee for 1977 - 1988 are corrections which are reported and explained in the Maine Yankee report "Revised Semiannual Effluent Release Reports for 770131 - 901231" Docket Date 92/01/08.

*+ included with Three Mile Island 2 total

N/D = Not Detectable

Table 4

Airborne Effluents Comparison By Year

I-131 and Particulates (Curies)
 (Half-Life Equal To or Greater Than 8 Days)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turkey Point 3&4	1.44E-01	2.77E-02								
Turkey Point 3			7.98E-03	1.93E-02	1.24E-02	4.83E-03	3.10E-03	4.60E-03	6.53E-04	1.15E-04
Turkey Point 4			7.88E-03	2.45E-03	1.38E-02	4.78E-03	2.99E-04	1.87E-03	6.52E-04	1.15E-04
Vogtle 1&2					1.99E-05	1.75E-05	1.25E-03	8.49E-05	2.08E-03	5.87E-03
Waterford 3			3.48E-03	5.30E-03	1.02E-03	1.24E-03	7.62E-04	5.99E-04	2.36E-03	2.75E-05
Wolf Creek 1			1.67E-06	2.11E-04	2.14E-04	8.36E-05	2.31E-05	1.71E-04	2.40E-03	1.81E-05
Yankee Rowe 1	3.11E-03 <	6.49E-03 <	7.61E-04	2.02E-04	4.10E-05	5.89E-05 <	1.82E-04	1.61E-04	2.97E-05	7.71E-06
Zion 1&2	2.28E-02	4.27E-02	2.55E-02	4.48E-02	4.07E-03	1.40E-02	2.39E-03	1.38E-03	7.65E-03	5.11E-02
Total	< 1.65E+00 <	1.76E+00 <	3.56E+00 <	1.42E+00 <	1.25E+00 <	7.59E-01 <	7.93E-01	2.25E-01	2.73E-01	2.86E-01

Table 5

Liquid Effluents Comparison By Year

Tritium (Curies)

Boiling Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Big Rock Point 1	1.97E+01	5.10E+00	5.73E+00	2.41E+00	8.83E+00	4.05E+00	5.45E+00	6.18E+00	3.13E+00	2.98E+00
Browns Ferry 1,2, & 3		2.80E+00	1.04E+01	< 4.02E+00	2.40E+01	3.08E+01	1.32E+01	2.18E+01	2.42E+01	2.39E+01
Brunswick 1&2			3.20E+00	5.90E+00	8.93E+00	1.41E+01	3.09E+01	1.28E+01	2.26E+01	4.88E+01
Clinton 1										
Cooper		1.70E+00	8.25E+00	8.43E+00	9.04E+00	7.51E+00	6.63E+00	8.77E+00	< 8.37E+00	< 9.08E+00
Dresden 1	1.85E+01	1.88E+01	2.70E-01	2.00E-02	8.90E-02	1.31E+01	1.50E+00	N/D	N/D	N/D
Dresden 2-3	2.58E+01	2.26E+01	5.40E+01	1.97E+01	5.00E+00	1.92E+01	1.93E+01	6.20E+01	6.05E+00	1.36E+00
Duane Arnold			3.30E-01	3.40E-01	2.13E-01	1.19E+02	2.90E-01	N/D	N/D	2.25E-05
Fermi 2										
James A. Fitzpatrick			5.03E+00	4.20E+00	3.35E+00	1.90E+00	1.52E+00	2.81E+00	4.11E+00	6.55E-01
Grand Gulf 1										
Edwin I. Hatch 1			6.12E+00	8.98E+00	1.20E+01	9.00E+00	1.23E+01	1.42E+01	1.16E+01	1.03E+02
Edwin I. Hatch 2								1.07E+01	9.28E+00	3.68E+01
Hope Creek 1										
Humboldt Bay 3	5.13E+01	3.17E+01	2.01E+01	1.30E+01	5.26E-01	3.63E-02	3.91E-02	9.70E-02	< 1.62E-01	5.99E-02
LaCrosse	1.03E+02	1.15E+02	1.27E+02	4.10E+01	4.86E+01	4.72E+01	3.54E+01	7.20E+01	7.74E+01	5.92E+01
LaSalle 1&2										9.26E-01
Limerick 1&2										
Millstone 1	3.70E+00	2.41E+01	8.03E+01	2.01E+01	4.41E+00	3.20E+00	7.92E+00	2.73E+01	2.62E+00	6.21E+00
Monticello	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	4.17E-03	2.70E-05
Nine Mile Point 1	4.65E+01	1.87E+01	2.81E+01	2.46E+00	2.49E+00	N/D	6.78E+00	N/D	5.05E+00	5.82E+00
Nine Mile Point 2										
Oyster Creek 1	3.59E+01	1.41E+01	1.79E+01	3.86E+01	1.88E+01	1.96E+01	1.40E+00	1.54E+02	2.67E+01	4.95E+00
Peach Bottom 2&3	< 1.00E-01	1.00E+01	3.08E+01	7.37E+01	7.09E+01	3.24E+01	4.28E+01	3.73E+01	3.68E+01	2.37E+01
Perry 1										
Pilgrim 1	4.00E-01	1.05E+01	1.82E+01	4.67E+01	3.27E+01	2.98E+00	1.34E+01	4.00E+01	3.41E+01	5.91E+00
Quad-Cities 1&2	2.45E+01	3.40E+01	5.37E+01	4.98E+01	2.64E+01	1.72E+01	1.76E+01	1.03E+01	1.19E+01	7.80E+00
River Bend 1										
Shoreham 1										
Susquehanna 1&2										< 8.55E-01
Vermont Yankee 1	1.00E-01	N/D	N/D	1.60E+00	8.44E-01	N/D	4.04E+00	N/D	3.70E-01	N/D
WNP-2										
Total	< 3.30E+02	3.09E+02	4.69E+02	< 3.41E+02	2.77E+02	3.41E+02	2.20E+02	4.80E+02	< 2.84E+02	< 3.42E+02
* Fort St. Vrain							1.23E+02	2.06E+02	2.19E+02	2.62E+02

* High temperature gas cooled reactor
N/D = Not Detectable

Table 5

Liquid Effluents Comparison By Year

Tritium (Curies)

Boiling Water Reactors										
Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Big Rock Point 1	2.22E+01	1.11E+00	1.27E+00	3.51E-01	5.85E-01	3.47E-01	6.39E-01	5.89E-01	2.51E-01	1.08E+00
Browns Ferry 1,2 &3	3.20E+01	3.18E+01	3.31E+01	7.93E+00	2.03E+00	1.46E+00	7.01E-01	2.07E-01	5.96E+00	2.85E+01
Brunswick 1&2	1.04E+02	3.37E+01	9.88E+00	5.78E+00	1.93E+01	3.10E+01	1.79E+01	4.95E+01	7.99E+01	4.24E+01
Clinton 1					1.87E+00	2.90E+00	1.49E+00	2.60E+00	4.45E+00	2.36E+00
Cooper	< 7.60E+00	< 7.20E+00	< 5.05E+00	< 5.56E+00	5.02E+00	4.17E+00	5.45E+00	5.07E+00	9.05E+00	1.46E+01
Dresden 1	N/D	N/D	N/D	N/D	N/D	**	**	**	**	**
Dresden 2-3	1.45E-03	3.93E+01	7.45E+00	1.27E+01	2.23E+01	1.72E+01	1.83E+01	2.04E+01	1.28E+01	4.26E+00
Duane Arnold	N/D	1.41E-06	3.57E-02	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fernal 2				3.00E-01	1.05E+00	9.33E-01	1.30E+00	7.47E-01	2.02E+00	3.52E-01
James A. Fitzpatrick	2.72E+00	4.77E+00	4.20E+00	4.99E+00	2.48E+00	8.87E+00	7.32E-01	3.08E+00	7.61E+00	2.85E+00
Grand Gulf 1	3.89E-03	7.27E-01	5.17E+00	1.47E+01	1.83E+01	1.34E+01	1.32E+01	1.89E+01	2.16E+01	2.30E+01
Edwin 1. Hatch 1	9.47E+01	8.02E+01	3.93E+01	1.85E+01	2.01E+01	+	+	+	+	+
Edwin 1. Hatch 2	3.40E+01	2.13E+01	1.81E+01	1.01E+01	8.10E+00	4.40E+01	4.57E+01	2.26E+01	2.91E+01	4.46E+01
Hope Creek 1				6.91E-03	9.53E+00	9.36E+00	2.35E+01	1.18E+01	2.45E+01	1.25E+02
Humboldt Bay 3	5.38E-02	2.93E-02	1.08E+00	6.67E-02	6.98E-04	9.44E-04	1.14E-03	3.48E-03	2.29E-03	1.62E-03
LaCrosse	1.24E+02	1.25E+02	1.28E+02	5.75E+01	4.66E+01	4.60E+00	2.79E+00	7.74E-01	5.36E-01	1.83E-01
LaSalle 1&2	4.25E+00	1.10E+00	3.89E-01	1.37E-01	1.10E+00	1.76E+00	1.07E+00	3.74E-01	N/D	2.96E-05
Limerick 1&2		N/D	1.15E+00	2.06E+00	6.02E+00	N/D	2.70E+01	3.02E+01	1.37E+01	1.05E+01
Millstone 1	8.38E+00	8.58E+00	1.79E+01	5.33E+00	1.78E+01	3.78E+01	4.58E+01	2.02E+01	8.40E+00	7.34E+00
Monticello	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Nine Mile Point 1	7.89E+00	N/D	N/D	2.19E+00	N/D	N/D	N/D	1.41E+00	N/D	N/D
Nine Mile Point 2					4.63E-01	7.92E+00	8.10E+00	4.78E+00	7.78E+00	8.95E+00
Oyster Creek 1	8.76E+00	1.03E+01	N/D	1.07E+00	1.96E+00	1.62E+01	3.96E+00	N/D	6.03E-01	N/D
Peach Bottom 2&3	2.02E+01	3.58E+01	5.04E+01	4.46E+01	4.64E+01	9.69E+00	2.00E+01	2.35E+01	1.46E+01	1.77E+01
Perry 1				2.67E-03	3.49E+00	7.34E-00	6.96E+00	8.79E+00	1.06E+01	9.27E+00
Pilgrim 1	1.56E+01	1.47E+01	7.81E+00	1.00E+01	3.21E+00	5.73E-01	2.37E+00	3.68E+00	1.02E+01	1.46E-02
Quad-Cities 1&2	3.88E+00	5.42E+00	3.41E+00	6.43E+00	6.92E+00	7.28E+00	2.91E+01	2.61E+01	4.43E+00	1.25E+01
River Bend 1				4.56E+00	6.92E+00	9.65E+00	1.60E+01	8.35E+01	3.06E+01	2.34E+01
Shoreham 1				3.80E-03	6.04E-03	N/D	N/D	N/D	N/D	N/D
Susquehanna 1&2	8.98E+00	1.12E+01	9.14E+00	1.54E+01	1.87E+01	1.45E+01	2.74E+01	5.80E+01	4.62E+01	7.70E+01
Vermont Yankee 1	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	4.02E-05
WNP-2		5.40E-01	1.50E+00	3.29E+00	1.21E+00	1.38E+00	2.03E+00	7.54E-01	1.81E+00	1.08E+01
Total	< 4.99E+02	< 4.33E+02	< 3.44E+02	< 2.34E+02	2.71E+02	2.52E+02	3.21E+02	3.98E+02	3.47E+02	4.67E+02
* Fort St. Vrain	3.69E+02	1.24E+02	1.53E+01	1.27E+02	5.61E+01	1.61E+02	1.12E+02	3.22E+00	1.11E+01	1.92E-01

* High temperature gas cooled reactor

** included with Dresden 2-3 total

+ included with Edwin 1. Hatch 2 total

N/D = Not Detectable

Table 6

Liquid Effluents Comparison By Year

Facility	Tritium (Curies)									
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Pressurized Water Reactors										
Arkansas One 1		2.56E+01	4.60E+02	2.12E+02	2.45E+02	2.94E+02	1.68E+02	2.12E+02	4.42E+02	2.06E+02
Arkansas One 2							5.27E+01	2.89E+02	2.44E+02	1.39E+02
Beaver Valley 1&2				8.60E+00	1.08E+02	3.49E+02	9.59E+01	3.98E+01	1.40E+02	1.84E+02
Braidwood 1										
Braidwood 2										
Byron 1&2										
Callaway 1										
Calvert Cliffs 1&2			2.63E+02	2.74E+02	5.75E+02	4.56E+02	5.14E+02	4.91E+02	1.00E+03	4.35E+02
Catawba 1										
Catawba 2										
Comanche Peak 1										
Donald C. Cook 1&2			5.64E+01	1.92E+02	2.86E+02	6.24E+02	1.22E+03	7.82E+02	9.15E+02	1.23E+03
Crystal River 3					1.66E+02	1.54E+02	1.66E+02	1.95E+02	2.71E+02	1.82E+02
Davis-Besse 1					9.01E+00	2.15E+02	2.45E+02	1.08E+02	1.57E+02	5.68E+01
Diablo Canyon 1&2										
Joseph M. Farley 1						5.91E+01	9.40E+01	5.70E+02	1.65E+02	3.37E+02
Joseph M. Farley 2									6.34E+02	3.59E+02
Fort Calhoun 1	1.58E+01	1.24E+02	1.11E+02	1.22E+02	1.57E+02	1.50E+02	2.58E+02	5.44E+01	2.42E+02	3.08E+02
R. E. Ginna	2.86E+02	1.95E+02	2.60E+02	2.42E+02	1.19E+02	2.42E+02	2.40E+02	1.60E+02	2.40E+02	3.08E+02
Haddam Neck	3.90E+03	2.24E+03	5.67E+03	4.85E+03	6.67E+03	3.94E+03	3.55E+03	3.29E+03	5.29E+03	4.05E+03
Harris 1										
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	2.76E+02	2.41E+02	1.72E+02
Indian Point 3				Shown With	Other Unit	2.56E+02	1.15E+02	4.27E+02	6.42E+02	1.94E+02
Kewaunee		9.24E+01	2.77E+02	1.80E+02	2.95E+02	2.96E+02	2.49E+02	2.33E+02	2.51E+02	3.18E+02
Maine Yankee	1.54E+02	2.19E+02	1.77E+02	3.67E+02	1.53E+02	3.15E+02	2.02E+02	2.18E+02	2.16E+02	1.85E+02
McGuire 1									6.25E+00	1.60E+02
McGuire 2										
Millstone 2			7.60E+00	2.77E+02	2.11E+02	2.01E+02	2.54E+02	2.68E+02	3.71E+02	2.91E+02
Millstone 3										
North Anna 1&2						2.82E+02	3.13E+02	4.03E+02	1.28E+03	5.71E+02
Oconee 1,2& 3	7.07E+01	3.50E+02	3.55E+03	2.19E+03	1.92E+03	1.17E+03	8.94E+02	7.12E+02	5.07E+02	3.54E+02
Palisades	1.85E+02	8.10E+00	4.16E+01	9.63E+00	5.58E+01	1.01E+02	1.26E+02	7.47E+01	2.78E+02	1.79E+02
Palo Verde 1										
Palo Verde 2										
Palo Verde 3										
Point Beach 1&2	5.56E+02	8.33E+02	8.85E+02	6.94E+02	9.99E+02	1.29E+03	8.92E+02	7.61E+02	6.52E+02	5.03E+02
Prairie Island 1&2	< 1.00E-01	1.42E+02	4.54E+01	1.00E-01	1.35E+03	5.51E+02	6.25E+02	5.43E+02	5.62E+02	6.00E+02
Rancho Seco 1			1.32E+02	N/D	8.55E-02	N/D	N/D	1.47E-02	8.35E+01	6.46E+01
H. B. Robinson 2	4.32E+02	4.49E+02	6.24E+02	9.80E+02	6.85E+02	4.73E+02	4.29E+02	1.89E+02	1.86E+02	9.51E+01
Salem 1				4.00E-02	2.96E+02	4.46E+02	7.26E+02	N/D	4.93E+02	7.22E+02
Salem 2								N/R	8.42E+02	5.25E+02
San Onofre 1	4.07E+03	3.81E+03	4.00E+03	3.39E+03	1.79E+03	2.50E+03	2.32E+03	1.03E+03	2.97E+02	5.45E+02
San Onofre 2-3										8.92E+00
Seabrook 1										
Sequoyah 1&2								3.23E-01	7.65E+01	9.34E+02
South Texas 1										
South Texas 2										
St. Lucie 1				1.33E+01	2.42E+02	1.28E+02	1.28E+02	2.72E+02	3.25E+02	3.21E+02
St. Lucie 2										
Summer 1										3.19E-01
Surry 1&2	4.88E+02	2.45E+02	4.42E+02	7.82E+02	4.08E+02	7.47E+02	3.57E+02	3.85E+02	5.31E+02	9.10E+02
Three Mile Island 1		1.30E+02	4.63E+02	1.89E+02	1.92E+02	1.55E+02	5.59E+01	3.26E+01	7.11E+00	3.91E+00
Three Mile Island 2						3.83E+01	7.81E+01	6.10E-04	5.06E-02	7.20E-02
TMI 2/Epicor								N/D	N/D	N/D
Trojan				3.60E+01	3.11E+02	1.59E+02	6.80E+01	1.24E+02	1.03E+02	2.00E+02

N/R = Not Reported

N/D = Not Detectable

Table 6

Liquid Effluents Comparison By Year

Pressurized Water Reactors	Tritium (Curies)									
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Turkey Point 3&4	3.29E+02	5.80E+02	7.97E+02	7.71E+02	9.24E+02	1.17E+03	9.40E+02	7.49E+02	1.95E+02	6.27E+02
Turkey Point 3										
Turkey Point 4										
Vogtle 1&2										
Waterford 3										
Wolf Creek 1										
Yankee Rowe 1	6.94E+02	3.14E+02	2.47E+02	1.56E+02	1.39E+02	1.96E+02	1.75E+02	5.84E+01	1.03E+02	1.86E+02
Zion 1	1.00E-01	2.74E+02	1.03E+03	7.47E+02	7.24E+02	7.25E+02	6.01E+02	7.45E+02	6.04E+02	6.76E+02
Zion 2									2.66E+02	3.77E+02
Total	< 1.12E+04	1.01E+04	1.96E+04	1.70E+04	1.94E+04	1.82E+04	1.65E+04	1.37E+04	1.89E+04	1.75E+04

Table 6

Liquid Effluents Comparison By Year

Facility	Tritium (Curies)									
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Pressurized Water Reactors										
Arkansas One 1	1.09E+02	3.05E+02	3.27E+02	2.12E+02	1.50E+02	2.50E+02	3.81E+02	2.67E+02	5.18E+02	5.06E+02
Arkansas One 2	2.38E+02	3.09E+02	2.41E+02	2.30E+02	3.52E+02	2.44E+02	4.40E+02	5.33E+02	9.40E+02	2.98E+02
Beaver Valley 1&2	4.60E+02	4.12E+02	1.50E+02	2.06E+02	5.72E+02	4.09E+02	6.21E+02	4.91E+02	4.85E+02	4.65E+02
Braidwood 1					4.12E+01	2.74E+02	5.58E+02	6.50E+02	3.43E+02	9.58E+02
Braidwood 2						2.44E+02	5.58E+02	6.50E+02	3.43E+02	9.58E+02
Byron 1&2			2.61E+02	6.70E+01	4.10E+02	1.01E+03	1.29E+03	9.98E+02	1.43E+03	1.58E+03
Callaway 1		2.90E+01	5.88E+02	4.35E+02	4.48E+02	8.93E+02	6.09E+02	1.02E+03	1.23E+03	5.92E+02
Calvert Cliffs 1&2	7.56E+02	7.87E+02	4.83E+02	7.35E+02	7.38E+02	6.24E+02	2.36E+02	7.29E+01	1.02E+03	1.77E+03
Catawba 1			1.75E+02	1.18E+02	3.64E+02	3.53E+02	4.45E+02	2.97E+02	3.23E+02	3.86E+02
Catawba 2				1.18E+02	3.64E+02	3.53E+02	4.45E+02	2.97E+02	3.23E+02	3.86E+02
Comanche Peak 1								1.87E+02	4.60E+02	6.11E+02
Donald C. Cook 1&2	8.85E+02	1.37E+03	1.14E+03	6.95E+02	1.97E+03	1.10E+03	8.74E+02	1.56E+03	1.55E+03	4.33E+02
Crystal River 3	1.99E+02	4.20E+02	1.76E+02	1.73E+02	3.56E+02	5.11E+02	3.44E+02	5.10E+02	4.49E+02	3.64E+02
Davis-Besse 1	1.14E+02	1.22E+02	6.74E+01	2.09E+01	2.46E+02	3.50E+01	2.39E+02	1.27E+02	3.26E+02	3.80E+02
Diablo Canyon 1&2		1.07E+00	4.25E+02	6.98E+02	6.91E+02	4.29E+02	9.35E+02	9.68E+02	1.05E+03	1.22E+03
Joseph M. Farley 1	4.12E+02	4.23E+02	6.03E+02	7.14E+02	6.37E+02	5.16E+02	6.99E+02	7.35E+02	4.71E+02	8.18E+02
Joseph M. Farley 2	3.17E+02	3.56E+02	5.02E+02	6.22E+02	5.05E+02	7.53E+02	6.08E+02	6.72E+02	3.53E+02	7.90E+02
Fort Calhoun 1	1.53E+02	2.35E+02	1.67E+02	1.84E+02	2.28E+02	2.32E+02	2.28E+02	1.74E+02	1.77E+02	1.06E+02
R. E. Ginna	3.50E+02	4.59E+02	5.01E+02	3.57E+02	5.64E+02	3.47E+02	5.92E+02	3.21E+02	3.76E+02	2.13E+02
Haddam Neck	3.90E+03	3.66E+03	5.76E+03	2.58E+03	3.17E+03	1.18E+03	4.81E+03	9.89E+02	4.63E+03	8.63E+02
Harris 1					2.48E+02	4.01E+02	4.58E+02	7.26E+02	2.92E+02	9.02E+02
Indian Point 1&2	3.43E+02	2.22E+02	3.51E+02	3.36E+02	5.63E+02	4.39E+02	5.60E+02	6.44E+02	5.45E+02	6.95E+02
Indian Point 3	3.19E+01	5.87E+02	3.40E+02	5.67E-02	3.40E+02	5.73E+02	3.51E+02	3.33E+02	5.38E+02	4.50E+02
Kewaunee	2.92E+02	4.40E+02	3.79E+02	2.94E+02	3.51E+02	3.32E+02	3.41E+02	3.79E+02	4.34E+02	2.90E+02
Maine Yankee	2.87E+02	1.72E+02	1.84E+02	3.50E+02	1.18E+02	2.91E+02	4.22E+02	2.43E+02	3.89E+02	2.17E+02
McGuire 1	1.49E+02	3.23E+02	4.02E+02	4.58E+02	4.92E+02	5.29E+02	4.23E+02	4.58E+02	4.39E+02	4.33E+02
McGuire 2	1.49E+02	3.23E+02	4.02E+02	4.58E+02	4.92E+02	5.29E+02	4.23E+02	4.58E+02	4.39E+02	4.33E+02
Millstone 2	1.21E+02	3.97E+02	1.66E+02	2.80E+02	2.86E+02	2.59E+02	3.66E+02	5.28E+02	2.66E+02	1.06E+02
Millstone 3				5.41E+02	5.90E+02	5.47E+02	6.97E+02	7.74E+02	3.04E+02	5.96E+02
North Anna 1&2	1.61E+03	6.20E+02	1.48E+03	1.56E+03	8.36E+02	1.94E+03	1.40E+03	1.67E+03	1.16E+03	9.29E+02
Oconee 1,2&3	1.28E+03	1.28E+03	1.24E+03	1.34E+03	9.49E+02	7.10E+02	1.02E+03	9.92E+02	1.13E+03	9.98E+02
Palisades	2.35E+02	6.95E+01	4.29E+02	6.32E+01	1.19E+02	2.83E+02	8.06E+01	1.49E+02	5.52E+01	8.09E+01
Palo Verde 1			N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Palo Verde 2				N/D	N/D	N/D	N/D	N/D	N/D	N/D
Palo Verde 3					N/D	N/D	N/D	N/D	N/D	N/D
Point Beach 1&2	5.39E+02	2.10E+03	8.05E+02	8.11E+02	7.09E+02	3.57E+02	5.59E+02	8.72E+02	7.87E+02	4.16E+02
Prairie Island 1&2	5.20E+02	6.41E+02	6.96E+02	6.70E+02	4.49E+02	4.05E+02	4.64E+02	3.98E+02	5.58E+02	4.72E+02
Rancho Seco 1	7.43E+01	2.97E+02	9.00E+01	6.50E+01	1.83E+01	1.01E+02	7.29E+01	1.37E+01	9.84E-01	2.42E+01
H. B. Robinson 2	3.40E+02	1.34E+01	3.09E+02	3.42E+02	2.74E+02	5.36E+02	1.64E+02	3.53E+02	1.88E+02	3.94E+02
Salem 1	2.08E+02	3.30E+02	9.23E+02	4.10E+02	3.79E+02	6.35E+02	6.09E+02	3.53E+02	6.06E+02	2.45E+02
Salem 2	2.23E+02	3.08E+02	5.77E+02	4.38E+02	6.61E+02	3.68E+02	5.11E+02	3.03E+02	4.42E+02	2.25E+02
San Onofre 1	1.57E+01	3.39E+01	2.38E+03	4.53E+02	2.27E+03	1.53E+03	9.62E+02	1.42E+03	1.25E+03	3.00E+03
San Onofre 2-3	2.38E+02	4.55E+02	4.75E+02	7.41E+02	8.20E+02	6.43E+02	1.30E+03	9.27E+02	1.08E+03	9.69E+02
Seabrook 1							1.33E-03	1.13E+02	3.86E+02	5.01E+02
Sequoyah 1&2	7.35E+02	1.82E+03	6.33E+02	2.46E+02	1.19E+02	2.01E+02	1.15E+03	8.53E+02	1.65E+03	1.44E+03
South Texas 1						1.99E+02	3.17E+02	3.45E+02	6.21E+02	6.19E+02
South Texas 2							2.72E+02	4.70E+02	4.69E+02	7.42E+02
St. Lucie 1	3.46E+02	2.21E+02	2.86E+02	2.78E+02	3.38E+02	2.75E+02	4.05E+02	2.84E+02	4.06E+02	4.00E+02
St. Lucie 2	3.77E+01	2.21E+02	3.64E+02	2.78E+02	3.38E+02	2.75E+02	4.05E+02	2.84E+02	4.06E+02	4.00E+02
Summer 1	2.27E+02	2.25E+02	3.11E+02	3.75E+02	7.36E+02	7.55E+02	6.85E+02	4.22E+02	8.13E+02	6.08E+02
Surry 1&2	7.17E+02	8.12E+02	7.50E+02	8.73E+02	8.15E+02	4.94E+02	4.29E+02	1.11E+03	9.13E+02	9.74E+02
Three Mile Island 1	3.09E+00	1.72E+00	9.06E+00	1.69E+02	1.97E+02	3.02E+02	3.73E+02	2.10E+02	3.59E+02	5.61E+02
Three Mile Island 2	3.75E-04	1.56E-04	2.22E-03	1.60E-03	1.48E-03	5.49E-03	9.76E-04	8.80E-04	6.19E-03	3.53E-03
TMI 2/Epicor	N/D	N/D	**	**	**	**	**	**	**	**
Trojan	2.34E+02	1.87E+02	2.65E+02	2.43E+02	1.75E+02	3.75E+02	3.18E+02	2.19E+02	1.69E+02	1.96E+02

** Included with Three Mile Island 2 total

N/D = Not Detectable

Table 6

Liquid Effluents Comparison By Year

Tritium (Curies)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turkey Point 3&4	7.12E+02	8.91E+02								
Turkey Point 3			4.33E+02	3.64E+02	2.69E+02	2.99E+02	2.29E+02	3.22E+02	1.02E+02	2.21E+02
Turkey Point 4			4.33E+02	3.64E+02	2.69E+02	2.99E+02	2.29E+02	3.22E+02	1.02E+02	2.21E+02
Vogtle 1&2					3.21E+02	3.90E+02	9.18E+02	1.17E+03	1.09E+03	1.48E+03
Waterford 3			2.54E+01	4.31E+02	5.25E+02	5.03E+02	3.58E+02	7.12E+02	3.44E+02	4.95E+02
Wolf Creek 1			1.83E+02	3.77E+02	3.17E+02	4.06E+02	5.88E+02	5.90E+02	7.17E+02	4.51E+02
Yankee Rowe 1	1.68E+02	1.64E+02	2.28E+02	1.76E+02	2.19E+02	1.96E+02	1.66E+02	1.92E+02	2.03E+02	6.31E+01
Zion 1	1.74E+02	1.74E+02	1.35E+02	2.67E+02	2.16E+02	4.11E+02	1.81E+02	2.90E+02	**	**
Zion 2	2.56E+02	5.11E+02	5.21E+02	4.46E+02	4.40E+02	5.58E+02	8.66E+02	3.91E+02	9.30E+02	5.22E+02
Total	1.81E+04	2.27E+04	2.78E+04	2.32E+04	2.81E+04	2.71E+04	3.40E+04	3.18E+04	3.74E+04	3.55E+04

** Included with Zion 2 total

Table 7

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Boiling Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Big Rock Point 1	2.70E+00	1.10E+00	2.02E+00	7.70E-01	3.92E-01	2.74E-01	9.03E-01	7.82E-01	3.91E-01	2.60E-01
Browns Ferry 1,2 & 3		8.00E-01	2.70E+00	3.95E+00	1.19E+00	1.32E+01	1.02E+01	9.38E+00	2.24E+00	5.36E+01
Brunswick 1&2			1.89E+00	3.29E+00	6.22E+00	3.48E+00	5.10E+00	1.26E+00	2.20E+00	2.32E+00
Clinton 1										
Cooper		1.40E+00	1.74E+00	7.00E-02	7.50E-01	3.05E+00	< 2.48E+00	< 1.10E+01	< 3.61E+00	< 5.44E+00
Dresden 1	9.20E+00	6.90E+00	8.40E-01	3.60E-01	6.00E-01	3.26E-01	2.65E-02	N/D	N/D	N/D
Dresden 2-3	2.59E+01	3.31E+01	8.10E-01	1.21E+00	4.40E-01	3.99E-01	2.65E-01	7.16E-01	6.12E-02	1.91E-02
Duane Arnold			< 1.00E-02	< 1.00E-02	2.32E-03	2.73E-01	5.10E-04	N/D	N/D	4.16E-06
Ferni 2										
James A. Fitzpatrick			5.32E+00	6.01E+00	8.85E-01	1.58E+00	6.46E-01	1.51E+00	2.51E+00	6.50E-01
Grand Gulf 1										
Edwin I. Hatch 1			6.00E-02	4.00E-02	2.50E+01	4.03E-02	4.82E-02	6.83E-02	3.73E-01	7.00E-01
Edwin I. Hatch 2							4.57E-02	1.63E-01	1.83E-01	
Hope Creek 1										
Humboldt Bay 3	2.40E+00	4.40E+00	3.79E+00	9.90E-01	9.17E-01	1.95E-01	9.55E-02	1.39E-01	1.55E-01	3.46E-01
LaCrosse	3.59E+01	1.31E+01	1.42E+01	< 5.78E+00	2.13E+01	8.86E+00	1.67E+00	2.13E+00	2.26E-01	5.83E+00
LaSalle 1&2										9.82E-01
Limerick 1&2										
Milstone 1	3.34E+01	1.98E+02	1.99E+02	9.65E+00	5.27E-01	1.75E-01	2.10E-01	7.24E-01	3.94E-01	1.15E+00
Monticello	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	3.11E-06	5.80E-07
Nine Mile Point 1	4.08E+01	2.56E+01	2.10E+01	2.14E+00	3.03E-01	N/D	1.89E+00	N/D	5.35E+00	2.51E-03
Nine Mile Point 2										
Oyster Creek 1	4.20E+00	7.00E-01	4.10E-01	2.20E-01	9.81E-02	1.53E-02	6.59E-03	5.06E-01	2.48E-01	8.10E-02
Peach Bottom 2&3	< 1.00E-01	9.00E-01	9.30E-01	3.38E+00	2.23E+00	5.11E+00	1.95E+01	1.90E+00	1.97E+00	9.33E+00
Perry 1										
Pilgrim 1	9.00E-01	4.20E+00	8.01E+00	2.33E+00	3.41E+00	1.77E+00	5.12E-01	2.73E+00	1.94E+00	8.72E-01
Quad-Cities 1&2	2.14E+01	3.88E+01	1.71E+01	6.99E+00	1.34E+00	2.24E+00	1.31E+00	1.31E+01	3.27E+00	4.03E-01
River Bend 1										
Shoreham 1										
Susquehanna 1&2										< 1.99E-01
Vermont Yankee 1	< 1.00E-01	N/D	< 1.00E-02	< 1.00E-02	1.55E-01	N/D	2.40E-04	N/D	1.02E-02	N/D
WNP-2										
Total	< 1.77E+02	3.29E+02	< 2.80E+02	< 4.72E+01	6.58E+01	4.10E+01	< 4.49E+01	< 4.60E+01	< 2.51E+01	< 8.24E+01
* Fort St. Vrain							1.89E-04	6.37E-05	3.64E-04	4.34E-04

* High temperature gas cooled reactor
N/D = Not Detectable

Table 7

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Boiling Water Reactors										
Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Big Rock Point 1	7.82E-02	1.48E-01	1.53E-01	7.09E-02	2.73E-01	2.18E-01	2.32E-01	3.64E-02	1.22E-01	1.50E-01
Browns Ferry 1,2 & 3	1.28E+01	6.30E+00	1.34E+00	5.39E-01	3.25E-01	2.42E-01	1.71E-01	3.02E-01	8.39E-01	2.41E+00
Brunswick 1&2	1.08E+00	5.65E-01	1.15E-01	1.26E-01	7.15E-01	8.32E-01	1.56E+00	4.57E-01	4.36E-01	4.94E-02
Clinton 1					1.54E-02	1.10E-01	1.74E-02	2.53E-02	3.29E-02	1.82E-02
Cooper	< 1.23E+01	< 6.30E+00	< 1.30E+01	< 7.40E+00	2.25E+00	2.33E+00	2.19E+00	2.04E+00	2.29E+00	3.97E+00
Dresden 1	N/D	N/D	N/D	N/D	N/D	+	+	+	+	+
Dresden 2-3	1.24E-02	1.15E-01	2.03E+00	2.14E-01	3.78E-01	1.16E-01	6.53E-01	7.12E-01	7.63E-01	2.21E-02
Duane Arnold	N/D	1.90E-09	8.24E-04	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fermi 2				3.67E-03	2.10E-02	7.41E-02	1.68E-01	2.18E-01	2.15E-01	1.52E-04
James A. Fitzpatrick	7.71E-01	9.79E-02	1.80E-01	1.92E-02	7.84E-02	4.86E-02	5.46E-02	2.74E-02	3.08E-02	1.15E-02
Grand Gulf 1	4.42E-03	3.16E-02	2.13E-01	3.01E-01	3.64E-01	3.96E-01	3.20E-01	6.45E-01	8.76E-01	1.20E-01
Edwin I. Hatch 1	9.09E-01	1.05E+00	4.80E-01	4.88E-01	6.85E-01	**	**	**	**	**
Edwin I. Hatch 2	3.29E-01	2.67E-01	2.63E-01	3.02E-01	1.30E-01	9.83E-01	2.48E-01	3.01E-01	7.23E-01	7.54E-01
Hope Creek 1				7.56E-01	1.62E+00	7.24E-01	1.05E+00	1.49E+00	7.88E-01	3.06E-01
Humboldt Bay 3	9.89E-02	1.64E-01	1.25E-01	4.69E-02	1.19E-02	7.60E-03	8.42E-03	5.77E-03	6.88E-03	9.81E-03
LaCrosse	3.75E+00	3.26E+00	1.83E+00	5.00E+00	1.16E+00	4.47E-01	1.69E-01	6.86E-02	1.59E-01	5.23E-02
LaSalle 1&2	8.60E+00	8.48E-02	3.84E+00	1.78E-02	8.89E-01	1.10E+01	4.01E-01	2.46E-02	N/D	2.84E-04
Limerick 1&2		6.45E-04	2.18E-02	5.74E-03	7.45E-02	N/D	1.12E-01	3.43E-01	3.34E-02	2.95E-02
Millstone 1	8.08E-01	3.78E-02	4.66E-01	7.73E-01	1.14E+00	1.08E+00	9.06E-01	1.39E-01	1.36E+00	4.63E-01
Monticello	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Nine Mile Point 1	1.11E-02	N/D	N/D	< 6.70E-04	N/D	N/D	N/D	1.95E-03	N/D	N/D
Nine Mile Point 2					1.30E+00	3.08E+00	2.20E-01	6.34E-02	1.68E-01	2.60E-01
Oyster Creek 1	3.63E-03	6.84E-03	N/D	N/D	6.63E-03	2.68E-02	5.01E-02	6.70E-05	1.61E-04	N/D
Peach Bottom 2&3	2.24E+00	6.15E+00	2.16E+00	4.59E-01	3.31E-01	2.02E-01	1.13E-01	1.36E-02	3.73E-02	2.62E-02
Perry 1				3.67E-03	1.47E-02	2.50E-01	1.16E+00	6.10E-01	1.18E-01	5.98E-02
Pilgrim 1	9.35E-01	4.75E+00	1.06E+00	< 2.11E-01	< 1.47E+00	3.56E-02	2.49E-02	1.56E-02	3.40E-02	3.36E-03
Quad-Cities 1&2	1.37E-01	7.23E-02	1.46E+00	2.36E-01	7.10E-02	5.60E-02	4.84E-01	1.13E-01	7.33E-01	3.92E-02
River Bend 1				1.06E-01	7.96E-02	5.58E-01	1.11E+00	7.37E-01	3.62E-01	1.66E+00
Shoreham 1				7.17E-03	3.41E-03	1.98E-05	1.78E-05	N/D	1.74E-04	6.03E-04
Susquehanna 1&2	2.49E+00	1.45E-01	6.35E-01	7.92E-01	3.12E-01	9.48E-02	1.02E-01	1.34E-01	6.21E-02	4.84E-02
Vermont Yankee 1	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	2.66E-05
WNP-2		2.74E-02	1.09E-02	2.32E-02	1.21E-02	6.10E-03	5.04E-02	1.53E-02	3.45E-02	9.49E-02
Total	< 4.74E+01	< 2.96E+01	< 2.94E+01	< 1.79E+01	< 1.37E+01	2.29E+01	1.16E+01	8.54E+00	1.02E+01	1.06E+01
* Fort St. Vrain	1.73E-02	1.27E-03	1.84E-03	2.30E-05	1.18E-06	1.69E-04	1.22E-05	8.22E-05	1.21E-04	4.35E-05

* High temperature gas cooled reactor

** Included with Edwin I. Hatch 2 total

+ Included with Dresden 2-3 total

N/D = Not Detectable

Table 8

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Arkansas One 1		8.50E+00	3.11E+00	1.31E+01	4.50E+00	6.05E+00	3.09E+00	3.42E+00	7.50E+00	5.80E+00
Arkansas One 2							1.30E+00	4.13E+00	2.95E+00	5.90E+00
Beaver Valley 1&2				1.70E-01	6.52E-01	2.63E-01	1.21E-01	1.04E-01	1.44E-01	1.47E-01
Braidwood 1										
Braidwood 2										
Byron 1&2										
Callaway 1										
Calvert Cliffs 1&2			1.44E+00	1.18E+00	3.48E+00	6.13E+00	7.80E+00	4.53E+00	2.68E+00	5.26E+00
Catawba 1										
Catawba 2										
Comanche Peak 1										
Donald C. Cook 1&2			2.60E-01	1.87E+00	1.52E+00	1.48E+00	2.58E+00	1.37E+00	1.86E+00	1.90E+00
Crystal River 3					1.54E-02	2.96E-02	4.16E-01	1.46E-01	1.29E-01	1.07E-01
Davis-Besse 1					2.60E-02	9.01E-02	4.28E-02	2.07E-01	7.92E-01	2.19E-01
Diablo Canyon 1&2										
Joseph M. Farley 1						1.03E-01	5.86E-02	6.18E-02	1.31E-01	5.94E-02
Joseph M. Farley 2									2.69E-02	2.90E-02
Fort Calhoun 1	< 1.00E-01	2.30E+00	3.60E-01	5.50E-01	3.63E-01	5.95E-01	2.45E-01	5.33E-01	1.75E-01	2.03E-01
R. E. Ginna	1.00E-01	1.00E-01	4.20E-01	6.90E-01	6.47E-02	6.07E-02	8.63E-02	1.96E-02	3.85E-02	6.17E-01
Haddam Neck	3.00E+00	2.20E+00	1.20E+00	1.30E-01	1.71E+00	9.50E-01	8.67E-01	2.76E-01	7.12E-01	6.93E-02
Harns 1										
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	1.26E+00	5.67E+00	2.41E+00
Indian Point 3				Shown With	Other Unit	1.03E+00	4.02E-01	2.90E+00	2.62E+00	5.46E-01
Kewaunee		4.00E-01	7.20E-01	2.83E+00	1.26E+00	6.99E-01	8.94E-01	6.17E-01	8.15E-01	1.52E+00
Maine Yankee	< 1.00E-01	4.00E+00	3.21E+00	< 2.84E+00	4.42E-01	1.04E-01	4.63E-01	2.97E-01	4.36E-01	7.03E-01
McGuire 1									3.94E-01	1.75E+00
McGuire 2										
Millstone 2			2.00E-02	2.60E-01	1.56E+00	2.79E+00	4.87E+00	2.81E+00	4.18E+00	1.39E+01
Millstone 3										
North Anna 1&2						2.68E-01	5.89E-01	1.05E+00	6.76E-01	1.32E+00
Oconee 1,2 & 3	2.80E+00	1.90E+00	5.05E+00	7.93E+00	3.62E+01	6.51E+00	9.24E-01	1.54E+00	1.75E+00	1.04E+00
Palisades	2.78E+01	5.90E+00	3.45E+00	4.40E-01	9.29E-02	9.65E-02	1.28E-01	8.73E-03	3.31E-02	1.27E-01
Palo Verde 1										
Palo Verde 2										
Palo Verde 3										
Point Beach 1&2	8.00E-01	2.00E-01	2.34E+00	3.24E+00	1.50E+00	6.86E-01	7.25E-01	6.29E-01	1.01E+00	2.95E+00
Pratt Island 1&2	< 1.00E-01	< 1.00E-01	4.50E-01	1.00E-01	1.33E-02	4.94E-03	9.00E-03	1.32E-02	9.12E-03	2.23E-03
Rancho Seco 1			< 1.00E-02	N/D	N/D	N/D	N/D	3.78E-03	5.92E-01	2.16E-01
H. B. Robinson 2	6.00E-01	2.50E+00	4.50E-01	3.80E-01	3.29E-01	1.78E-01	2.99E-01	3.58E-01	1.84E+00	1.20E+00
Salem 1				< 1.00E-02	2.88E+00	4.02E+00	3.98E+00	2.65E+00	2.80E+00	3.22E+00
Salem 2								3.89E-01	1.51E+00	3.21E+00
San Onofre 1	1.60E+01	5.00E+00	1.22E+00	7.43E+00	9.84E+00	1.18E+01	1.10E+01	1.12E+01	3.64E+00	2.15E+00
San Onofre 2-3										6.32E-01
Seabrook 1										
Sequoyah 1&2								N/R	2.76E+00	9.82E+00
South Texas 1										
South Texas 2										
St. Lucie 1				8.00E-02	5.80E+00	2.80E+00	2.67E+00	2.36E+00	2.46E+00	3.07E+00
St. Lucie 2										
Summer 1										1.24E-04
Surry 1&2	1.00E-01	3.80E+00	9.27E+00	3.37E+01	6.55E+01	2.41E+00	2.53E+00	3.85E+00	6.11E+00	6.68E+00
Three Mile Island 1		1.30E+00	7.00E-02	1.00E-01	1.94E-01	6.14E-01	4.91E-01	1.83E-01	8.69E-02	5.29E-02
Three Mile Island 2						3.92E-01	3.31E-01	1.45E-05	2.22E-05	4.25E-05
TMI 2/Epicor								N/D	N/D	N/D
Trojan				2.77E+00	4.19E+00	7.07E-01	5.55E-01	7.87E-01	9.94E-01	8.56E-01

N/R = Not Reported

N/D = Not Detectable

Table 8

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Pressurized Water Reactors

Facility	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Turkey Point 3&4	< 1.00E-01	1.60E+00	3.07E+00	< 8.65E+00	8.90E+00	3.32E+00	4.10E-01	6.78E-01	3.03E-01	1.68E+00
Turkey Point 3										
Turkey Point 4										
Vogtle 1&2										
Waterford 3										
Wolf Creek 1										
Yankee Rowe 1	< 1.00E-01	< 1.00E-01	2.00E-02	< 1.00E-02	1.80E-02	8.14E-02	1.17E-02	1.75E-02	1.43E-02	9.53E-03
Zion 1	< 1.00E-01	< 1.00E-01	< 1.00E-02	1.60E-01	9.50E-01	9.51E-01	7.00E-01	4.74E-01	1.61E+00	7.22E-01
Zion 2									1.05E+00	1.65E+00
Total	< 5.40E+01	< 4.22E+01	< 4.11E+01	< 9.36E+01	1.55E+02	5.72E+01	5.05E+01	4.89E+01	6.05E+01	8.17E+01

Table 8

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Arkansas One 1	4.30E+00	4.10E+00	3.53E+00	5.09E+00	2.45E+00	3.73E+00	2.04E+00	2.36E+00	1.12E+00	3.59E+00
Arkansas One 2	3.70E+00	2.48E+00	4.36E+00	3.43E+00	1.85E+00	4.46E+00	2.65E+00	2.52E-01	2.73E+00	1.85E+00
Beaver Valley 1&2	6.09E-02	2.03E-01	1.13E-01	1.19E-01	6.69E-01	1.02E-01	5.45E-01	2.55E+00	3.14E-01	3.41E-01
Braidwood 1					5.00E-02	8.57E+00	2.50E+00	2.13E+00	1.01E+01	5.23E-01
Braidwood 2						3.04E+00	2.52E+00	2.13E+00	1.01E+01	5.23E-01
Byron 1&2			1.63E+01	4.05E+00	2.48E+00	1.40E+00	6.35E-01	1.18E+00	6.70E-01	4.10E+00
Callaway 1		1.07E-03	4.97E-03	3.83E-02	4.92E-01	7.74E-02	1.01E-02	3.86E-02	1.59E-02	4.54E-03
Calvert Cliffs 1&2	2.24E+00	1.64E+00	2.38E+00	1.79E+00	5.19E+00	2.64E+00	2.07E+00	1.42E+00	1.59E+00	1.44E+00
Catawba 1			1.26E+00	3.82E-01	6.53E-01	5.42E-01	3.42E-01	9.78E-01	3.81E-01	4.65E-01
Catawba 2				3.82E-01	6.53E-01	5.42E-01	3.42E-01	9.78E-01	3.81E-01	4.65E-01
Comanche Peak 1								1.19E-02	1.57E-01	3.99E-01
Donald C. Cook 1&2	6.83E-01	1.19E+00	2.26E+00	3.34E-01	2.00E+00	4.44E-01	8.06E-01	1.61E+00	1.03E+00	1.12E+00
Crystal River 3	1.50E-01	2.34E-01	1.51E+00	8.12E-01	9.55E-01	2.31E-01	2.36E-01	6.19E-01	1.80E-01	1.63E+00
Davis-Besse 1	5.39E-01	1.89E-01	1.85E-01	6.15E-02	6.51E-02	1.68E-01	1.84E-01	1.41E-01	1.84E-01	1.10E-01
Diablo Canyon 1&2		1.16E-02	3.20E+00	1.11E+01	2.86E+00	2.00E+00	1.61E+00	2.80E+00	8.47E-01	7.44E-01
Joseph M. Farley 1	5.75E-02	6.34E-02	6.72E-02	1.02E-01	5.09E-02	7.97E-02	7.31E-02	7.47E-02	2.14E-01	1.77E-01
Joseph M. Farley 2	2.04E-02	8.63E-02	3.77E-02	8.28E-02	4.63E-02	8.53E-02	7.34E-02	8.29E-02	1.90E-01	1.77E-01
Fort Calhoun 1	1.44E-01	2.91E+00	2.88E-01	8.37E-02	2.03E-01	3.08E-01	5.62E-01	8.05E-01*	2.08E+00	5.90E-01
R. E. Ginna	1.93E-01	1.69E-01	5.22E-01	6.47E-02	5.88E-02	3.43E-02	8.12E-02	1.50E-01	1.52E-01	3.42E-01
Haddam Neck	4.80E-01	2.63E-01	8.44E-02	3.10E-01	4.26E-01	6.87E-01	3.90E-01	2.69E+00	7.43E-01	1.73E-01
Harris 1					9.08E-01	8.04E-02	2.42E-01	7.31E-01	6.62E-01	3.14E-01
Indian Point 1&2	4.02E+00	2.67E+00	1.85E+00	3.61E+00	6.02E+00	2.84E+00	6.38E-01	1.06E+00	1.30E+00	1.53E+00
Indian Point 3	5.44E-01	1.26E+00	4.18E-01	1.95E-01	3.47E-01	3.22E-01	5.92E-01	3.09E-01	2.86E-01	2.13E-01
Kewaunee	5.43E-01	1.01E+00	1.35E+00	5.33E-01	1.29E+00	5.01E-01	1.22E+00	2.06E-01	2.35E-01	6.42E-02
Maine Yankee	1.99E-01	8.62E-02	3.11E-02	2.99E-01	8.81E-01	3.49E-01	1.83E-01	1.87E-01	4.13E-01	2.51E-01
McGuire 1	1.87E+00	1.51E+00	6.21E-01	7.73E-01	1.57E+00	2.57E+00	1.54E+00	2.00E+00	1.04E+00	3.27E-01
McGuire 2	1.87E+00	1.51E+00	6.21E-01	7.73E-01	1.57E+00	2.57E+00	1.54E+00	2.00E+00	1.04E+00	3.27E-01
Millstone 2	7.81E+00	3.55E+00	4.60E+00	4.49E+00	4.07E+00	8.89E+00	1.06E+01	8.76E+00	2.06E+00	2.14E+00
Millstone 3				3.01E+00	5.40E+00	3.15E+00	5.94E+00	2.47E+00	2.99E+00	2.42E+00
North Anna 1&2	5.88E+00	4.51E+00	5.07E+00	9.41E-01	1.33E+00	4.32E-01	1.16E+00	6.75E-01	3.20E-01	4.98E-01
Oconee 1,2 & 3	1.43E+00	1.58E+00	4.16E+00	5.02E+00	2.90E+00	3.10E+00	3.82E+00	3.11E+00	1.40E+00	2.58E+00
Palisades	7.48E-02	3.68E-02	5.83E-02	1.40E-01	9.23E-02	3.43E-02	3.75E-03	7.75E-03	1.14E-02	3.88E-03
Palo Verde 1			N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Palo Verde 2				N/D	N/D	N/D	N/D	N/D	N/D	N/D
Palo Verde 3					N/D	N/D	N/D	N/D	N/D	N/D
Point Beach 1&2	1.27E+00	1.22E+01	1.90E+00	1.60E+01	7.55E-01	9.58E-02	5.58E-02	1.16E-02	5.89E-02	4.29E-01
Prairie Island 1&2	3.16E-02	1.91E-02	2.75E-02	6.01E-01	6.04E-02	2.55E-01	1.73E-01	1.30E-01	1.85E-01	6.66E-01
Rancho Seco 1	2.81E-01	6.33E-01	7.39E-03	1.45E-03	5.78E-04	5.79E-03	2.15E-03	2.08E-04	2.04E-04	4.83E-04
H. B. Robinson 2	8.23E-01	3.90E-01	9.41E-02	2.61E-01	7.36E-01	9.64E-01	2.82E-01	3.60E-01	2.36E-01	2.20E-01
Salem 1	2.97E+00	3.31E+00	2.88E+00	4.35E+00	3.33E+00	3.21E+00	3.11E+00	3.00E+00	3.35E+00	3.27E+00
Salem 2	2.85E+00	2.75E+00	2.80E+00	6.11E+00	4.07E+00	3.23E+00	3.56E+00	3.14E+00	2.31E+00	3.63E+00
San Onofre 1	1.22E+00	2.74E+00	7.79E+00	8.51E-01	8.42E-01	7.11E-01	6.87E-01	4.03E-01	4.22E-01	3.79E-01
San Onofre 2-3	2.79E+00	1.30E+01	1.12E+01	8.20E-01	5.37E-01	1.16E+00	9.19E-01	2.02E-01	9.94E-02	1.03E-01
Seabrook 1							1.09E-04	2.21E-03	1.22E-01	1.19E-01
Sequoyah 1&2	4.61E+00	3.23E+00	1.45E+00	1.65E-01	4.66E-01	4.48E-01	3.54E-01	1.22E+00	1.48E+00	1.45E+00
South Texas 1						2.24E-01	3.02E+00	7.09E+00	5.08E+00	2.12E+00
South Texas 2							1.17E-02	5.72E+00	3.61E+00	1.74E+00
St. Lucie 1	2.99E+00	1.93E+00	2.72E+00	2.53E+00	5.95E-01	2.64E-01	2.56E-01	8.27E-01	3.98E-01	5.12E-01
St. Lucie 2	4.37E-01	1.93E+00	2.75E+00	2.43E+00	5.42E-01	2.59E-01	2.53E-01	7.68E-01	3.09E-01	5.12E-01
Summer 1	1.47E+00	4.54E+00	7.09E-01	3.26E-01	4.88E-01	7.55E-01	1.37E+00	3.56E-01	6.08E-01	2.23E-01
Surry 1&2	1.45E+01	9.73E+00	8.55E+00	8.77E+00	5.17E+00	2.41E+00	3.87E+00	4.60E+00	2.84E+00	8.27E-02
Three Mile Island 1	8.12E-02	3.41E-02	6.30E-03	1.41E-02	4.41E-02	4.68E-02	1.61E-02	2.36E-02	3.50E-02	2.60E-02
Three Mile Island 2	9.03E-05	6.46E-04	1.77E-04	1.87E-04	1.16E-04	1.12E-03	3.15E-04	1.77E-04	8.82E-05	1.22E-04
TMI 2/Epicor	N/D	N/D	**	**	**	**	**	**	**	**
Trojan	3.10E-01	3.49E-01	4.65E-01	2.64E-01	2.09E-01	2.01E-01	1.61E-01	1.44E-01	5.80E-02	8.95E-02

* This number is a correction to that reported in the 1990 report

** Included with Three Mile Island 2 total

N/D = Not Detectable

Table 8

Liquid Effluents Comparison By Year

Mixed Fission and Activation Products (Curies)

Pressurized Water Reactors

Facility	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turkey Point 3&4	1.13E+00	2.27E-01								
Turkey Point 3			4.48E-01	2.53E-01	3.74E-01	3.27E-01	1.56E-01	1.41E-01	4.06E-01	2.98E-01
Turkey Point 4			4.48E-01	2.53E-01	3.74E-01	3.26E-01	1.58E-01	1.40E-01	3.29E-01	2.98E-01
Vogtle 1&2					5.77E-01	1.66E+00	4.03E-01	1.01E+00	2.76E-01	1.94E-01
Waterford 3			2.88E-01	4.02E+00	1.28E+00	1.41E+00	1.28E+00	7.30E-01	9.10E-01	1.31E+00
Wolf Creek 1			6.35E-01	2.26E+00	2.90E-01	3.79E-01	7.23E-01	3.15E-01	2.12E+00	2.91E-01
Yankee Rowe 1	1.30E-02	3.06E-02	1.69E-02	1.36E-02	1.56E-02	7.10E-02	4.88E-03	4.17E-03	1.33E-02	6.23E-03
Zion 1	1.50E+00	6.82E+00	3.24E-01	5.57E-01	7.53E-01	1.61E+00	9.07E-01	2.65E+00	**	**
Zion 2	1.15E+00	7.06E+00	2.05E+00	1.04E+00	8.20E-01	1.97E+00	2.57E+00	9.26E-01	1.68E+00	1.81E+00
Total	7.72E+01	1.02E+02	1.02E+02	9.79E+01	6.99E+01	7.60E+01	6.95E+01	7.84E+01	7.19E+01	4.92E+01

** Included with Zion 2 total

Table 9

Solid Waste Summary 1992

Boiling Water Reactors			
Facility	Volume (Cubic Meters)	Activity (Curies)	No. Of Shipments
Big Rock Point 1	0.00E+00	0.00E+00	0 ***
Browns Ferry 1,2.&3	3.12E+02	3.54E+04	122
Brunswick 1&2	4.16E+02	5.45E+04	91
Clinton 1	2.34E+02	2.13E+03	56
Cooper	1.43E+02	1.01E+05	44
Dresden 1,2.&3	2.46E+03	3.32E+04	192
Duane Arnold	3.01E+02	4.21E+04	19
Fermi 2	0.00E+00	0.00E+00	0 ***
James A. Fitzpatrick	2.53E+02	1.67E+03	65
Grand Gulf 1	3.30E+02	2.64E+03	118
Edwin I. Hatch 1&2	4.05E+02	3.79E+04	76
Hope Creek 1	2.03E+02	2.17E+04	60
Humboldt Bay 3	3.86E+01	6.43E-02	2
LaCrosse	3.73E+01	4.36E-01	11
LaSalle 1&2	1.76E+03	5.49E+03	99
Limerick 1&2	4.70E+02	9.39E+04	283
Millstone 1	2.78E+02	2.37E+04	43
Monticello	6.12E+01	5.93E+04	31
Nine Mile Point 1	1.87E+02	6.43E+04	84
Nine Mile Point 2	2.19E+02	1.98E+04	85
Oyster Creek 1	8.35E+02	2.55E+04	77
Peach Bottom 2&3	1.76E+04	2.45E+04	238
Perry 1	1.08E+03	2.32E+03	47
Pilgrim 1	1.78E+02	5.46E+02	34
Quad-Cities 1&2	4.33E+02	2.66E+03	90
River Bend 1	4.30E+02	3.15E+02	126
Shoreham 1	3.35E+03	6.81E+02	136
Susquehanna 1&2	3.40E+02	9.89E+02	53
Vermont Yankee 1	4.16E+02	2.06E+04	23
WNP-2	4.77E+02	1.25E+03	69
Total	3.32E+04	6.78E+05	2374
* Fort St. Vrain	3.79E+02	3.27E+04	70

* High temperature gas cooled reactor

*** These plants store waste on-site

Note: If the volume before compaction and the volume after compaction were both given, the volume used for this table is the volume after compaction. If more than one volume was given, both are shown in the individual plant report. If a description of what the volume represents was given, that is also shown in the individual plant report.

Table 10

Solid Waste Summary 1992

Pressurized Water Reactors			
Facility	Volume (Cubic Meters)	Activity (Curies)	No. Of Shipments
Arkansas One 1&2	1.75E+02	2.61E+03	47
Beaver Valley 1&2	1.63E+02	4.71E+02	31
Braidwood 1&2	5.98E+02	8.10E+02	33
Byron 1&2	1.59E+02	8.78E+02	23
Callaway 1	8.85E+01	1.03E+03	26
Calvert Cliffs 1&2	1.04E+03	6.33E+03	39
Catawba 1&2	2.08E+02	9.88E+02	31
Comanche Peak 1	1.27E+02	2.33E+02	22
Donald C. Cook 1&2	0.00E+00	0.00E+00	0 ***
Crystal River 3	6.42E+02	3.30E+02	22
Davis-Besse 1	3.71E+01	4.10E+01	6
Diablo Canyon 1&2	1.77E+01	9.95E+02	39
Joseph M. Farley 1&2	2.39E+02	2.15E+03	108
Fort Calhoun 1	6.45E+01	4.41E+02	69
K.E. Ginna	5.46E+01	5.84E+02	12
Haddam Neck	1.41E+02	1.48E+03	26
Harris 1	7.12E+01	2.90E+02	100
Indian Point 1&2	1.64E+02	6.07E+02	22
Indian Point 3	1.81E+02	2.23E+02	15
Kewaunee	2.35E+01	1.93E+02	6
Maine Yankee	1.83E+02	8.06E+03	30
McGuire 1&2	1.65E+02	1.19E+03	41
Millstone 2	7.59E+02	3.67E+03	44
Millstone 3	4.13E+01	4.81E+02	8
North Anna 1&2	2.17E+02	3.84E+02	44
Oconee 1,2&3	1.46E+02	4.35E+02	177
Palisades	0.00E+00	0.00E+00	0 ***
Palo Verde 1,2&3	4.25E+02	1.54E+03	154
Point Beach 1&2	1.28E+02	3.71E+02	72
Prairie Island 1&2	1.12E+01	2.79E+01	6
Rancho Seco 1	3.47E+01	3.68E+00	2
H.B. Robinson 2	6.25E+01	4.47E+02	95
Salem 1&2	9.78E+01	8.32E+02	29
San Onofre	2.04E+01	4.16E-01	58
San Onofre 1	9.36E+01	6.84E+02	0
San Onofre 2-3	2.93E+02	1.55E+03	0
Seabrook 1	0.00E+00	0.00E+00	0 ***
Sequoyah 1&2	1.27E+02	1.35E+03	129
South Texas 1&2	8.27E+01	4.67E+02	23
St. Lucie 1&2	2.14E+02	3.88E+02	28
Summer 1	1.14E+02	2.68E+02	179
Surry 1&2	2.10E+02	4.10E+02	43
Three Mile Island 1	6.87E+02	2.03E+02	45
Three Mile Island 2	1.19E+03	1.27E+03	60
TMI 2/Epicor	**	**	**
Trojan	1.20E+02	7.10E+02	19
Turkey Point 3&4	2.14E+03	2.30E+02	39
Vogtle 1&2	1.09E+02	1.07E+03	37
Waterford 3	8.25E+02	3.93E+03	27
Wolf Creek 1	5.24E+01	2.43E+02	18
Yankee Rowe 1	2.02E+02	3.24E+04	15
Zion 1&2	2.74E+02	2.19E+04	41
Total	1.32E+04	1.05E+05	2140

* Represents solid waste shipped by plant but not broken down into units 1, 2, & 3

** Included with Three Mile Island 2 totals

*** These plants store waste on-site

Note: If the volume before compaction and the volume after compaction were both given, the volume used for this table is the volume after compaction. If more than one volume was given, both are shown in the individual plant report. If a description of what the volume represents was given, that is also shown in the individual plant report.

Table 11

Solid Waste Comparison By Year

Boiling Water Reactors	Volume (Cubic Meters) - Activity (Curies)							
	1977		1978		1979		1980	
Big Rock Point 1	7.22E+01	9.68E+02	3.10E+01	2.56E+01	8.99E+01	2.77E+02	4.20E+01	3.09E+01
Browns Ferry 1,2,&3	1.82E+03	1.10E+04	2.90E+03	1.33E+03	2.29E+03	4.17E+03	2.49E+03	6.46E+03
Brunswick 1&2	2.47E+03	3.24E+03	2.02E+03	2.14E+03	3.09E+03	4.29E+03	6.73E+03	7.55E+03
Clinton 1								
Cooper	2.83E+02	2.85E+02	3.29E+02	3.84E+02	5.65E+02	9.69E+01	4.35E+02	7.05E+02
Dresden 1,2 & 3	2.25E+03	1.13E+04	1.77E+03	1.88E+03	1.04E+03	8.45E+02	1.16E+03	4.46E+03
Duane Arnold	5.45E+02	4.98E+02	1.10E+03	1.86E+03	7.99E+02	8.01E+02	7.35E+02	7.00E+02
Fermi 2								
James A. Fitzpatrick	1.23E+03	6.17E+03	8.70E+02	3.19E+02	8.04E+02	1.06E+03	7.50E+02	8.86E+02
Grand Gulf 1								
Edwin 1, Hatch 1	5.39E+02	3.81E+02	7.50E+02	1.09E+04	9.78E+02	2.70E+02	4.64E+02	9.62E+02
Edwin 1, Hatch 2							2.59E+02	8.27E+01
Hope Creek 1								
Humboldt Bay 3	3.77E+02	2.00E+01	1.78E+02	7.91E-01	9.06E+01	3.35E+03	8.20E+01	6.95E+01
LaCrosse	4.65E+00	5.88E+02	3.80E+01	6.18E+01	5.09E+00	1.25E+02	4.32E+01	2.02E+01
LaSalle 1&2								
Limerick 1&2								
Millstone 1	1.77E+03	3.03E+03	2.00E+03	8.15E+04	2.11E+03	1.16E+03	2.30E+03	2.36E+03
Monticello	5.73E+02	2.91E+04	4.99E+02	6.35E+04	4.74E+02	1.31E+04	7.42E+02	7.57E+02
Nine Mile Point 1	6.65E+02	2.51E+04	3.85E+02	2.24E+04	4.97E+02	1.52E+03	8.14E+02	2.32E+04
Nine Mile Point 2								
Oyster Creek 1	1.74E+03	2.73E+02	1.54E+03	1.15E+03	1.13E+03	1.34E+03	2.03E+03	1.32E+03
Peach Bottom 2&3	2.52E+03	1.82E+03	1.96E+03	4.97E+03	2.40E+03	8.03E+03	2.64E+02	6.69E+03
Perry 1								
Pilgrim 1	5.84E+02	5.70E+03	1.97E+03	4.92E+04	3.03E+03	2.22E+04	2.94E+03	1.60E+03
Quad-Cities 1&2	1.20E+03	7.53E+03	1.34E+03	3.27E+03	7.82E+02	4.26E+03	1.67E+03	4.07E+03
River Bend 1								
Shoreham 1								
Susquehanna 1&2								
Vermont Yankee 1	1.08E+02	1.76E+02	3.99E+02	5.39E+04	2.71E+02	9.99E+02	4.84E+02	9.20E+02
WNP-2								
Total	1.88E+04	1.07E+05	2.01E+04	2.99E+05	2.04E+04	6.79E+04	2.68E+04	6.28E+04
* Fort St. Vrain					0.00E+00	0.00E+00	0.00E+00	0.00E+00

* High temperature gas cooled reactor

Table 11

Solid Waste Comparison By Year

Boiling Water Reactors	Volume (Cubic Meters) - Activity (Curies)							
	1981		1982		1983		1984	
Big Rock Point 1	1.44E+02	3.17E+02	1.09E+02	4.33E+00	1.01E+02	2.74E+02	3.67E+01	2.13E+00
Browns Ferry 1,2 & 3	2.23E+03	4.78E+03	5.91E+03	5.51E+03	3.72E+03	6.90E+03	1.92E+03	2.15E+03
Brunswick 1&2	4.30E+03	7.47E+03	3.53E+03	5.50E+03	3.51E+03	8.36E+03	1.37E+03	3.45E+03
Clinton 1								
Cooper	4.99E+02	4.43E+02	4.45E+02	4.27E+02	5.03E+02	8.53E+02	4.37E+02	4.91E+02
Dresden 1,2 & 3	1.14E+03	4.59E+03	8.99E+02	1.66E+05+	1.42E+03	2.91E+03	1.26E+03	4.37E+03
Duane Arnold	6.97E+02	1.07E+03	4.57E+02	1.27E+03	6.81E+02	1.44E+03	2.68E+02	9.13E+02
Fermi 2								
James A. Fitzpatrick	8.61E+02	1.63E+03	1.64E+03	7.89E+02	7.11E+02	7.03E+02	4.31E+02	1.26E+03
Grand Gulf 1					3.12E+02	7.21E+00	4.31E+02	9.09E+00
Edwin 1 Hatch 1	1.29E+03	4.46E+03	9.13E+02	3.10E+03	1.87E+03	2.27E+03	2.50E+03	2.58E+03
Edwin 1 Hatch 2	1.40E+03	3.05E+02	7.79E+02	9.40E+02	**	**	**	**
Hope Creek 1								
Humboldt Bay 3	8.43E+01	5.46E-01	7.71E+01	1.34E+00	2.78E+01	1.75E+04	6.56E+01	7.29E+00
LaCrosse	4.82E+00	6.11E+01	3.53E+01	5.26E+01	1.20E+01	1.88E+02	4.22E+01	1.93E+02
LaSalle 1&2			0.00E+00	0.00E+00	6.83E+02	3.01E+01	8.40E+02	1.80E+02
Limerick 1&2							0.00E+00	0.00E+00
Millstone 1	1.96E+03	1.82E+03	9.77E+02	1.08E+03	6.93E+02	6.81E+02	9.40E+02	1.97E+03
Monticello	5.54E+02	4.42E+02	7.50E+02	3.89E+03	3.57E+02	4.43E+04	1.24E+03	5.73E+02
Nine Mile Point 1	5.31E+02	1.72E+03	5.76E+02	7.07E+03	7.21E+02	5.42E+04	6.29E+02	1.34E+04
Nine Mile Point 2								
Oyster Creek 1	1.78E+03	4.21E+02	9.96E+02	4.67E+03	1.00E+03	5.61E+02	1.39E+03	4.39E+04
Peach Bottom 2&3	2.34E+03	5.33E+03	3.23E+03	4.51E+03	2.68E+03	2.24E+04	2.26E+03	9.22E+04
Perry 1								
Pilgrun 1	1.06E+03	9.38E+02	2.28E+03	9.59E+02	6.65E+02	1.48E+03	3.12E+03	1.54E+03
Quad-Cities 1&2	1.72E+03	5.16E+03	1.46E+03	3.98E+03	1.58E+03	5.85E+03	1.35E+03	4.06E+04
River Bend 1								
Shoreham 1								
Susquehanna 1&2			4.51E+01	6.52E-02	1.26E+03	2.84E+02	1.30E+03	9.27E+02
Vermont Yankee 1	4.39E+02	1.11E+03	4.51E+01	2.09E+02	4.15E+02	5.75E+04	3.48E+02	2.85E+02
WNP-2							3.87E+02	3.58E+01
Total	2.30E+04	4.21E+04	2.56E+04	2.10E+05	2.29E+04	2.29E+05	2.26E+04	2.11E+05
* Fort St. Vrain	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E+01	1.84E+01	0.00E+00	0.00E+00

* High temperature gas cooled reactor

* Includes 12 shipments of poison curtains (irradiated components) to Barnwell, SC

** Included with Edwin 1 Hatch 1 totals

Table 11

Solid Waste Comparison By Year

Boiling Water Reactors

Volume (Cubic Meters) - Activity (Curies)

Facility	1985		1986		1987		1988	
Big Rock Point 1	5.22E+01	1.14E+02	9.46E+00	2.52E+02	7.40E+01	2.30E+03	4.44E+01	7.28E+02
Browns Ferry 1,2 & 3	2.30E+03	3.08E+03	1.36E+03	1.49E+03	1.32E+03	6.44E+02	7.81E+02	5.72E+02
Brunswick 1&2	1.32E+03	2.50E+03	9.35E+02	9.83E+03	8.43E+02	4.48E+04	6.89E+02	3.07E+03
Clinton 1					5.10E+01	1.41E-01	2.87E+02	6.14E+01
Cooper	6.35E+02	2.98E+04	4.49E+02	5.83E+02	3.41E+02	3.60E+02	3.09E+02	1.47E+02
Dresden 1,2 & 3	1.05E+04	6.63E+04	2.14E+03	3.74E+04	1.80E+03	8.26E+02	2.35E+03	1.54E+03
Duane Arnold	7.93E+02	5.24E+02	2.17E+02	2.15E+04	4.94E+02	2.62E+02	2.12E+02	4.06E+02
Fermi 2			1.48E+02	2.12E+01	2.36E+02	9.37E+01	2.38E+02	2.81E+02
James A. Fitzpatrick	7.77E+02	7.79E+02	4.62E+02	7.21E+02	5.13E+02	6.44E+02	3.81E+02	1.32E+04
Grand Gulf 1	6.02E+02	2.60E+02	4.39E+02	1.36E+03	3.92E+02	1.65E+03	4.99E+02	7.15E+02
Edwin I. Hatch 1	2.04E+03	3.83E+04	1.36E+03	8.82E+02	7.78E+02	1.82E+03	8.36E+02	2.02E+03
Edwin I. Hatch 2	**	**	**	**	**	**	**	**
Hope Creek 1			8.45E+01	5.14E+00	4.21E+02	3.63E+02	2.92E+02	3.23E+03
Humboldt Bay 3	8.31E+02	2.60E+02	5.99E+02	3.50E+02	0.00E+00	0.00E+00	3.99E+01	9.91E-02
LaCrosse	6.30E+01	2.35E+02	4.81E+00	7.78E+01	2.93E+01	2.86E-03	6.52E+00	7.03E+01
LaSalle 1&2	1.21E+03	4.87E+02	8.02E+02	1.20E+03	7.66E+02	2.30E+03	9.25E+02	3.38E+03
Limerick 1&2	3.06E+02	2.06E+01	5.76E+02	7.53E+02	3.81E+02	2.15E+03	8.95E+02	9.70E+02
Millstone 1	1.17E+03	9.36E+04	7.00E+02	7.85E+02	6.66E+02	5.05E+02	2.79E+02	9.54E+04
Monticello	5.44E+02	4.87E+03	2.94E+02	2.81E+04	2.19E+02	5.66E+02	1.48E+02	2.93E+02
Nine Mile Point 1	5.75E+02	6.80E+03	1.08E+03	7.27E+02	5.07E+02	2.30E+02	2.72E+02	3.07E+02
Nine Mile Point 2					9.89E+01	1.14E+01	3.78E+02	3.88E+02
Oyster Creek 1	4.62E+02	6.30E+02	5.92E+02	7.96E+02	2.36E+02	3.48E+04	1.81E+02	6.29E+03
Peach Bottom 2&3	2.33E+03	1.21E+05	1.49E+03	1.88E+04	1.58E+03	3.89E+03	8.38E+02	1.19E+03
Perry 1			0.00E+00	0.00E+00	4.89E+02	4.52E+01	4.95E+02	5.59E+02
Pilgrim 1	1.41E+03	7.48E+04	6.01E+02	4.38E+02	5.27E+02	3.15E+02	2.72E+02	2.19E+02
Quad-Cities 1&2	1.33E+03	5.53E+04	1.32E+03	2.14E+03	9.19E+02	2.90E+04	9.25E+02	6.26E+02
River Bend 1			4.63E+02	7.99E+01	4.07E+02	3.45E+02	3.06E+02	3.50E+02
Shoreham 1			4.47E+01	1.47E-01	6.26E+01	9.57E-02	6.26E+01	1.86E-02
Susquehanna 1&2	1.13E+03	2.07E+03	8.68E+02	2.53E+03	7.18E+02	2.11E+03	1.33E+03	2.65E+03
Vermont Yankee 1	5.43E+02	1.73E+04	3.10E+02	3.33E+02	2.23E+02	1.19E+04	1.73E+02	4.25E+02
WNP-2	4.02E+02	2.96E+02	3.02E+02	5.07E+02	3.75E+02	1.09E+03	4.70E+02	1.01E+03
Total	3.13E+04	5.19E+05	1.77E+04	1.32E+05	1.55E+04	1.43E+05	1.49E+04	1.40E+05
* Fort St. Vrain	1.10E+02	4.19E+02	0.00E+00	0.00E+00	3.02E+01	1.03E+02	7.00E+00	3.10E-01

* High temperature gas cooled reactor

** Included with Edwin I. Hatch 1 totals

Table 11

Solid Waste Comparison By Year

Boiling Water Reactors Facility	Volume (Cubic Meters) - Activity (Curies)							
	1989		+1990		+1991		+1992	
Big Rock Point 1	7.35E+01	3.71E+02	8.30E+01	1.26E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00 ***
Browns Ferry 1,2 & 3	5.84E+02	2.95E+02	2.12E+02	1.04E+02	2.60E+02	3.36E+04	3.12E+02	3.54E+04
Brunswick 1&2	6.20E+02	6.06E+03	4.89E+02	1.26E+03	3.33E+02	1.23E+03	4.16E+02	5.45E+04
Clinton 1	3.99E+02	1.89E+03	2.72E+02	5.44E+02	2.48E+02	8.03E+02	2.34E+02	2.13E+03
Cooper	2.92E+02	3.06E+02	3.08E+02	3.69E+02	2.49E+02	6.17E+02	1.43E+02	1.01E+05
Dresden 1,2 & 3	2.24E+03	2.54E+03	2.41E+03	5.09E+02	2.61E+03	9.87E+02	2.46E+03	3.32E+04
Duane Arnold	1.46E+02	1.69E+04	3.34E+02	3.79E+04	1.06E+02	4.57E+02	3.01E+02	4.21E+04
Fermi 2	3.66E+02	7.01E+02	1.23E+03	2.09E+04	2.16E+01	2.02E+00	0.00E+00	0.00E+00 ***
James A. Fitzpatrick	2.50E+02	9.39E+04	2.83E+02	2.05E+03	1.07E+03	2.85E+02	2.53E+02	1.67E+03
Grand Gulf 1	2.72E+02	2.06E+02	1.62E+02	1.35E+03	2.15E+02	2.68E+03	3.30E+02	2.64E+03
Edwin I. Hatch 1	8.53E+02	1.91E+03	1.38E+03	2.85E+04	7.90E+02	2.00E+03	4.05E+02	3.79E+04
Edwin I. Hatch 2	**	**	**	**	**	**	**	**
Hope Creek 1	1.67E+02	5.27E+02	3.06E+02	2.30E+03	2.46E+02	4.31E+04	2.03E+02	2.17E+04
Humboldt Bay 3	0.00E+00	0.00E+00	3.93E+01	9.06E-02	6.48E+01	1.42E-01	3.86E+01	6.43E-02
LaCrosse	6.74E+00	3.21E+01	4.59E+00	7.44E-01	2.40E+01	3.23E-01	3.73E+01	4.36E-01
LaSalle 1&2	8.80E+02	4.36E+03	9.04E+02	2.95E+03	8.99E+02	5.53E+03	1.76E+03	5.49E+03
Limerick 1&2	5.76E+02	3.40E+04	6.86E+02	1.24E+03	6.61E+02	5.95E+02	4.70E+02	9.39E+04
Millstone 1	4.28E+02	1.99E+04	2.94E+02	3.41E+04	3.51E+02	2.25E+03	2.78E+02	2.37E+04
Monticello	2.48E+02	5.97E+04	9.40E+01	1.17E+03	2.16E+02	1.45E+03	6.12E+01	5.93E+04
Nine Mile Point 1	2.37E+02	2.48E+02	2.45E+02	4.34E+02	1.77E+02	1.00E+05	1.87E+02	6.43E+04
Nine Mile Point 2	4.22E+02	4.89E+02	3.40E+02	6.73E+02	2.67E+02	1.38E+03	2.19E+02	1.98E+04
Oyster Creek 1	4.20E+02	2.33E+05	3.23E+02	1.13E+03	4.93E+02	1.39E+03	8.35E+02	2.55E+04
Peach Bottom 2&3	8.92E+02	1.73E+03	8.08E+02	3.02E+04	8.68E+02	8.56E+04	1.76E+04	2.45E+04
Perry 1	9.68E+02	9.18E+02	1.36E+03	1.94E+03	9.20E+02	2.68E+03	1.08E+03	2.32E+03
Pugrim 1	2.02E+02	2.76E+02	3.71E+02	6.62E+02	3.50E+02	7.06E+02	1.78E+02	5.46E+02
Quad-Cities 1&2	9.79E+02	1.33E+05	1.21E+03	1.24E+03	7.56E+02	1.04E+03	4.33E+02	2.66E+03
River Bend 1	5.16E+02	8.41E+02	2.44E+02	4.02E+02	3.30E+01	2.67E+00	4.30E+02	3.15E+02
Shoreham 1	1.79E+01	3.51E-02	5.04E+01	9.17E-01	6.99E+01	2.92E+00	3.35E+03	6.81E+02
Susquehanna 1&2	4.28E+02	1.34E+03	4.07E+02	2.95E+03	4.73E+02	2.61E+05	3.40E+02	9.89E+02
Vermont Yankee 1	4.84E+00	2.15E+00	0.00E+00	0.00E+00	4.70E-02	1.82E+05	4.16E+02	2.06E+04
WNP-2	3.64E+02	1.10E+03	3.34E+02	1.29E+03	3.01E+02	1.42E+03	4.77E+02	1.25E+03
Total	1.39E+04	6.17E+05	1.52E+04	1.76E+05	1.35E+04	7.33E+05	3.32E+04	6.78E+05
* Fort St. Vrain	4.57E+00	1.08E+03	1.01E+02	2.30E+00	6.75E+01	8.10E+03	3.79E+02	3.27E+04

* High temperature gas cooled reactor

** Included with Edwin I. Hatch 1 totals

*** These plants store waste on-site

* Note: If the volume before compaction and the volume after compaction were both given, the volume used for this table is the volume after compaction. If more than one volume was given, both are shown in the individual plant report. If a description of what the volume represents was given, that is also shown in the individual plant report.

Table 12

Solid Waste Comparison By Year

Pressurized Water Reactors

Volume (Cubic Meters) - Activity (Curies)

Facility	1977		1978		1979		1980	
Arkansas One 1&2	3.17E+02	1.26E+02	N/R	N/R	N/R	N/R	N/R	N/R
Beaver Valley 1&2	2.67E+02	8.18E+00	4.39E+02	2.25E+02	2.44E+02	2.95E+02	2.84E+02	5.34E+02
Brachwood 1&2								
Byron 1&2								
Callaway 1								
Cahvert Cliffs 1&2	3.09E+02	9.83E+02	6.03E+02	1.12E+03	4.32E+02	9.71E+02	2.51E+02	1.48E+04
Catawba 1&2								
Comanche Peak 1								
Donald C. Cook 1&2	6.84E+02	8.28E+01	1.28E+03	2.25E+02	1.09E+03	3.37E+02	2.10E+03	1.04E+03
Crystal River 3	4.48E+02	3.48E+00	6.87E+02	2.72E+04	1.24E+03	1.20E+03	9.27E+02	2.05E+03
Davis-Besse 1	0.00E+00	0.00E+00	3.40E+02	3.30E+00	2.60E+02	2.86E+00	3.30E+02	3.00E+01
Diablo Canyon 1&2								
Joseph M. Farley 1&2			2.69E+02	5.72E+00	1.11E+03	2.32E+02	4.41E+02	2.26E+02
Fort Calhoun 1	5.97E+02	6.46E+02	5.84E+02	1.06E+02	2.44E+02	2.99E+01	4.06E+02	1.32E+03
R. E. Ginna	3.49E+02	6.90E+02	5.96E+01	6.27E+02	3.08E+02	1.53E+02	4.00E+02	4.60E+02
Haddam Neck	1.68E+03	8.41E+02	2.29E+02	1.44E+02	1.29E+03	3.05E+02	1.26E+03	4.89E+02
Harris 1								
Indian Point 1&2	1.06E+03	1.45E+03	8.43E+03	2.37E+03	1.17E+03	2.16E+03	1.03E+03	3.32E+02
Indian Point 3	Shown With Other Unit		5.94E+02	6.49E+01	2.25E+02	1.63E+02	3.47E+02	2.02E+02
Kewaunee	3.37E+01	3.56E+02	7.98E+01	1.50E+03	1.70E+02	3.54E+02	1.03E+02	1.37E+03
Maine Yankee	1.84E+02	1.53E+04	5.81E+02	4.14E+03	3.63E+02	2.77E+03	4.57E+02	4.79E+03
McGuire 1&2								
Millstone 2	9.35E+01	5.80E+01	1.55E+02	1.70E+01	2.46E+02	1.78E+03	7.51E+00	2.28E+02
Millstone 3								
North Anna 1&2			2.14E+01	3.59E+00	2.95E+02	5.89E+01	2.64E+02	1.54E+02
Oconee 1,2&3	1.07E+03	7.37E+03	1.58E+03	5.93E+03	1.63E+03	2.59E+03	1.32E+03	2.91E+03
Palisades	4.43E+02	8.71E+01	7.17E+02	3.40E+03	6.84E+02	3.92E+02	7.31E+02	1.18E+02
Palo Verde 1,2&3								
Point Beach 1&2	6.84E+03	5.68E+02	1.61E+02	1.51E+03	2.69E+02	1.22E+03	4.49E+02	9.35E+02
Prairie Island 1&2	6.43E+02	2.46E+02	1.95E+02	1.53E+02	1.99E+01	8.83E-01	5.25E+02	1.98E+02
Rancho Seco 1	5.06E+01	1.21E+03	1.29E+02	1.27E+03	1.01E+02	4.03E+00	4.60E+02	1.12E+02
H. B. Robinson 2	2.59E+02	1.24E+03	8.22E+02	2.40E+02	8.34E+02	8.72E+01	3.99E+03	3.08E+02
Salem 1&2	4.25E+02	2.20E+00	2.27E+02	1.94E+02	6.86E+02	1.28E+02	1.01E+03	4.59E+02
San Onofre								
San Onofre 1	3.68E+02	6.02E+01	1.31E+02	7.17E+00	8.35E+01	9.24E+01	7.12E+02	4.35E+02
San Onofre 2-3								
Seabrook 1								
Sequoyah 1&2							N/R	N/R
South Texas 1&2								
St. Lucie 1&2	3.85E+02	3.27E+03	3.58E+02	1.26E+04	3.08E+02	1.79E+02	3.12E+02	7.46E+02
Summer 1								
Surry 1&2	7.93E+02	6.10E+02	6.03E+02	5.66E+02	2.74E+03	3.45E+02	2.01E+03	7.06E+02
Three Mile Island 1	2.18E+02	4.73E+01	3.89E+02	2.34E+02	7.51E+02	3.12E+01	4.62E+02	2.30E+02
Three Mile Island 2			Shown With Other Unit		Shown With Other Unit		7.67E+02	1.26E+02
TMI 2/Epicor							0.00E+00	0.00E+00
Trojan	1.01E+02	8.31E+01	2.26E+02	4.48E+02	6.37E+02	3.30E+02	5.14E+02	4.59E+01
Turkey Point 3&4	1.07E+03	4.26E+02	1.75E+03	1.72E+03	9.20E+02	2.48E+02	7.24E+02	1.61E+02
Vogtle 1&2								
Waterford 3								
Wolf Creek 1								
Yankee Rowe 1	2.81E+02	3.54E+00	2.60E+02	9.75E+00	2.36E+02	1.63E+02	2.07E+02	9.57E+01
Zion 1&2	1.97E+03	2.25E+02	1.63E+03	1.86E+03	5.97E+02	2.69E+03	1.64E+03	2.55E+03
Total	2.09E+04	3.60E+04	2.35E+04	6.79E+04	1.92E+04	1.94E+04	2.44E+04	3.82E+04

N/R = Not Reported

Table 12

Solid Waste Comparison By Year

Facility	Volume (Cubic Meters) - Activity (Curies)							
	1981		1982		1983		1984	
Arkansas One 1&2	N/R	N/R	N/R	N/R	7.06E+02	2.09E+03	8.10E+02	1.46E+03
Beaver Valley 1&2	2.13E+02	9.30E+01	2.94E+02	3.83E+02	2.19E+02	4.75E+02	1.56E+02	7.11E+02
Braidwood 1&2								
Byron 1&2								
Callaway 1							0.00E+00	0.00E+00
Calvert Cliffs 1&2	5.00E+02	9.86E+01	1.57E+02	9.16E+02	5.06E+02	1.07E+02	5.28E+02	3.77E+04
Catawba 1&2								
Comanche Peak 1								
Donald C. Cook 1&2	9.63E+02	1.43E+03	7.14E+02	8.45E+02	6.68E+02	2.01E+03	4.94E+02	6.69E+02
Crystal River 3	1.27E+03	1.38E+03	6.62E+02	6.28E+02	5.40E+02	1.55E+03	4.11E+02	1.15E+03
Davis-Besse 1	3.25E+02	3.95E+01	0.00E+00	0.00E+00	1.13E+02	6.37E+02	1.51E+02	4.73E+02
Diablo Canyon 1&2							0.00E+00	0.00E+00
Joseph M. Farley 1&2	5.64E+02	7.20E+02	3.46E+02	1.03E+02	4.41E+02	1.05E+03	5.62E+02	2.98E+02
Fort Calhoun 1	2.53E+02	1.01E+02	3.42E+02	3.54E+01	4.65E+02	7.00E+02	3.93E+02	7.17E+01
R. E. Ginna	3.76E+02	6.35E+02	4.89E+02	2.02E+02	3.36E+02	5.21E+02	2.52E+02	3.23E+02
Haddam Neck	4.38E+02	6.61E+02	3.12E+02	2.57E+02	6.52E+02	1.52E+03	4.28E+02	3.75E+02
Harris 1								
Indian Point 1&2	1.58E+03	1.71E+03	1.17E+03	6.46E+03	1.29E+03	2.12E+03	9.81E+02	2.03E+03
Indian Point 3	3.17E+02	6.40E+01	3.79E+02	6.14E+01	3.16E+02	7.32E+02	1.53E+02	4.12E+02
Kewaunee	7.38E+01	1.98E+02	6.73E+01	2.74E+02	5.52E+01	6.85E+02	6.32E+01	1.60E+03
Maine Yankee	4.14E+02	1.67E+03	2.20E+02	3.09E+01	3.37E+02	1.03E+02	3.49E+02	3.59E+02
McGuire 1&2	1.98E+01	1.31E-01	9.91E+01	6.43E+00	2.44E+02	2.82E-01	4.14E+02	1.89E+03
Millstone 2	1.63E+01	3.21E+02	6.85E+00	4.84E+02	4.48E+01	2.58E+02	6.08E+01	1.10E+05
Millstone 3								
North Anna 1&2	3.02E+02	2.62E+03	4.21E+02	3.05E+02	5.39E+02	1.87E+03	9.00E+02	9.53E+02
Oconee 1,2 & 3	2.48E+03	1.12E+04	3.06E+03	1.09E+04	1.16E+03	2.84E+03	9.36E+02	6.17E+03
Palisades	8.54E+02	1.57E+04	7.08E+02	7.98E+01	5.75E+02	2.56E+04	4.48E+02	2.58E+02
Paio Verde 1,2 & 3								
Point Beach 1&2	1.77E+02	4.87E+02	2.52E+02	9.46E+02	7.11E+02	1.12E+03	7.12E+02	1.64E+03
Prairie Island 1&2	2.97E+02	5.64E+01	9.91E+01	3.64E+02	2.39E+02	1.92E+02	4.19E+01	1.19E+01
Rancho Seco 1	2.31E+02	1.44E+02	2.40E+02	4.66E+02	2.72E+02	2.25E+02	4.25E+02	4.60E+01
H. B. Robinson 2	9.02E+02	1.88E+01	1.38E+03	6.38E+01	1.09E+03	4.62E+01	3.05E+03	1.95E+02
Salem 1&2	9.36E+02	1.14E+03	1.91E+03	3.19E+02	2.07E+03	2.99E+02	1.52E+03	6.23E+02
San Onofre								
San Onofre 1	1.62E+03	1.26E+03	9.27E+02	7.52E+01	3.33E+02	2.27E+02	2.91E+02	1.54E+01
San Onofre 2-3			0.00E+00	0.00E+00	1.89E+02	7.98E+00	2.02E+02	5.49E+02
Seabrook 1								
Sequoyah 1&2	1.61E+02	2.92E+01	3.58E+02	2.28E+02	6.93E+02	2.30E+03	9.67E+02	2.43E+03
South Texas 1&2								
St. Lucie 1&2	2.50E+02	2.96E+02	3.07E+02	7.95E+02	6.20E+02	9.39E+04	1.22E+03	6.36E+04
Summer 1			0.00E+00	0.00E+00	9.25E+01	1.37E+01	4.80E+02	1.55E+02
Surry 1&2	2.80E+03	1.36E+03	2.17E+03	9.89E+02	3.08E+03	3.56E+03	9.45E+02	1.16E+03
Three Mile Island 1	7.98E+02	2.34E+02	5.32E+02	8.91E+00	6.05E+02	6.84E+02	4.34E+02	4.18E+02
Three Mile Island 2	2.74E+02	5.11E+01	1.80E+02	1.22E+01	3.16E+02	5.17E+05	2.56E+02	9.89E+03
TMI 2/Epicor	1.51E+02	3.50E+02	0.00E+00	0.00E+00	2.23E+02	4.62E+04	4.53E+00	2.35E-01
Trojan	3.75E+02	1.04E+03	2.17E+01	2.87E+02	2.28E+02	1.67E+03	2.30E+02	5.85E+01
Turkey Point 3&4	1.25E+03	1.17E+02	1.01E+03	1.13E+03	1.21E+03	9.26E+02	8.50E+02	1.91E+03
Vogtle 1&2								
Waterford 3								
Wolf Creek 1								
Yankee Rowe 1	3.08E+02	6.79E+01	2.09E+02	2.81E+01	1.58E+02	5.12E+00	2.00E+02	1.63E+02
Zion 1&2	1.53E+03	3.44E+03	8.82E+02	2.17E+03	9.21E+02	2.97E+03	6.43E+02	2.62E+03
Total	2.30E+04	4.87E+04	1.99E+04	2.99E+04	2.23E+04	7.16E+05	2.10E+04	2.52E+05

N/R = Not Reported

Table 12

Solid Waste Comparison By Year

Pressurized Water Reactors

Volume (Cubic Meters) - Activity (Curies)

Facility	1985	1986	1987	1988
Arkansas One 1&2	6.88E+02	1.75E+03	1.21E+02	2.18E+02
Beaver Valley 1&2	1.56E+02	9.71E+01	9.49E+01	4.45E+02
Bradwood 1&2				
Byron 1&2	1.78E+02	1.39E+01	3.18E+02	9.90E+01
Callaway 1	1.39E+02	6.29E+00	1.68E+02	1.91E+01
Calvert Cliffs 1&2	3.89E+02	1.51E+04	2.12E+02	4.51E+02
Catawba 1&2	3.48E+01	6.90E-02	1.93E+02	1.33E+01
Comanche Peak 1				
Donald C. Cook 1&2	8.28E+02	2.00E+03	5.28E+02	1.59E+03
Crystal River 3	4.98E+02	4.60E+03	3.64E+02	1.35E+03
Davis-Besse 1	1.97E+02	9.58E+01	1.40E+02	2.19E+00
Diablo Canyon 1&2	3.11E+01	4.40E+01	9.06E+01	6.97E+00
Joseph M. Farley 1&2	4.95E+02	8.20E+02	2.45E+02	1.80E+03
Fort Calhoun 1	3.43E+02	2.24E+02	1.16E+02	2.82E+01
R. E. Ginna	2.23E+02	1.19E+02	1.12E+02	1.39E+02
Haddam Neck	1.73E+02	5.33E+01	4.14E+02	5.86E+02
Harris 1				
Indian Point 1&2	6.89E+02	5.75E+02	5.30E+02	2.52E+02
Indian Point 3	2.39E+02	5.49E+02	8.29E+01	2.58E+01
Kewaunee	7.77E+01	9.56E+02	5.31E+01	1.33E+02
Maine Yankee	3.59E+02	1.11E+02	1.96E+02	1.64E+02
McGuire 1&2	6.60E+02	1.97E+02	7.83E+02	6.73E+02
Millstone 2	2.87E+01	6.16E+03	8.85E+01	6.17E+03
Millstone 3				
North Anna 1&2	6.50E+02	2.90E+02	5.30E+02	7.97E+02
Oconee 1,2 & 3	4.33E+02	1.41E+03	7.60E+02	8.51E+02
Palisades	4.76E+02	1.83E+02	2.39E+02	2.85E+02
Palo Verde 1,2 & 3	8.42E+01	6.80E+01	1.16E+02	4.22E+01
Point Beach 1&2	2.81E+02	1.25E+03	1.08E+02	1.35E+03
Prairie Island 1&2	1.73E+02	4.02E+02	1.28E+02	1.55E+02
Rancho Seco 1	9.76E+02	1.57E+03	1.56E+02	1.00E+03
H. B. Robinson 2	6.42E+02	3.35E+03	4.53E+02	1.58E+02
Salem 1&2	4.55E+02	2.02E+03	4.71E+02	4.53E+02
San Onofre	1.56E+01	8.96E-01	2.33E+00	4.65E-01
San Onofre 1	1.80E+02	6.04E+00	2.51E+02	3.82E+02
San Onofre 2-3	5.45E+02	1.72E+03	2.94E+02	1.93E+02
Seabrook 1				
Sequoyah 1&2	7.52E+02	2.45E+03	4.27E+02	1.33E+04
South Texas 1&2				
St. Lucie 1&2	5.45E+02	1.59E+03	4.60E+02	2.13E+03
Summer 1	4.46E+02	1.30E+02	1.12E+02	1.50E+01
Surry 1&2	2.02E+03	1.21E+03	6.39E+02	1.16E+03
Three Mile Island 1	4.69E+02	1.94E+01	2.13E+02	7.70E+00
Three Mile Island 2	4.83E+02	6.35E+03	3.29E+02	5.81E+01
TMI 2/Epicor	**	**	**	**
Trojan	3.09E+02	3.52E+03	2.49E+02	6.25E+02
Turkey Point 3&4	6.08E+02	1.50E+03	3.23E+02	8.87E+01
Vogtle 1&2				
Waterford 3	2.82E+02	3.39E+01	1.74E+02	3.75E+01
Wolf Creek 1	0.00E+00	0.00E+00	1.73E+02	1.48E+02
Yankee Rowe 1	2.00E+02	2.68E+02	1.12E+02	5.21E+00
Zion 1&2	6.73E+02	2.69E+03	3.31E+02	6.74E+02
Total	1.81E+04	6.55E+04	1.19E+04	3.81E+04

* Represents solid waste shipped by plant but not broken down into units 1, 2, & 3

** Included with Three Mile Island 2 totals

Table 12

Solid Waste Comparison By Year

Pressurized Water Reactors

Volume (Cubic Meters) - Activity (Curies)

Facility	1989		+1990		+1991		+1992	
Arkansas One 1&2	2.22E+02	2.96E+02	1.69E+02	1.43E+01	4.18E+02	6.03E+02	1.75E+02	2.61E+03
Beaver Valley 1&2	1.96E+03	1.35E+03	1.57E+02	5.44E+02	1.74E+02	1.08E+03	1.63E+02	4.71E+02
Braidwood 1&2	3.10E+02	3.89E+02	1.48E+02	8.55E+01	4.57E+02	6.52E+01	5.98E+02	8.10E+02
Byron 1&2	3.65E+02	1.28E+03	2.43E+02	4.99E+02	2.81E+02	3.77E+02	1.59E+02	8.78E+02
Calloway 1	2.09E+02	6.00E+02	8.70E+01	3.12E+02	1.36E+02	2.48E+03	8.85E+01	1.03E+03
Calvert Cliffs 1&2	2.07E+02	4.14E+02	1.35E+02	4.12E+03	1.60E+02	4.50E+03	1.04E+03	6.33E+03
Catawba 1&2	2.16E+02	3.17E+02	1.19E+02	2.09E+01	1.16E+02	3.35E+02	2.08E+02	9.88E+02
Comanche Peak 1			0.00E+00	0.00E+00	6.99E+01	7.76E-01	1.27E+02	2.33E+02
Donald C. Cook 1&2	3.88E+02	1.17E+03	1.95E+02	1.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00 ***
Crystal River 3	3.47E+02	2.40E+03	9.22E+02	2.20E+02	3.45E+02	2.39E+02	6.42E+02	3.30E+02
Davis-Besse 1	1.18E+02	2.08E+02	3.99E+02	2.26E+03	2.38E+02	5.47E+02	3.71E+01	4.10E+01
Diablo Canyon 1&2	1.87E+02	4.29E+02	8.32E+01	2.91E+02	1.89E+02	1.70E+03	1.77E+01	9.95E+02
Joseph M. Farley 1&2	4.85E+02	4.00E+02	1.51E+02	2.88E+02	1.50E+02	1.03E+03	2.39E+02	2.15E+02
Fort Calhoun 1	1.75E+02	8.75E+00	1.22E+02	7.48E+00	3.78E+01	1.97E+01	6.45E+01	4.41E+02
R. E. Ginna	2.33E+02	7.99E+01	1.98E+02	2.32E+02	5.00E+01	3.19E+00	5.46E+01	5.84E+02
Haddam Neck	1.53E+02	6.55E+02	1.66E+02	2.21E+05	1.34E+02	3.37E+02	1.41E+02	1.48E+03
Harris 1	1.60E+02	2.54E+01	7.73E+01	6.25E+01	7.84E+01	3.03E+02	7.12E+01	2.90E+02
Indian Point 1&2	4.78E+02	3.60E+02	2.60E+02	2.08E+03	4.88E+02	9.62E+01	1.64E+02	6.07E+02
Indian Point 3	5.77E+02	3.50E+02	6.66E+02	1.50E+02	1.29E+02	2.00E+01	1.81E+02	2.23E+02
Kewaunee	7.00E+01	7.74E+02	1.11E+02	3.54E+02	6.90E+01	5.28E+02	2.35E+01	1.93E+02
Maine Yankee	1.95E+02	2.36E+02	1.70E+02	1.85E+02	1.47E+02	3.46E+02	1.83E+02	8.06E+03
McGuire 1&2	4.36E+02	6.32E+02	2.63E+02	9.80E+02	4.52E+01	9.29E+02	1.67E+02	1.19E+03
Millstone 2	2.47E+02	5.55E+02	1.59E+02	9.34E+00	1.37E+02	8.79E+02	7.59E+02	3.67E+03
Millstone 3	1.47E+02	7.37E+02	7.80E+01	1.76E+02	1.16E+02	1.04E+02	4.13E+01	4.81E+02
North Anna 1&2	6.77E+02	1.72E+03	2.13E+02	7.24E+02	2.35E+02	3.01E+02	2.17E+02	3.84E+02
Oconee 1,2 & 3	4.25E+02	1.46E+03	4.39E+02	1.79E+03	1.02E+02	4.04E+02	1.46E+02	4.35E+02
Palisades	2.19E+02	4.23E+03 *	2.85E+02	8.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00 ***
Palo Verde 1,2&3	8.74E+02	6.74E+02	7.66E+02	2.40E+02	4.83E+02	8.91E+02	4.25E+02	1.54E+03
Point Beach 1&2	1.06E+02	2.54E+02	1.30E+02	2.07E+02	9.64E+01	2.20E+02	1.28E+02	3.71E+02
Prairie Island 1&2	1.25E+02	1.03E+02	5.54E+01	3.23E+02	1.11E+02	1.90E+02	1.12E+01	2.79E+01
Rancho Seco 1	2.44E+02	3.27E+02	2.16E+01	3.69E+02	3.97E+01	2.46E+02	3.47E+01	3.68E+00
H. B. Robinson 2	9.69E+01	1.86E+02	6.99E+01	1.44E+01	6.46E+01	9.54E+01	6.25E+01	4.47E+02
Salem 1&2	1.22E+02	5.65E+04	8.92E+01	1.45E+02	1.03E+02	6.79E+02	9.78E+01	8.32E+02
San Onofre	0.00E+00	0.00E+00	2.12E-01	1.04E+00	0.00E+00	0.00E+00	2.04E+01	4.16E-01
San Onofre 1	1.19E+02	1.72E+03	5.81E+01	1.27E+01	9.29E+01	5.75E+00	9.36E+01	6.84E+02
San Onofre 2-3	3.28E+02	2.72E+03	1.75E+02	3.34E+01	1.64E+02	6.87E+02	2.93E+02	1.55E+03
Seabrook 1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 ***
Sequoyah 1&2	4.65E+02	2.64E+03	2.59E+02	9.06E+02	1.42E+02	1.82E+03	1.27E+02	1.35E+03
South Texas 1&2	5.03E+01	7.24E+00	5.76E+01	1.38E+01	9.99E+01	9.81E+01	8.27E+01	4.67E+02
St. Lucie 1&2	3.18E+02	1.69E+02	2.26E+02	5.89E+03	1.82E+02	8.26E+02	2.14E+02	3.88E+02
Summer 1	1.40E+02	3.76E+02	1.10E+02	2.22E+02	6.82E+01	1.64E+02	1.14E+02	2.68E+02
Surry 1&2	5.38E+02	1.31E+03	1.48E+02	1.13E+03	1.73E+02	8.18E+02	2.10E+02	4.10E+02
Three Mile Island 1	3.32E+02	5.05E+01	5.83E+02	6.53E+02	6.19E+02	3.85E+02	6.87E+02	2.03E+02
Three Mile Island 2	1.18E+03	1.39E+04	3.40E+02	7.74E+03	3.88E+02	2.21E+02	1.19E+03	1.27E+03
TMI 2/Epicor	**	**	**	**	**	**	**	**
Trojan	2.59E+02	4.47E+02	1.80E+02	5.84E+02	1.09E+02	2.40E+02	1.20E+02	7.10E+02
Turkey Point 3&4	3.46E+02	2.26E+00	2.15E+02	6.94E+02	1.89E+02	1.16E+01	2.14E+03	2.30E+02
Vogtle 1&2	1.00E+02	1.51E+01	9.29E+01	1.64E+02	6.87E+01	5.96E+02	1.09E+02	1.07E+03
Waterford 3	7.61E+02	4.07E+02	5.50E+01	5.91E+02	1.46E+02	7.01E+02	8.25E+02	3.93E+03
Wolf Creek 1	1.51E+02	1.26E+03	8.31E+01	3.17E+01	8.39E+01	4.14E+02	5.24E+01	2.43E+02
Yankee Rowe 1	2.98E+02	1.78E+01	1.82E+02	1.69E+02	1.61E+02	8.49E+01	2.02E+02	3.24E+04
Zion 1&2	2.14E+02	3.58E+03	1.44E+02	2.02E+03	9.59E+01	1.95E+03	2.74E+02	2.19E+04
Total	1.64E+04	1.08E+05	1.01E+04	2.59E+05	8.18E+03	2.86E+04	1.32E+04	1.05E+05

* Represents solid waste shipped by plant but not broken down into units 1, 2, & 3

** Included with Three Mile Island 2 totals

*** These plants store waste on-site

* This number is a correction to that entered in earlier reports

+ Note: If the volume before compaction and the volume after compaction were both given, the volume used for this table is the volume after compaction. If more than one volume was given, both are shown in the individual plant report. If a description of what the volume represents was given, that is also shown in the individual plant report.

Table 13

Net Electrical Energy Generation Comparison By Year

Boiling Water Reactors	Megawatt Hours									
	Facility	Initial Criticality	Commercial Operation	1979	1980	1981	1982	1983	1984	1985
Big Rock Point 1	09/27/82	03/29/83	1.14E+05	4.05E+05	4.70E+05	3.60E+05	3.49E+05	4.18E+05	3.62E+05	
Browns Ferry 1	08/17/73	08/01/74	2.04E+07	8.06E+06	4.41E+06	7.88E+06	2.18E+06	7.85E+06	1.54E+06	
Browns Ferry 2	07/20/74	03/01/75		5.62E+06	7.47E+06	4.45E+06	6.39E+06	4.04E+06	0.00E+00	
Browns Ferry 3	08/08/76	03/01/77		6.94E+06	6.26E+06	4.89E+06	5.39E+06	2.91E+05	1.47E+06	
Brunswick 1	10/08/76	03/18/77	6.82E+06	3.94E+06	2.56E+06	2.92E+06	1.39E+06	5.03E+06	1.91E+06	
Brunswick 2	03/20/75	11/03/75		1.86E+05	3.28E+06	1.91E+06	3.94E+06	1.39E+06	5.02E+06	
Clinton 1	02/27/87	11/24/87								
Cooper	02/21/74	07/01/74	4.99E+06	3.79E+06	3.85E+06	5.28E+06	3.34E+06	3.47E+06	1.07E+06	
Dresden 1	10/15/59	07/04/60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+06	0.00E+00	
Dresden 2	01/07/70	06/09/70	8.42E+06	4.58E+06	3.41E+06	5.12E+06	3.40E+06	2.11E+06	3.09E+06	
Dresden 3	01/31/71	11/16/71		4.33E+06	5.18E+06	3.89E+06	4.15E+06	2.11E+06	4.39E+06	
Duane Arnold	03/23/74	02/01/75	2.90E+06	2.80E+06	2.22E+06	2.28E+06	2.32E+06	2.72E+06	1.94E+06	
Fermi 2	06/21/85	01/23/86								
James A. Fitzpatrick	11/17/74	07/28/75	2.96E+06	4.33E+06	4.78E+06	4.96E+06	4.63E+06	4.90E+06	4.17E+06	
Grand Gulf 1	08/18/82	07/01/85					0.00E+00	1.65E+05	2.65E+06	
Edwin I. Hatch 1	09/12/74	12/31/75	5.10E+06	4.79E+06	2.76E+06	2.88E+06	3.96E+06	3.60E+06	4.76E+06	
Edwin I. Hatch 2	07/04/78	09/05/79		3.64E+06	4.48E+06	3.73E+06	3.81E+06	1.88E+06	5.38E+06	
Hope Creek 1	06/28/86	12/20/86								
Humboldt Bay 3	02/16/63	08/ /63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
LaCrosse	07/11/67	11/01/69	2.01E+05	2.15E+06	2.41E+05	1.38E+05	2.01E+05	3.19E+05	3.23E+05	
LaSalle 1	06/21/82	01/01/84				4.61E+05	1.64E+06	5.21E+06	4.81E+06	
LaSalle 2	03/10/84	10/19/84						1.39E+06	3.43E+06	
Limerick 1	12/22/84	02/01/86						0.00E+00	1.14E+06	
Limerick 2	08/12/89	01/08/90								
Millstone 1	10/26/70	03/01/71	4.22E+06	3.40E+06	2.52E+06	4.08E+06	5.35E+06	4.32E+06	4.59E+06	
Monticello	12/10/70	06/30/71	4.40E+06	3.45E+06	3.26E+06	2.42E+06	4.15E+06	2.63E+05	4.29E+06	
Nine Mile Point 1	09/05/69	12/01/69	3.00E+06	4.54E+06	3.27E+06	1.13E+06	2.80E+06	3.64E+06	4.93E+06	
Nine Mile Point 2	05/23/87	04/05/88								
Oyster Creek 1	05/03/69	12/01/69	4.56E+06	1.96E+06	2.63E+06	2.01E+06	2.05E+05	2.79E+05	3.75E+06	
Peach Bottom 2	09/16/73	07/05/74	1.47E+07	4.34E+06	6.63E+06	4.79E+06	4.45E+06	2.43E+06	2.33E+06	
Peach Bottom 3	08/07/74	12/23/74		7.23E+06	3.13E+06	8.53E+06	2.42E+06	7.45E+06	3.28E+06	
Perry 1	06/06/86	11/18/87								
Pilgrim 1	06/16/73	12/01/72	4.84E+06	3.04E+06	3.44E+06	3.29E+06	4.71E+06	3.52E+03	4.95E+06	
Quad-Cities 1	10/18/71	02/18/73	8.76E+06	3.44E+06	5.73E+06	3.24E+06	5.78E+06	3.35E+06	6.07E+06	
Quad-Cities 2	04/26/72	03/10/73		3.61E+06	3.77E+06	5.06E+06	3.15E+06	4.98E+06	4.56E+06	
River Bend 1	10/31/85	06/16/86								
Shoreham 1	02/15/85									
Susquehanna 1	09/10/82	06/08/83				3.21E+05	3.54E+06	6.09E+06	5.26E+06	
Susquehanna 2	05/08/84	02/12/85						9.32E+05	6.95E+06	
Vermont Yankee 1	03/24/72	11/30/72	3.45E+06	2.98E+06	3.57E+06	4.17E+06	2.87E+06	3.34E+06	3.00E+06	
WNP-2	01/19/84	12/13/84						4.10E+05	5.18E+06	
Total			9.98E+07	9.16E+07	8.93E+07	9.02E+07	8.65E+07	8.88E+07	1.07E+08	
* Fort St. Vrain 1	01/31/74	07/01/79	1.24E+05	6.76E+05	7.55E+05	5.69E+05	7.48E+05	5.67E+04	0.00E+00	

* High temperature gas cooled reactor

Table 13

Net Electrical Energy Generation Comparison By Year
Megawatt Hours

Boiling Water Reactors	Facility	Initial	Commercial	1986	1987	1988	1989	1990	1991	1992
		Criticality	Operation							
	Big Rock Point 1	09/27/62	03/29/63	5.06E+05	3.75E+05	3.84E+05	4.17E+05	4.26E+05	4.92E+05	2.71E+05
	Browns Ferry 1	08/17/73	08/01/74	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Browns Ferry 2	07/20/74	03/01/75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+06	8.39E+06
	Browns Ferry 3	08/08/76	03/01/77	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Brunswick 1	10/08/76	03/18/77	5.97E+06	4.05E+06	4.45E+06	4.18E+06	4.32E+06	4.39E+06	1.82E+06
	Brunswick 2	03/20/75	11/03/75	2.91E+06	5.69E+06	3.92E+06	4.19E+06	4.05E+06	3.64E+06	1.26E+06
	Clinton 1	02/27/87	11/24/87		6.84E+05	5.86E+06	2.86E+06	3.60E+06	6.05E+06	4.94E+06
	Cooper	02/21/74	07/01/74	4.05E+06	5.52E+06	4.20E+06	4.79E+06	5.11E+06	4.80E+06	6.23E+06
	Dresden 1	10/15/59	07/04/60	0.00E+00	0.00E+00					
	Dresden 2	01/07/70	06/09/70	4.65E+06	3.34E+06	4.32E+06	4.75E+06	4.08E+06	2.97E+06	4.18E+06
	Dresden 3	01/31/71	11/16/71	1.46E+06	4.40E+06	4.16E+06	5.12E+06	5.14E+06	2.57E+06	3.06E+06
	Duane Arnold	03/23/74	02/01/75	3.01E+06	2.54E+06	3.14E+06	3.14E+06	3.01E+06	4.15E+06	3.43E+06
	Fermi 2	06/21/85	01/23/86	0.00E+00	1.39E+06	4.06E+06	5.22E+06	7.10E+06	6.18E+06	5.41E+06
	James A. Fitzpatrick	11/17/74	07/28/75	6.02E+06	4.20E+06	4.36E+06	6.16E+06	4.60E+06	3.38E+06	0.00E+00
	Grand Gulf 1	08/18/82	07/01/85	4.10E+06	7.73E+06	9.59E+06	7.85E+06	7.40E+06	9.12E+06	8.17E+06
	Edwin 1 Hatch 1	09/12/74	12/31/75	3.65E+06	5.08E+06	4.11E+06	6.48E+06	4.07E+06	4.70E+06	6.16E+06
	Edwin 1 Hatch 2	07/04/78	09/05/79	3.62E+06	5.76E+06	4.25E+06	4.14E+06	6.53E+06	4.92E+06	4.69E+06
	Hope Creek 1	06/28/86	12/20/86	1.03E+06	7.28E+06	6.99E+06	6.61E+06	4.07E+06	7.39E+06	7.05E+06
	Humboldt Bay 3	02/16/63	08/ /63	0.00E+00	0.00E+00					
	LaCrosse	07/11/67	11/01/69	1.57E+05						
	LaSalle 1	06/21/82	01/01/84	2.02E+06	4.08E+06	5.44E+06	6.16E+06	8.64E+06	6.83E+06	6.45E+06
	LaSalle 2	03/10/84	10/19/84	5.72E+06	4.54E+06	5.66E+06	6.50E+06	6.18E+06	8.71E+06	5.78E+06
	Limerick 1	12/22/84	02/01/86	6.85E+06	5.32E+06	6.67E+06	5.21E+06	5.62E+06	8.13E+06	6.23E+06
	Limerick 2	08/12/89	01/08/90				1.06E+06	7.23E+06	7.14E+06	8.49E+06
	Millstone 1	10/26/70	03/01/71	5.25E+06	4.38E+06	5.54E+06	4.64E+06	5.09E+06	1.75E+06	3.61E+06
	Monticello	12/10/70	06/30/71	3.38E+06	3.53E+06	4.57E+06	2.65E+06	4.51E+06	3.59E+06	4.45E+06
	Nine Mile Point 1	09/05/69	12/01/69	3.15E+06	4.62E+06	0.00E+00	0.00E+00	1.28E+06	3.87E+06	2.93E+06
	Nine Mile Point 2	05/23/87	04/05/88		2.61E+05	2.51E+06	4.25E+06	4.14E+06	6.56E+06	4.25E+06
	Oyster Creek 1	05/03/69	12/01/69	1.30E+06	3.11E+06	3.54E+06	2.40E+06	4.31E+06	2.95E+06	4.53E+06
	Peach Bottom 2	09/16/73	07/05/74	6.90E+06	1.55E+06	0.00E+00	3.86E+06	6.70E+06	5.06E+06	5.67E+06
	Peach Bottom 3	08/07/74	12/23/74	4.85E+06	1.46E+06	0.00E+00	1.89E+05	7.53E+06	5.11E+06	7.18E+06
	Perry 1	06/06/86	11/18/87		8.28E+05	7.23E+06	5.32E+06	6.59E+06	8.98E+06	7.17E+06
	Pilgrim 1	06/16/72	12/01/72	1.03E+06	0.00E+00	0.00E+00	1.71E+06	4.24E+06	3.42E+06	4.74E+06
	Quad-Cities 1	10/18/71	02/18/73	4.42E+06	4.46E+06	5.66E+06	4.28E+06	5.33E+06	3.54E+06	4.17E+06
	Quad-Cities 2	04/26/72	03/10/73	4.72E+06	4.95E+06	4.18E+06	5.74E+06	4.35E+06	5.30E+06	3.90E+06
	River Bend 1	10/31/85	06/16/86	3.00E+06	4.96E+06	7.25E+06	4.79E+06	5.59E+06	6.69E+06	2.76E+06
	Shoreham 1	02/15/85								
	Susquehanna 1	09/10/82	06/08/83	5.83E+06	6.13E+06	8.41E+06	6.47E+06	6.44E+06	8.82E+06	6.39E+06
	Susquehanna 2	05/08/84	02/12/85	5.45E+06	8.60E+06	5.90E+06	6.77E+06	8.29E+06	7.04E+06	7.18E+06
	Vermont Yankee 1	03/24/72	11/30/72	2.06E+06	3.54E+06	4.11E+06	3.61E+06	3.62E+06	4.11E+06	3.73E+06
	WNP-2	01/19/84	12/13/84	5.18E+06	5.40E+06	6.00E+06	6.12E+06	5.74E+06	4.23E+06	5.69E+06
	Total			1.12E+08	1.30E+08	1.46E+08	1.48E+08	1.75E+08	1.80E+08	1.70E+08
	* Fort St. Vrain 1	01/31/74	07/01/79	5.20E+04	1.81E+05	6.60E+05				

* High temperature gas cooled reactor

Table 14

Net Electrical Energy Generation Comparison By Year

Facility	Initial		Megawatt Hours						
	Criticality	Commercial Operation	1979	1980	1981	1982	1983	1984	1985
Arkansas One 1	08/06/74	12/19/74	3.32E+06	3.78E+06	4.90E+06	3.72E+06	3.22E+06	4.60E+06	5.19E+06
Arkansas One 2	12/05/78	03/26/80	8.81E+05	3.65E+06	4.32E+06	3.81E+06	4.43E+06	6.20E+06	4.70E+06
Beaver Valley 1	05/10/76	10/01/76	1.79E+06	3.01E+05	4.66E+06	2.69E+06	4.68E+06	4.75E+06	5.90E+06
Beaver Valley 2	08/04/87	11/17/87							
Braidwood 1	05/29/87	07/29/88							
Braidwood 2	03/08/88	10/17/88							
Byron 1	02/02/85	09/16/85							1.01E+06
Byron 2	01/09/87	08/21/87							
Callaway 1	10/02/84	12/19/84						3.23E+05	8.05E+06
Calvert Cliffs 1	10/07/74	05/08/75	9.68E+06	4.53E+06	6.11E+06	5.36E+06	5.57E+06	6.22E+06	4.36E+06
Calvert Cliffs 2	11/30/76	04/01/77		6.41E+06	5.42E+06	5.00E+06	6.11E+06	5.34E+06	5.61E+06
Catawba 1	01/07/85	06/29/85							3.44E+06
Catawba 2	05/08/86	08/19/86							
Comanche Peak 1	04/03/90	08/13/90							
Donald C. Cook 1	01/18/75	08/27/75	1.16E+07	6.46E+06	6.78E+06	5.35E+06	5.29E+06	7.75E+06	2.12E+06
Donald C. Cook 2	03/10/78	07/01/78		6.70E+06	6.38E+06	7.00E+06	7.01E+06	5.36E+06	5.68E+06
Crystal River 3	01/14/77	03/13/77	3.76E+06	3.35E+06	4.01E+06	4.92E+06	3.77E+06	6.48E+06	2.85E+06
Davis-Besse 1	08/12/77	07/31/78	3.13E+06	2.09E+06	4.36E+06	3.22E+06	4.88E+06	4.29E+06	1.94E+06
Diablo Canyon 1	04/29/84	05/07/85						2.04E+05	5.23E+06
Diablo Canyon 2	09/19/85	03/13/86							5.41E+06
Joseph M. Farley 1	08/09/77	12/01/77	1.74E+06	4.60E+06	2.62E+06	5.22E+06	5.26E+06	5.43E+06	5.87E+06
Joseph M. Farley 2	05/05/81	07/30/81			2.92E+06	5.30E+06	5.98E+06	6.62E+06	5.47E+06
Fort Calhoun 1	08/06/73	06/20/74	3.67E+06	2.01E+06	2.15E+06	3.48E+06	2.75E+06	2.33E+06	3.07E+06
R. E. Ginna	11/08/69	07/01/70	2.96E+06	3.09E+06	3.32E+06	2.41E+06	3.04E+06	3.16E+06	3.62E+06
Haddam Neck	07/24/67	01/01/68	4.12E+06	3.56E+06	4.06E+06	4.54E+06	3.78E+06	3.36E+06	4.64E+06
Harris 1	01/03/87	05/02/87							
Indian Point 1	08/02/62	10/ /62	4.80E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indian Point 2	05/22/73	08/01/74		4.26E+06	3.06E+06	4.45E+06	5.90E+06	2.89E+06	6.67E+06
Indian Point 3	04/06/76	08/30/76	4.79E+06	3.07E+06	3.03E+06	1.44E+06	6.07E+04	6.04E+06	4.73E+06
Kewaunee	03/07/74	06/16/74	3.44E+06	3.63E+06	3.77E+06	3.82E+06	3.71E+06	3.81E+06	3.70E+06
Maine Yankee	10/23/72	12/28/72	4.54E+06	4.40E+06	5.21E+06	4.52E+06	0.00E+00	5.13E+06	5.35E+06
McGuire 1	08/08/81	12/01/81			1.91E+04	4.30E+06	4.63E+06	6.42E+06	6.78E+06
McGuire 2	05/08/83	03/01/84					0.00E+00	6.56E+06	5.60E+06
Millstone 2	10/17/75	12/26/75	4.36E+06	4.88E+06	6.09E+06	5.01E+06	2.45E+06	6.61E+06	3.50E+06
Millstone 3	01/23/86	04/23/86							
North Anna 1	04/05/78	06/06/78	4.19E+06	5.63E+06	4.64E+06	2.40E+06	5.31E+06	3.78E+06	5.80E+06
North Anna 2	06/12/80	12/14/80		3.50E+05	5.65E+05	4.05E+06	5.80E+06	4.72E+06	6.81E+06
Oconee 1	04/19/73	07/15/73	1.32E+07	5.12E+06	3.00E+06	5.15E+06	5.67E+06	6.17E+06	7.07E+06
Oconee 2	11/11/73	09/09/74		3.88E+06	5.19E+05	3.44E+06	5.14E+06	7.30E+06	5.06E+06
Oconee 3	09/05/74	12/16/74		5.22E+06	5.64E+06	2.12E+06	7.10E+06	5.35E+06	4.86E+06
Palisades	05/24/71	12/31/71	3.43E+06	2.38E+06	3.46E+06	3.35E+06	3.77E+06	8.12E+05	5.30E+06
Palo Verde 1	05/25/85	02/13/86							1.13E+06
Palo Verde 2	04/18/86	09/19/86							
Palo Verde 3	10/25/87	01/08/88							
Point Beach 1	11/02/70	12/21/70	6.77E+06	2.48E+06	2.61E+06	2.70E+06	2.38E+06	3.11E+06	3.35E+06
Point Beach 2	05/30/72	10/01/71		3.59E+06	3.72E+06	3.61E+06	3.02E+06	3.51E+06	3.60E+06
Prairie Island 1	12/01/73	12/16/73	7.10E+06	3.11E+06	3.84E+06	3.92E+06	3.89E+06	4.16E+06	3.68E+06
Prairie Island 2	12/17/74	12/21/74		3.47E+06	3.09E+06	3.86E+06	3.72E+06	3.91E+06	3.61E+06
Rancho Seco 1	09/16/74	04/17/75	5.71E+06	4.42E+06	2.63E+06	3.37E+06	2.85E+06	3.77E+06	1.94E+06
H. B. Robinson 2	09/20/70	03/07/71	4.00E+06	3.21E+06	3.50E+06	2.25E+06	3.35E+06	1.90E+05	5.24E+06
Salem 1	12/11/76	06/30/77	2.04E+06	5.68E+06	6.19E+06	4.09E+06	5.38E+06	2.13E+06	9.01E+06
Salem 2	08/08/80	10/13/81		0.00E+00	1.63E+06	7.94E+06	7.44E+05	3.20E+06	5.02E+06
San Onofre 1	06/14/67	01/01/68	3.36E+06	8.17E+05	7.79E+05	5.10E+05	0.00E+00	2.62E+05	2.46E+06
San Onofre 2	07/26/82	08/08/83				1.26E+05	3.76E+06	5.27E+06	5.15E+06
San Onofre 3	08/29/83	04/01/84					9.97E+05	4.10E+06	3.71E+06
Seabrook 1	06/13/89	08/19/90							
Sequoyah 1	07/05/80	07/01/81		5.18E+05	2.53E+06	4.91E+06	7.34E+06	6.10E+06	4.06E+06
Sequoyah 2	11/05/81	06/01/82					6.69E+06	6.40E+06	5.61E+06
South Texas 1	03/08/88	08/25/88							
South Texas 2	03/12/89	06/19/89							

Table 14

Net Electrical Energy Generation Comparison By Year

Facility	Initial		Megawatt Hours							
	Criticality	Commercial Operation	1979	1980	1981	1982	1983	1984	1985	
St. Lucie 1	04/22/76	12/21/76	4.88E+06	5.20E+06	4.95E+06	6.78E+06	1.07E+06	4.23E+06	5.87E+06	
St. Lucie 2	06/02/83	08/08/83					2.40E+06	5.56E+06	6.11E+06	
Summer 1	10/22/82	01/01/84				1.91E+05	4.33E+06	4.20E+06	5.23E+06	
Surry 1	07/01/72	12/22/72	2.87E+06	2.47E+06	2.38E+06	5.48E+06	3.52E+06	3.33E+06	5.62E+06	
Surry 2	03/07/73	05/01/73		2.24E+06	5.15E+06	5.49E+06	4.09E+06	5.21E+06	4.07E+06	
Three Mile Island 1	06/05/74	09/02/74	8.48E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E+05	
Three Mile Island 2	03/28/78	12/30/78	N/R	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Trojan	12/15/75	05/20/76	5.27E+06	6.07E+06	6.42E+06	4.80E+06	4.08E+06	4.74E+06	6.91E+06	
Turkey Point 3	10/20/72	12/14/72	6.71E+06	4.39E+06	9.12E+05	3.77E+06	4.33E+06	4.78E+06	3.41E+06	
Turkey Point 4	06/11/73	09/07/73		3.85E+06	4.50E+06	3.84E+06	2.97E+06	3.08E+06	5.18E+06	
Vogtle 1	03/09/87	05/31/87								
Vogtle 2	03/28/89	05/20/89								
Waterford 3	03/04/85	09/24/85							1.81E+06	
Wolf Creek 1	05/22/85	09/03/85							2.94E+06	
Yankee Rowe 1	08/19/60	07/01/61	1.23E+06	2.92E+05	8.85E+05	8.82E+05	1.34E+06	1.03E+06	1.18E+06	
Zion 1	06/19/73	12/31/73	1.03E+07	6.51E+06	6.19E+06	4.70E+06	4.02E+06	5.69E+06	4.81E+06	
Zion 2	12/24/73	09/17/74		5.28E+06	5.26E+06	5.16E+06	6.18E+06	5.99E+06	5.11E+06	
Total			1.50E+08	1.57E+08	1.78E+08	1.84E+08	1.98E+08	2.32E+08	2.72E+08	

N/R = Not Reported

Table 14

Net Electrical Energy Generation Comparison By Year

Facility	Initial		Megawatt Hours						
	Criticality	Commercial Operation	1986	1987	1988	1989	1990	1991	1992
Arkansas One 1	08/06/74	12/19/74	3.57E+06	4.76E+06	3.95E+06	3.37E+06	4.12E+06	6.54E+06	5.83E+06
Arkansas One 2	12/05/78	03/26/80	5.31E+06	6.61E+06	4.95E+06	5.47E+06	7.13E+06	6.12E+06	5.50E+06
Beaver Valley 1	05/10/76	10/01/76	4.78E+06	5.62E+06	4.98E+06	3.79E+06	6.17E+06	3.70E+06	6.30E+06
Beaver Valley 2	08/04/87	11/17/87		7.38E+05	6.48E+06	4.54E+06	4.29E+06	6.76E+06	5.64E+06
Braidwood 1	05/29/87	07/29/88		1.46E+06	3.42E+06	4.63E+06	8.26E+06	4.98E+06	7.15E+06
Braidwood 2	03/08/88	10/17/88			1.35E+06	7.14E+06	6.33E+06	6.54E+06	8.75E+06
Byron 1	02/02/85	09/16/85	7.40E+06	5.33E+06	6.29E+06	8.95E+06	6.93E+06	6.31E+06	8.99E+06
Byron 2	01/09/87	08/21/87		1.97E+06	6.36E+06	6.06E+06	6.01E+06	8.77E+06	6.98E+06
Callaway 1	10/02/84	12/19/84	7.20E+06	6.32E+06	8.94E+06	8.35E+06	8.01E+06	9.98E+06	8.09E+06
Calvert Cliffs 1	10/07/74	05/08/75	5.83E+06	5.27E+06	5.16E+06	1.35E+06	1.34E+06	5.47E+06	4.11E+06
Calvert Cliffs 2	11/30/76	04/01/77	7.01E+06	4.83E+06	6.60E+06	4.53E+06	0.00E+00	3.64E+06	6.59E+06
Catawba 1	01/07/85	06/29/85	5.18E+06	6.38E+06	7.63E+06	7.76E+06	6.87E+06	6.67E+06	7.03E+06
Catawba 2	05/08/86	08/19/86	1.30E+06	7.17E+06	6.17E+06	6.51E+06	6.44E+06	7.27E+06	9.27E+06
Comanche Peak 1	04/03/90	08/13/90					2.51E+06	5.38E+06	6.95E+06
Donald C. Cook 1	01/18/75	08/27/75	6.65E+06	5.03E+06	7.47E+06	5.43E+06	6.30E+06	7.34E+06	4.99E+06
Donald C. Cook 2	03/10/78	07/01/78	4.34E+06	5.03E+06	2.32E+06	6.66E+06	4.81E+06	8.19E+06	1.43E+06
Crystal River 3	01/14/77	03/13/77	2.65E+06	3.62E+06	5.77E+06	2.93E+06	4.14E+06	5.46E+06	5.30E+06
Davis-Besse 1	08/12/77	07/31/78	3.49E+03	5.06E+06	1.16E+06	7.32E+06	4.16E+06	5.84E+06	7.65E+06
Diablo Canyon 1	04/29/84	05/07/85	5.29E+06	8.28E+06	5.26E+06	7.20E+06	8.71E+06	7.36E+06	7.45E+06
Diablo Canyon 2	09/19/85	03/13/86	6.55E+06	5.72E+06	6.23E+06	8.62E+06	7.56E+06	7.71E+06	9.25E+06
Joseph M. Farley 1	08/09/77	12/01/77	5.73E+06	6.44E+06	5.91E+06	6.02E+06	6.91E+06	5.41E+06	5.65E+06
Joseph M. Farley 2	05/05/81	07/30/81	5.96E+06	4.90E+06	7.17E+06	5.62E+06	5.25E+06	6.74E+06	5.41E+06
Fort Calhoun 1	08/06/73	06/20/74	3.61E+06	3.06E+06	2.63E+06	3.30E+06	2.42E+06	3.25E+06	2.54E+06
R. E. Ginna	11/08/69	07/01/70	3.61E+06	3.80E+06	3.53E+06	3.07E+06	3.45E+06	3.48E+06	3.48E+06
Haddam Neck	07/24/67	01/01/68	2.13E+06	2.53E+06	3.31E+06	2.96E+06	1.15E+06	3.70E+06	3.88E+06
Harris 1	01/03/87	05/02/87		3.38E+06	5.33E+06	5.63E+06	6.34E+06	5.92E+06	5.41E+06
Indian Point 1	08/02/62	10/ /62	0.00E+00	0.00E+00					
Indian Point 2	05/22/73	08/01/74	3.81E+06	5.15E+06	6.06E+06	4.47E+06	5.21E+06	3.86E+06	7.88E+06
Indian Point 3	04/06/76	08/30/76	5.53E+06	4.85E+06	6.71E+06	4.97E+06	5.03E+06	7.30E+06	4.76E+06
Kewaunee	03/07/74	06/16/74	3.85E+06	4.01E+06	3.91E+06	3.74E+06	3.90E+06	3.67E+06	3.94E+06
Maine Yankee	10/23/72	12/28/72	6.24E+06	4.04E+06	5.02E+06	6.94E+06	4.86E+06	6.26E+06	5.36E+06
McGuire 1	08/08/81	12/01/81	5.16E+06	7.35E+06	7.39E+06	7.80E+06	4.73E+06	6.84E+06	7.49E+06
McGuire 2	05/08/83	03/01/84	6.21E+06	7.57E+06	8.05E+06	7.41E+06	6.46E+06	9.52E+06	6.78E+06
Millstone 2	10/17/75	12/26/75	5.16E+06	6.89E+06	5.73E+06	4.89E+06	5.30E+06	3.94E+06	2.71E+06
Millstone 3	01/23/86	04/23/86	5.86E+06	6.74E+06	7.67E+06	7.08E+06	8.22E+06	2.84E+06	6.57E+06
North Anna 1	04/05/78	06/06/78	6.31E+06	5.75E+06	6.90E+06	4.30E+06	7.23E+06	5.63E+06	5.36E+06
North Anna 2	06/12/80	12/14/80	6.02E+06	5.65E+06	7.88E+06	5.90E+06	5.98E+06	7.68E+06	6.32E+06
Oconee 1	04/19/73	07/15/73	4.78E+06	5.03E+06	7.19E+06	5.94E+06	6.45E+06	6.01E+06	6.28E+06
Oconee 2	11/11/73	09/09/74	5.80E+06	6.23E+06	5.54E+06	6.01E+06	6.27E+06	7.43E+06	5.94E+06
Oconee 3	09/05/74	12/16/74	6.06E+06	5.08E+06	5.97E+06	6.34E+06	7.43E+06	5.59E+06	5.45E+06
Palisades	05/24/71	12/31/71	8.41E+05	2.63E+06	3.44E+06	3.64E+06	3.01E+06	4.87E+06	4.87E+06
Palo Verde 1	05/25/85	02/13/86	5.85E+06	5.27E+06	6.67E+06	1.80E+06	4.72E+06	9.31E+06	7.12E+06
Palo Verde 2	04/18/86	09/19/86	2.65E+06	8.19E+06	6.75E+06	4.70E+06	6.24E+06	8.27E+06	1.01E+07
Palo Verde 3	10/25/87	01/08/88		3.20E+05	3.55E+04	1.33E+06	9.64E+06	7.52E+06	8.39E+06
Point Beach 1	11/02/70	12/21/70	3.77E+06	3.57E+06	3.83E+06	3.61E+06	3.53E+06	3.63E+06	3.60E+06
Point Beach 2	05/30/72	10/01/71	3.42E+06	3.61E+06	3.72E+06	3.49E+06	3.79E+06	3.69E+06	3.67E+06
Prairie Island 1	12/01/73	12/16/73	3.82E+06	3.59E+06	3.82E+06	4.39E+06	3.83E+06	3.98E+06	3.50E+06
Prairie Island 2	12/17/74	12/21/74	3.86E+06	4.43E+06	3.89E+06	3.89E+06	3.80E+06	4.48E+06	3.22E+06
Rancho Seco 1	09/16/74	04/17/75	0.00E+00	0.00E+00	2.81E+06	1.41E+06	0.00E+00	0.00E+00	0.00E+00
H. B. Robinson 2	09/20/70	03/07/71	4.80E+06	4.23E+06	3.18E+06	2.78E+06	3.31E+06	4.79E+06	4.06E+06
Salem 1	12/11/76	06/30/77	7.08E+06	6.21E+06	7.41E+06	6.21E+06	5.96E+06	6.81E+06	5.30E+06
Salem 2	08/08/80	10/13/81	5.31E+06	6.17E+06	5.97E+06	7.82E+06	5.41E+06	7.66E+06	4.72E+06
San Onofre 1	06/14/67	01/01/68	8.74E+05	2.71E+06	1.37E+06	1.17E+06	1.54E+06	2.03E+06	1.17E+06
San Onofre 2	07/26/82	08/08/83	6.36E+06	6.23E+06	9.00E+06	5.22E+06	8.31E+06	5.76E+06	8.80E+06
San Onofre 3	08/29/83	04/01/84	6.76E+06	7.52E+06	6.13E+06	8.84E+06	6.58E+06	8.69E+06	6.83E+06
Seabrook 1	06/13/89	08/19/90					4.09E+06	6.81E+06	7.87E+06
Sequoyah 1	07/05/80	07/01/81	0.00E+00	0.00E+00	6.71E+04	9.55E+06	6.82E+06	7.27E+06	8.36E+06
Sequoyah 2	11/05/81	06/01/82	0.00E+00	0.00E+00	3.88E+06	9.55E+06	7.18E+06	9.32E+06	7.27E+06
South Texas 1	03/08/88	08/25/88			2.79E+06	6.28E+06	6.00E+06	7.20E+06	7.27E+06
South Texas 2	03/12/89	06/19/89				3.02E+06	6.43E+06	7.26E+06	1.03E+07

Table 14

Net Electrical Energy Generation Comparison By Year

Facility	Pressurized Water Reactors		Megawatt Hours						
	Final Criticality	Commercial Operation	1986	1987	1988	1989	1990	1991	1992
St. Lucie 1	04/22/76	12/21/76	7.05E+06	5.72E+06	6.25E+06	6.95E+06	4.49E+06	5.79E+06	7.14E+06
St. Lucie 2	06/02/83	08/08/83	6.15E+06	5.95E+06	7.41E+06	5.44E+06	5.32E+06	7.43E+06	5.43E+06
Summer 1	10/22/82	01/01/84	7.16E+06	5.15E+06	5.05E+06	5.41E+06	6.11E+06	5.34E+06	7.52E+06
Surry 1	07/01/72	12/22/72	4.49E+06	4.63E+06	2.69E+06	3.17E+06	4.77E+06	6.59E+06	5.22E+06
Surry 2	03/07/73	05/01/73	4.50E+06	4.79E+06	3.57E+06	8.94E+05	5.84E+06	3.99E+06	6.43E+06
Three Mile Island 1	06/05/74	09/02/74	4.82E+06	5.03E+06	5.47E+06	7.22E+06	5.30E+06	5.67E+06	7.22E+06
Three Mile Island 2	03/28/78	12/30/78	0.00E+00	0.00E+00					
Trojan	12/15/75	05/20/76	7.09E+06	4.35E+06	6.34E+06	5.53E+06	6.07E+06	1.46E+06	4.57E+06
Turkey Point 3	10/20/72	12/14/72	4.51E+06	8.56E+05	3.45E+06	3.59E+06	3.36E+06	1.31E+06	3.42E+06
Turkey Point 4	06/11/73	09/07/73	1.72E+06	2.64E+06	3.26E+06	2.09E+06	4.38E+06	7.98E+05	4.64E+06
Vogtle 1	03/09/87	05/31/87		3.92E+06	6.79E+06	8.71E+06	7.34E+06	7.50E+06	9.38E+06
Vogtle 2	03/28/89	05/20/89				5.55E+06	6.85E+06	8.90E+06	7.77E+06
Waterford 3	03/04/85	09/24/85	7.30E+06	7.43E+06	6.54E+06	7.61E+06	8.60E+06	7.27E+06	7.62E+06
Wolf Creek 1	05/22/85	09/03/85	6.97E+06	6.50E+06	6.66E+06	9.71E+06	7.87E+06	5.86E+06	8.49E+06
Yankee Rowe 1	08/19/80	07/01/61	1.39E+06	1.14E+06	1.12E+06	1.31E+06	8.26E+05	9.92E+05	0.00E+00
Zion 1	06/19/73	12/31/73	4.90E+06	6.06E+06	6.34E+06	5.00E+06	4.45E+06	4.26E+06	4.11E+06
Zion 2	12/24/73	09/17/74	7.33E+06	5.11E+06	6.65E+06	7.69E+06	2.85E+06	5.13E+06	5.37E+06
Total			2.96E+08	3.19E+08	3.65E+08	3.88E+08	3.97E+08	4.33E+08	4.45E+08

* High temperature gas cooled reactor

Table 15

Thermal Energy Generation Comparison By Year

Boiling Water Reactors	Megawatt Hours								
	Initial Criticality	Commercial Operation	1979	1980	1981	1982	1983	1984	1985
Big Rock Point 1	09/27/62	03/29/63	3.96E+05	1.40E+06	1.63E+06	1.20E+06	1.14E+06	1.37E+06	1.19E+06
Browns Ferry 1	08/17/73	08/01/74	6.31E+07	1.92E+07	1.36E+07	2.49E+07	6.78E+06	2.45E+07	4.95E+06
Browns Ferry 2	07/20/74	03/01/75		1.74E+07	2.31E+07	1.36E+07	1.97E+07	1.31E+07	0.00E+00
Browns Ferry 3	08/08/76	03/01/77		2.13E+07	1.95E+07	1.55E+07	1.70E+07	9.11E+05	4.65E+06
Brunswick 1	10/08/76	03/18/77	2.12E+07	1.23E+07	8.29E+06	9.48E+06	4.53E+06	1.56E+07	6.06E+06
Brunswick 2	03/20/75	11/03/75		5.38E+06	1.04E+07	6.30E+06	1.23E+07	4.53E+06	1.57E+07
Clinton 1	02/27/87	11/24/87							
Cooper	02/21/74	07/01/74	1.58E+07	1.36E+07	1.39E+07	1.64E+07	1.05E+07	1.09E+07	3.42E+06
Dresden 1	10/15/59	07/04/60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+07	0.00E+00
Dresden 2	01/07/70	06/09/70	2.77E+07	1.57E+07	1.13E+07	1.89E+07	1.13E+07	7.10E+06	1.03E+07
Dresden 3	01/31/71	11/16/71		1.42E+07	1.71E+07	1.27E+07	1.37E+07	7.10E+06	1.47E+07
Duane Arnold	03/23/74	02/01/75	9.07E+06	8.87E+06	7.05E+06	7.32E+06	7.38E+06	8.71E+06	6.15E+06
Fermi 2	06/21/85	01/23/86							
James A. Fitzpatrick	11/17/74	07/28/75	8.97E+06	1.30E+07	1.42E+07	1.51E+07	1.42E+07	1.52E+07	1.28E+07
Grand Gulf 1	08/18/82	07/01/85					0.00E+00	8.80E+05	9.80E+06
Edwin I. Hatch 1	09/12/74	12/31/75	1.62E+07	1.54E+07	8.97E+06	9.42E+06	1.29E+07	1.20E+07	1.53E+07
Edwin I. Hatch 2	07/04/78	09/05/79		1.16E+07	1.47E+07	1.18E+07	1.19E+07	5.99E+06	1.70E+07
Hope Creek 1	06/28/86	12/20/86							
Humboldt Bay 3	02/16/63	08/ /63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LaCrosse	07/11/67	11/01/69	7.48E+05	8.00E+05	9.11E+05	5.27E+05	7.60E+05	1.07E+06	1.11E+06
LaSalle 1	06/21/82	01/01/84				2.09E+06	5.86E+06	2.30E+07	1.54E+07
LaSalle 2	03/10/84	10/19/84						4.51E+06	1.10E+07
Limerick 1	12/22/84	02/01/86						0.00E+00	4.42E+06
Limerick 2	08/12/89	01/08/90							
Millstone 1	10/26/70	03/01/71	1.30E+07	1.04E+07	8.60E+06	1.36E+07	1.64E+07	1.34E+07	1.42E+07
Monticello	12/10/70	06/30/71	1.35E+07	1.07E+07	1.01E+07	7.68E+06	1.30E+07	8.98E+05	1.31E+07
Nine Mile Point 1	09/05/69	12/01/69	9.67E+06	1.41E+07	1.01E+07	3.42E+06	8.72E+06	1.12E+07	1.52E+07
Nine Mile Point 2	05/23/87	04/05/88							
Oyster Creek 1	05/03/69	12/01/69	1.38E+07	6.27E+06	8.44E+06	6.79E+06	9.23E+05	1.04E+06	1.16E+07
Peach Bottom 2	09/16/73	07/05/74	4.58E+07	1.37E+07	2.08E+07	1.53E+07	1.40E+07	7.87E+06	7.85E+06
Peach Bottom 3	08/07/74	12/23/74		2.26E+07	9.85E+06	2.65E+07	7.82E+06	2.32E+07	1.08E+07
Perry 1	06/06/86	11/18/87							
Pilgrim 1	06/16/72	12/01/72	1.47E+07	9.20E+06	1.05E+07	9.90E+06	1.42E+07	4.99E+05	1.50E+07
Quad-Cities 1	10/18/71	02/18/73	3.00E+07	1.17E+07	1.88E+07	1.12E+07	1.89E+07	1.06E+07	1.92E+07
Quad-Cities 2	04/26/72	03/10/73		1.22E+07	1.27E+07	1.67E+07	1.08E+07	1.61E+07	1.46E+07
River Bend 1	10/31/85	06/16/86							
Shoreham 1	02/15/85								
Susquehanna 1	09/10/82	06/08/83				1.16E+06	1.12E+07	1.94E+07	1.70E+07
Susquehanna 2	05/08/84	02/12/85						3.23E+06	2.20E+07
Vermont Yankee 1	03/24/72	11/30/72	1.08E+07	9.38E+06	1.13E+07	1.31E+07	9.12E+06	1.04E+07	9.55E+06
WNP-2	01/19/84	12/13/84						1.21E+06	1.64E+07
Total			3.14E+08	2.90E+08	2.86E+08	2.89E+08	2.75E+08	2.90E+08	3.40E+08
* Fort St. Vrain 1	01/31/74	07/01/79	4.78E+05	2.23E+06	2.23E+06	1.86E+06	2.58E+06	3.40E+05	3.34E+04

* High temperature gas cooled reactor

Table 15

Thermal Energy Generation Comparison By Year

Facility	Megawatt Hours									
	Initial Criticality	Commercial Operation	1986	1987	1988	1989	1990	1991	1992	
Boiling Water Reactors										
Big Rock Point 1	09/27/62	03/29/63	1.66E+06	1.23E+06	1.26E+06	1.14E+07	1.40E+06	1.63E+06	8.97E+05	
Browns Ferry 1	08/17/73	08/01/74	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Browns Ferry 2	07/20/74	03/01/75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+07	2.57E+07	
Browns Ferry 3	08/08/76	03/01/77	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Brunswick 1	10/08/76	03/18/77	1.89E+07	1.29E+07	1.43E+07	1.32E+07	1.37E+07	1.39E+07	5.90E+06	
Brunswick 2	03/20/75	11/03/75	9.43E+06	1.83E+07	1.24E+07	1.34E+07	1.30E+07	1.18E+07	4.20E+06	
Clinton 1	02/27/87	11/24/87		2.15E+06	1.86E+07	9.26E+06	1.15E+07	1.92E+07	1.57E+07	
Cooper	02/21/74	07/01/74	1.26E+07	1.72E+07	1.31E+07	1.50E+07	1.59E+07	1.50E+07	1.93E+07	
Dresden 1	10/15/59	07/04/60	0.00E+00	0.00E+00						
Dresden 2	01/07/70	06/09/70	1.52E+07	1.11E+07	1.45E+07	1.56E+07	1.35E+07	1.00E+07	1.41E+07	
Dresden 3	01/31/71	11/16/71	5.04E+06	1.46E+07	1.36E+07	1.67E+07	1.67E+07	9.00E+06	1.02E+07	
Duane Arnold	03/23/74	02/01/75	9.48E+06	7.96E+06	9.97E+06	1.00E+07	9.64E+06	1.33E+07	1.10E+07	
Fermi 2	06/21/85	01/23/86	2.23E+05	5.99E+06	1.30E+07	1.63E+07	2.25E+07	1.96E+07	1.76E+07	
James A. Fitzpatrick	11/17/74	07/28/75	1.84E+07	1.31E+07	1.34E+07	1.88E+07	1.42E+07	1.04E+07	0.00E+00	
Grand Gulf 1	08/18/82	07/01/85	1.47E+07	2.55E+07	3.05E+07	2.51E+07	2.43E+07	2.98E+07	2.65E+07	
Edwin I. Hatch 1	09/12/74	12/31/75	1.18E+07	1.65E+07	1.35E+07	2.09E+07	1.35E+07	1.56E+07	2.02E+07	
Edwin I. Hatch 2	07/04/78	09/05/79	1.19E+07	1.83E+07	1.36E+07	1.35E+07	2.08E+07	1.59E+07	1.53E+07	
Hope Creek 1	06/28/86	12/20/86	3.62E+06	2.29E+07	2.22E+07	2.10E+07	1.35E+07	2.35E+07	2.22E+07	
Humboldt Bay 3	02/16/63	08/ /63	0.00E+00	0.00E+00						
LaCrosse	07/11/67	11/01/69	5.58E+05							
LaSalle 1	06/21/82	01/01/84	6.54E+06	1.31E+07	1.69E+07	1.91E+07	2.64E+07	2.10E+07	1.99E+07	
LaSalle 2	03/10/84	10/19/84	1.80E+07	1.43E+07	1.81E+07	2.04E+07	1.91E+07	2.68E+07	1.78E+07	
Limerick 1	12/22/84	02/01/86	2.16E+07	1.73E+07	2.19E+07	1.71E+07	1.82E+07	2.59E+07	1.97E+07	
Limerick 2	08/12/89	01/08/90				3.54E+06	2.29E+07	2.24E+07	2.67E+07	
Millstone 1	10/26/70	03/01/71	1.61E+07	1.34E+07	1.70E+07	1.42E+07	1.56E+07	5.52E+06	1.14E+07	
Monticello	12/10/70	06/30/71	1.04E+07	1.10E+07	1.43E+07	8.48E+06	1.40E+07	1.12E+07	1.39E+07	
Nine Mile Point 1	09/05/69	12/01/69	9.76E+06	1.42E+07	0.00E+00	0.00E+00	4.07E+06	1.19E+07	8.94E+06	
Nine Mile Point 2	05/23/87	04/05/88		1.53E+06	8.32E+06	1.41E+07	1.34E+07	2.05E+07	1.41E+07	
Oyster Creek 1	05/03/69	12/01/69	4.12E+06	9.69E+06	1.09E+07	7.75E+06	1.36E+07	9.43E+06	1.41E+07	
Peach Bottom 2	09/16/73	07/05/74	2.16E+07	4.98E+06	0.00E+00	1.25E+07	2.11E+07	1.61E+07	1.78E+07	
Peach Bottom 3	08/07/74	12/23/74	1.55E+07	4.76E+06	0.00E+00	8.84E+05	2.37E+07	1.62E+07	2.25E+07	
Perry 1	06/06/86	11/18/87		2.56E+06	2.23E+07	1.62E+07	2.00E+07	2.75E+07	2.19E+07	
Pilgrim 1	06/16/72	12/01/72	3.09E+06	0.00E+00	0.00E+00	5.48E+06	1.29E+07	1.04E+07	1.43E+07	
Quad-Cities 1	10/18/71	02/18/73	1.41E+07	1.42E+07	1.83E+07	1.40E+07	1.70E+07	1.13E+07	1.35E+07	
Quad-Cities 2	04/26/72	03/10/73	1.52E+07	1.60E+07	1.36E+07	1.85E+07	1.38E+07	1.69E+07	1.26E+07	
River Bend 1	10/31/85	06/16/86	9.85E+06	1.55E+07	2.25E+07	1.53E+07	1.78E+07	2.11E+07	8.77E+06	
Shoreham 1	02/15/85									
Susquehanna 1	09/10/82	06/08/83	1.87E+07	1.98E+07	2.65E+07	2.05E+07	2.05E+07	2.78E+07	2.03E+07	
Susquehanna 2	05/08/84	02/12/85	1.74E+07	2.72E+07	1.87E+07	2.14E+07	2.63E+07	2.23E+07	2.26E+07	
Vermont Yankee 1	03/24/72	11/30/72	6.57E+06	1.11E+07	1.30E+07	1.13E+07	1.13E+07	1.29E+07	1.18E+07	
WNP-2	01/19/84	12/13/84	1.61E+07	1.67E+07	1.87E+07	1.92E+07	1.80E+07	1.33E+07	1.75E+07	
Total			3.58E+08	4.15E+08	4.65E+08	4.80E+08	5.54E+08	5.71E+08	5.39E+08	
* Fort St. Vrain 1	01/31/74	07/01/79	3.77E+05	6.68E+05	1.95E+06					

* High temperature gas cooled reactor

Table 16

Thermal Energy Generation Comparison By Year

Facility	Megawatt Hours									
	Initial	Commercial	1979	1980	1981	1982	1983	1984	1985	
	Criticality	Operation								
Pressurized Water Reactors										
Arkansas One 1	08/06/74	12/19/74	1.05E+07	1.29E+07	1.54E+07	1.22E+07	1.02E+07	1.44E+07	1.62E+07	
Arkansas One 2	12/05/78	03/26/80	3.45E+06	1.18E+07	1.39E+07	1.25E+07	1.43E+07	1.95E+07	1.50E+07	
Beaver Valley 1	05/10/76	10/01/76	6.11E+06	1.13E+06	1.55E+07	8.86E+06	1.51E+07	1.58E+07	1.96E+07	
Beaver Valley 2	08/04/87	11/17/87								
Braidwood 1	05/29/87	07/29/88								
Braidwood 2	03/08/88	10/17/88								
Byron 1	02/02/85	09/16/85								3.34E+06
Byron 2	01/09/87	08/21/87								
Callaway 1	10/02/84	12/19/84						1.00E+06	2.49E+07	
Calvert Cliffs 1	10/07/74	05/08/75	3.15E+07	1.52E+07	1.96E+07	1.68E+07	1.75E+07	1.96E+07	1.35E+07	
Calvert Cliffs 2	11/30/76	04/01/77		2.05E+07	1.71E+07	1.62E+07	1.96E+07	1.69E+07	1.78E+07	
Catawba 1	01/07/85	06/29/85								1.07E+07
Catawba 2	05/08/86	08/19/86								
Comanche Peak 1	04/03/90	08/13/90								
Donald C. Cook 1	01/18/75	08/27/75	3.68E+07	2.02E+07	2.11E+07	1.69E+07	1.68E+07	2.41E+07	6.83E+06	
Donald C. Cook 2	03/10/78	07/01/78		2.14E+07	2.04E+07	2.22E+07	2.22E+07	1.70E+07	1.82E+07	
Crystal River 3	01/14/77	03/13/77	1.17E+07	1.04E+07	1.27E+07	1.52E+07	1.14E+07	1.97E+07	1.17E+07	
Davis-Besse 1	08/12/77	07/31/78	1.00E+07	6.71E+06	1.40E+07	1.03E+07	1.57E+07	1.39E+07	6.31E+06	
Diablo Canyon 1	04/29/84	05/07/85						9.48E+05	1.66E+07	
Diablo Canyon 2	08/19/85	03/13/86							2.12E+06	
Joseph M. Farley 1	08/09/77	12/01/77	5.77E+06	1.54E+07	8.96E+06	1.75E+07	1.76E+07	1.78E+07	1.90E+07	
Joseph M. Farley 2	05/05/81	07/30/81			9.47E+06	1.75E+07	1.99E+07	2.15E+07	1.74E+07	
Fort Calhoun 1	08/06/73	06/20/74	1.16E+07	6.48E+06	6.98E+06	1.09E+07	9.14E+06	7.43E+06	9.56E+06	
R. E. Ginna	11/08/69	07/01/70	9.35E+06	9.93E+06	1.07E+07	7.68E+06	9.67E+06	1.00E+07	1.14E+07	
Haddam Neck	07/24/67	01/01/68	1.32E+07	1.14E+07	1.31E+07	1.45E+07	1.22E+07	1.08E+07	1.49E+07	
Harris 1	01/03/87	05/02/87								
Indian Point 1	08/02/62	10/ /62	1.61E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indian Point 2	05/22/73	08/01/74		1.50E+07	1.05E+07	1.51E+07	1.96E+07	1.17E+07	2.21E+07	
Indian Point 3	04/06/76	08/30/76	1.57E+07	1.15E+07	1.14E+07	5.06E+06	2.82E+05	1.93E+07	1.51E+07	
Kewaunee	03/07/74	06/16/74	1.09E+07	1.15E+07	1.21E+07	1.23E+07	1.19E+07	1.21E+07	1.16E+07	
Maine Yankee	10/23/72	12/28/72	1.41E+07	1.41E+07	1.67E+07	1.47E+07	1.83E+07	1.62E+07	1.67E+07	
McGuire 1	08/08/81	12/01/81			8.50E+04	1.34E+07	1.39E+07	1.94E+07	2.06E+07	
McGuire 2	05/08/83	03/01/84					0.00E+00	1.94E+07	1.68E+07	
Millstone 2	10/17/75	12/26/75	1.38E+07	1.55E+07	1.92E+07	1.60E+07	7.88E+06	2.14E+07	1.12E+07	
Millstone 3	01/23/86	04/23/86								
North Anna 1	04/05/78	06/06/78	1.41E+07	1.89E+07	1.51E+07	7.95E+06	1.68E+07	1.18E+07	1.81E+07	
North Anna 2	06/12/80	12/14/80		1.12E+06	1.77E+07	1.29E+07	1.87E+07	1.51E+07	2.16E+07	
Oconee 1	04/19/73	07/15/73	4.37E+07	1.52E+07	9.00E+06	1.57E+07	1.72E+07	1.86E+07	2.14E+07	
Oconee 2	11/11/73	09/09/74		1.20E+07	1.59E+07	1.06E+07	1.58E+07	2.23E+07	1.56E+07	
Oconee 3	09/05/74	12/16/74		1.59E+07	1.72E+07	6.53E+06	2.14E+07	1.63E+07	1.49E+07	
Palisades	05/24/71	12/31/71	1.20E+07	8.19E+06	1.17E+07	1.12E+07	1.27E+07	2.72E+06	1.75E+07	
Palo Verde 1	05/25/85	02/13/86							4.39E+06	
Palo Verde 2	04/18/86	09/19/86								
Palo Verde 3	10/25/87	01/08/88								
Point Beach 1	11/02/70	12/21/70	2.08E+07	8.09E+06	8.51E+06	8.60E+06	7.59E+06	9.41E+06	1.02E+07	
Point Beach 2	05/30/72	10/01/71		1.11E+07	1.15E+07	1.13E+07	9.38E+06	1.09E+07	1.11E+07	
Prairie Island 1	12/01/73	12/16/73	1.12E+08	1.06E+07	1.25E+07	1.27E+07	1.24E+07	1.33E+07	1.18E+07	
Prairie Island 2	12/17/74	12/21/74		1.14E+07	1.01E+07	1.26E+07	1.19E+07	1.24E+07	1.15E+07	
Rancho Seco 1	09/16/74	04/17/75	1.79E+07	1.39E+07	8.92E+06	1.09E+07	9.16E+06	1.21E+07	6.26E+06	
H. B. Robinson 2	09/20/70	03/07/71	1.30E+07	1.07E+07	1.19E+07	7.67E+06	1.13E+07	7.84E+05	1.66E+07	
Salem 1	12/11/76	06/30/77	6.60E+06	1.84E+07	2.02E+07	1.31E+07	1.67E+07	6.95E+06	2.77E+07	
Salem 2	08/08/80	10/13/81		0.00E+00	5.11E+06	2.54E+07	2.95E+06	1.03E+07	1.60E+07	
San Onofre 1	06/14/67	01/01/68	1.05E+07	2.55E+06	2.59E+06	1.59E+06	0.00E+00	9.24E+05	8.12E+06	
San Onofre 2	07/26/82	08/08/83				9.28E+05	1.23E+07	1.66E+07	1.65E+07	
San Onofre 3	08/29/83	04/01/84					3.55E+06	1.29E+07	1.21E+07	
Seabrook 1	06/13/89	08/19/90								
Sequoyah 1	07/05/80	07/01/81		1.67E+06	8.06E+06	1.52E+07	2.22E+07	1.92E+07	1.24E+07	
Sequoyah 2	11/05/81	06/01/82					2.03E+07	1.96E+07	1.71E+07	
South Texas 1	03/08/88	08/25/88								
South Texas 2	03/12/89	06/19/89								

Table 16

Thermal Energy Generation Comparison By Year

Pressurized Water Reactors									
Facility			Megawatt Hours						
	Initial Criticality	Commercial Operation	1979	1980	1981	1982	1983	1984	1985
St. Lucie 1	04/22/76	12/21/76	1.60E+07	1.70E+07	1.67E+07	2.18E+07	3.53E+06	1.35E+07	1.88E+07
St. Lucie 2	06/02/83	08/08/83					7.66E+06	1.77E+07	1.93E+07
Summer 1	10/22/82	01/01/84				7.95E+05	1.38E+07	1.33E+07	1.65E+07
Surry 1	07/01/72	12/22/72	9.32E+06	8.67E+06	7.94E+06	1.83E+07	1.22E+07	1.11E+07	1.79E+07
Surry 2	03/07/73	05/01/73		7.26E+06	1.68E+07	1.79E+07	1.35E+07	1.73E+07	1.33E+07
Three Mile Island 1	06/05/74	09/02/74	2.83E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E+06
Three Mile Island 2	03/28/78	12/30/78	N/R	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trojan	12/15/75	05/20/76	1.70E+07	1.97E+07	2.10E+07	1.56E+07	1.34E+07	1.54E+07	2.25E+07
Turkey Point 3	10/20/72	12/14/72	2.28E+07	1.47E+07	3.03E+06	1.22E+07	1.41E+07	1.56E+07	1.11E+07
Turkey Point 4	06/11/73	09/07/73		1.32E+07	1.48E+07	1.27E+07	9.83E+06	1.04E+07	1.69E+07
Vogtle 1	03/09/87	05/31/87							
Vogtle 2	03/28/89	05/20/89							
Waterford 3	03/04/85	09/24/85							5.64E+06
Wolf Creek 1	05/22/85	09/03/85							8.87E+06
Yankee Rowe 1	08/19/60	07/01/61	4.17E+06	1.13E+06	3.63E+06	3.69E+06	4.69E+06	3.61E+06	4.19E+06
Zion 1	06/19/73	12/31/73	3.31E+07	2.22E+07	1.98E+07	1.52E+07	1.34E+07	1.83E+07	1.85E+07
Zion 2	12/24/73	09/17/74		1.75E+07	1.77E+07	1.71E+07	2.00E+07	1.92E+07	2.16E+07
Total			5.76E+08	5.12E+08	5.76E+08	5.96E+08	6.52E+08	7.37E+08	8.58E+08

N/R = Not Reported

Table 16

Thermal Energy Generation Comparison By Year

Facility	Megawatt Hours								
	Initial Criticality	Commercial Operation	1986	1987	1988	1989	1990	1991	1992
Arkansas One 1	08/06/74	12/19/74	1.11E+07	1.51E+07	1.24E+07	1.07E+07	1.30E+07	2.01E+07	1.80E+07
Arkansas One 2	12/05/78	03/26/80	1.68E+07	2.10E+07	1.58E+07	1.76E+07	2.26E+07	1.94E+07	1.75E+07
Beaver Valley 1	05/10/76	10/01/76	1.55E+07	1.64E+07	1.64E+07	1.27E+07	2.02E+07	1.22E+07	2.05E+07
Beaver Valley 2	08/04/87	11/17/87		2.39E+06	2.13E+07	1.51E+07	1.43E+07	2.22E+07	1.82E+07
Braidwood 1	05/29/87	07/29/88		5.02E+06	1.04E+07	1.44E+07	2.48E+07	1.53E+07	2.19E+07
Braidwood 2	03/08/88	10/17/88			4.08E+06	2.18E+07	1.95E+07	2.00E+07	2.67E+07
Byron 1	02/02/85	09/16/85	2.32E+07	1.71E+07	1.99E+07	2.77E+07	2.16E+07	1.99E+07	2.77E+07
Byron 2	01/09/87	08/21/87		6.47E+06	2.04E+07	1.87E+07	1.87E+07	2.72E+07	2.12E+07
Callaway 1	10/02/84	12/19/84	2.26E+07	1.98E+07	2.76E+07	3.15E+07	2.45E+07	3.04E+07	2.48E+07
Calvert Cliffs 1	10/07/74	05/08/75	1.82E+07	1.65E+07	1.62E+07	4.23E+06	4.34E+06	1.73E+07	1.29E+07
Calvert Cliffs 2	11/30/76	04/01/77	2.18E+07	1.50E+07	2.07E+07	1.45E+06	0.00E+00	1.17E+07	2.10E+07
Catawba 1	01/07/85	06/29/85	1.59E+07	1.95E+07	2.29E+07	2.36E+07	2.08E+07	2.02E+07	2.11E+07
Catawba 2	05/08/86	08/19/86	4.04E+06	2.17E+07	1.88E+07	1.95E+07	1.93E+07	2.18E+07	2.76E+07
Comanche Peak 1	04/03/90	08/13/90					8.16E+06	1.72E+07	2.20E+07
Donald C. Cook 1	01/18/75	08/27/75	2.16E+07	1.64E+07	2.42E+07	1.74E+07	2.05E+07	2.38E+07	1.63E+07
Donald C. Cook 2	03/10/78	07/01/78	1.44E+07	1.65E+07	7.41E+06	2.13E+07	1.53E+07	2.65E+07	4.89E+06
Crystal River 3	01/14/77	03/13/77	8.14E+06	1.11E+07	1.78E+07	9.14E+06	1.28E+07	1.68E+07	1.62E+07
Davis-Besse 1	08/12/77	07/31/78	1.29E+05	1.65E+07	3.91E+06	2.35E+07	1.32E+07	1.85E+07	2.41E+07
Diablo Canyon 1	04/29/84	05/07/85	1.70E+07	2.54E+07	1.66E+07	2.25E+07	2.72E+07	2.31E+07	2.34E+07
Diablo Canyon 2	08/19/85	03/13/86	2.11E+07	1.82E+07	1.98E+07	2.69E+07	2.39E+07	2.45E+07	2.91E+07
Joseph M. Farley 1	08/09/77	12/01/77	1.85E+07	2.11E+07	1.92E+07	1.96E+07	2.25E+07	1.78E+07	1.86E+07
Joseph M. Farley 2	05/05/81	07/30/81	1.91E+07	1.60E+07	2.29E+07	1.81E+07	1.69E+07	2.18E+07	1.76E+07
Fort Calhoun 1	08/06/73	06/20/74	1.13E+07	9.48E+06	8.34E+06	1.07E+07	7.67E+06	1.03E+07	7.94E+06
R. E. Ginna	11/08/69	07/01/70	1.13E+07	1.19E+07	1.10E+07	9.65E+06	1.07E+07	1.09E+07	1.08E+07
Haddam Neck	07/24/67	01/01/68	7.26E+06	8.39E+06	1.06E+07	9.47E+06	3.81E+06	1.19E+07	1.24E+07
Harris 1	01/03/87	05/02/87		1.12E+07	1.71E+07	1.83E+07	2.05E+07	1.89E+07	1.74E+07
Indian Point 1	08/02/62	10/ / 62	0.00E+00	0.00E+00					
Indian Point 2	05/22/73	08/01/74	1.29E+07	1.71E+07	1.95E+07	1.45E+07	1.66E+07	1.29E+07	2.57E+07
Indian Point 3	04/06/76	08/30/76	1.77E+07	1.56E+07	2.14E+07	1.55E+07	1.57E+07	2.25E+07	1.47E+07
Kewaunee	03/07/74	06/16/74	1.21E+07	1.26E+07	1.22E+07	1.18E+07	1.24E+07	1.16E+07	1.24E+07
Maine Yankee	10/23/72	12/28/72	1.93E+07	1.31E+07	1.67E+07	2.11E+07	1.50E+07	1.94E+07	1.86E+07
McGuire 1	08/08/81	12/01/81	1.56E+07	2.21E+07	2.26E+07	2.38E+07	1.48E+07	2.08E+07	2.28E+07
McGuire 2	05/08/83	03/01/84	1.96E+07	2.25E+07	2.41E+07	2.19E+07	1.93E+07	2.84E+07	2.04E+07
Millstone 1	10/17/75	12/26/75	1.66E+07	2.18E+07	1.81E+07	1.55E+07	1.69E+07	1.25E+07	8.51E+06
Millstone 2	01/23/86	04/23/86	2.17E+07	2.05E+07	2.33E+07	2.17E+07	2.52E+07	8.88E+06	2.02E+07
North Anna 1	04/05/78	06/06/78	1.98E+07	1.14E+07	2.20E+07	1.37E+07	2.31E+07	1.80E+07	1.72E+07
North Anna 2	06/12/80	12/14/80	1.92E+07	1.80E+07	2.50E+07	1.88E+07	1.91E+07	2.46E+07	2.03E+07
Oconee 1	04/19/73	07/15/73	1.46E+07	1.56E+07	2.21E+07	1.82E+07	1.96E+07	1.83E+07	1.91E+07
Oconee 2	11/11/73	09/09/74	1.79E+07	1.93E+07	1.72E+07	1.84E+07	1.90E+07	2.23E+07	1.81E+07
Oconee 3	09/05/74	12/16/74	1.88E+07	1.55E+07	1.80E+07	1.94E+07	2.23E+07	1.69E+07	1.66E+07
Palisades	05/24/71	12/31/71	2.76E+06	8.83E+06	1.14E+07	1.21E+07	1.01E+07	1.59E+07	1.56E+07
Palo Verde 1	05/25/85	02/13/86	1.82E+07	1.61E+07	2.03E+07	5.57E+06	1.45E+07	2.85E+07	2.19E+07
Palo Verde 2	04/18/86	09/19/86	7.02E+06	2.49E+07	2.07E+07	1.47E+07	1.91E+07	2.52E+07	3.11E+07
Palo Verde 3	10/25/87	01/08/88		1.24E+06	3.03E+07	4.10E+06	2.92E+07	2.29E+07	2.55E+07
Point Beach 1	11/02/70	12/21/70	1.15E+07	1.09E+07	1.17E+07	1.11E+07	1.09E+07	1.12E+07	1.11E+07
Point Beach 2	05/30/72	10/01/71	1.06E+07	1.11E+07	1.14E+07	1.06E+07	1.16E+07	1.13E+07	1.12E+07
Prairie Island 1	12/01/73	12/16/73	1.22E+07	1.14E+07	1.23E+07	1.40E+07	1.23E+07	1.26E+07	1.11E+07
Prairie Island 2	12/17/74	12/21/74	1.23E+07	1.41E+07	1.26E+07	1.25E+07	1.22E+07	1.43E+07	1.03E+07
Rancho Seco 1	09/16/74	04/17/75	0.00E+00	0.00E+00	9.47E+06	4.62E+06	0.00E+00	0.00E+00	0.00E+00
H. B. Robinson 2	09/20/70	03/07/71	1.52E+07	1.35E+07	1.06E+07	8.86E+06	1.08E+07	1.53E+07	1.29E+07
Salem 1	12/11/76	06/30/77	2.24E+07	1.96E+07	2.32E+07	1.97E+07	1.90E+07	2.14E+07	1.67E+07
Salem 2	08/08/80	10/13/81	1.74E+07	1.96E+07	1.90E+07	2.44E+07	1.69E+07	2.41E+07	1.50E+07
San Onofre 1	06/14/67	01/01/68	3.00E+06	8.82E+06	4.52E+06	3.92E+06	5.04E+06	6.74E+06	3.92E+06
San Onofre 2	07/26/82	08/08/83	2.01E+07	1.93E+07	2.75E+07	1.63E+07	2.55E+07	1.80E+07	2.73E+07
San Onofre 3	08/29/83	04/01/84	2.13E+07	2.32E+07	1.89E+07	2.73E+07	2.04E+07	2.70E+07	2.13E+07
Seabrook 1	06/13/89	08/19/90					1.26E+07	2.05E+07	2.35E+07
Sequoyah 1	07/05/80	07/01/81	0.00E+00	0.00E+00	5.16E+05	2.88E+07	2.10E+07	2.23E+07	2.54E+07
Sequoyah 2	11/05/81	06/01/82	0.00E+00	0.00E+00	1.26E+07	2.88E+07	2.19E+07	2.87E+07	2.23E+07
South Texas 1	03/08/88	08/25/88			8.81E+06	1.99E+07	1.90E+07	2.25E+07	2.24E+07
South Texas 2	03/12/89	06/19/89				9.52E+06	2.02E+07	2.27E+07	3.18E+07

Table 16

Thermal Energy Generation Comparison By Year

Facility	Megawatt Hours								
	Initial Criticality	Commercial Operation	1986	1987	1988	1989	1990	1991	1992
St. Lucie 1	04/22/76	12/21/76	2.23E+07	1.81E+07	1.97E+07	2.19E+07	1.43E+07	1.85E+07	2.26E+07
St. Lucie 2	06/02/83	08/08/83	1.94E+07	1.90E+07	2.35E+07	1.73E+07	1.70E+07	2.33E+07	1.73E+07
Summer 1	10/22/82	01/01/84	2.26E+07	1.64E+07	1.61E+07	1.76E+07	1.93E+07	1.69E+07	2.35E+07
Surry 1	07/01/72	12/22/72	1.42E+07	1.47E+07	8.45E+06	9.95E+06	1.51E+07	2.09E+07	1.65E+07
Surry 2	03/07/73	05/01/73	1.45E+07	1.54E+07	1.16E+07	2.87E+06	1.85E+07	1.27E+07	2.05E+07
Three Mile Island 1	06/05/74	09/02/74	1.56E+07	1.56E+07	1.69E+07	2.22E+07	1.69E+07	1.74E+07	2.22E+07
Three Mile Island 2	03/28/78	12/30/78	0.00E+00	0.00E+00					
Trojan	12/15/75	05/20/76	2.29E+07	1.39E+07	1.98E+07	1.73E+07	1.90E+07	4.72E+06	1.46E+07
Turkey Point 3	10/20/72	12/14/72	1.46E+07	2.96E+06	1.14E+07	1.18E+07	1.12E+07	4.34E+07	1.13E+07
Turkey Point 4	06/11/73	09/07/73	5.73E+06	8.69E+06	1.06E+07	7.14E+06	1.44E+07	2.68E+07	1.53E+07
Vogtle 1	03/09/87	05/31/87		1.27E+07	2.18E+07	2.76E+07	2.32E+07	2.33E+07	2.88E+07
Vogtle 2	03/28/89	05/20/89				1.72E+07	2.17E+07	2.75E+07	2.40E+07
Waterford 3	03/04/85	09/24/85	2.27E+07	2.31E+07	2.06E+07	2.37E+07	2.69E+07	2.29E+07	2.41E+07
Wolf Creek 1	05/22/85	09/03/85	2.09E+07	1.97E+07	2.01E+07	2.88E+07	2.36E+07	1.80E+07	2.54E+07
Yankee Rowe 1	08/19/60	07/01/61	4.90E+06	4.03E+06	4.03E+06	4.66E+06	2.94E+06	3.53E+06	0.00E+00
Zion 1	06/19/73	12/31/73	1.58E+07	1.88E+07	1.97E+07	1.56E+07	1.41E+07	1.34E+07	1.27E+07
Zion 2	12/24/73	09/17/74	2.30E+07	1.61E+07	2.08E+07	2.40E+07	8.42E+06	1.61E+07	1.67E+07
Total			9.38E+08	1.01E+09	1.18E+09	1.21E+09	1.24E+09	1.42E+09	1.39E+09

APPENDIX A

Installation: Arkansas One
Unit No.: 1

Location: 6 Mi WNW Russellville, AR

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-313
Thermal Power (MWH): 1.80E+07
Commercial Operation: 12/19/74
Cooling Water Source: Dardanelle Reservoir

Licensee: Arkansas Power & Light
Licensed Power (MWT): 2.57E+03
Net Electrical Power (MWH): 5.83E+06
Initial Criticality: 08/06/74

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-58	4.85E-02
KR-85	2.08E+01
KR-85M	4.27E-05
SR-89	7.04E-06
I-131	2.78E-04
XE-131M	1.87E+00
I-133	8.66E-06
XE-133	8.62E+02
XE-133M	1.00E+00
CS-134	2.94E-04
XE-135	7.47E+00
CS-137	7.44E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	5.76E-04
NA-24	1.99E-02
AR-41	1.18E-04
CR-51	3.81E-02
MN-54	8.23E-02
FE-55	5.63E-02
CO-57	8.30E-03
CO-58	1.79E+00
FE-59	9.45E-03
CO-60	2.88E-01
ZN-65	8.23E-03
KR-85	5.75E-01
KR-85M	1.46E-03
KR-87	8.95E-05
KR-88	1.14E-03
RB-88	1.10E-03
SR-89	1.28E-03
MO-90	1.65E-06
SR-90	7.09E-04
SR-92	2.88E-04
Y-93	1.46E-04
NB-95	2.51E-02
ZR-95	1.18E-02
NB-97	6.62E-05
MO-99	1.03E-03
TC-99M	1.25E-03
RU-103	3.49E-04
RU-106	4.81E-04
CD-109	4.57E-05

Installation: Arkansas One
Unit No.: 1

Location: 6 Mi WNW Russellville, AR

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
AG-110M	2.49E-02
SN-113	5.62E-04
SB-122	1.91E-03
SB-124	3.11E-02
SB-125	5.86E-01
SB-126	5.41E-04
I-131	1.48E-01
XE-131M	4.43E-01
I-132	7.35E-04
TE-132	5.97E-04
BA-133	8.89E-06
I-133	3.20E-03
XE-133	3.89E+01
XE-133M	3.76E-01
CS-134	1.61E-01
I-135	5.19E-04
XE-135	1.36E-01
XE-135M	4.93E-04
CS-136	4.26E-04
CS-137	2.80E-01
XE-138	1.96E-04
BA-140	2.07E-04
LA-140	3.12E-03
CE-144	1.09E-05
NP-239	2.01E-05

Total Airborne Tritium Released	1.57E+01 Ci
Total Liquid Tritium Released	5.06E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.21E+07 liters
Volume of Dilution Water Used During Period	1.82E+11 liters

Installation: Arkansas One
Unit No.: 2

Location: 6 Mi WNW Russellville, AR

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-368
Thermal Power(MWH): 1.75E+07
Commercial Operation: 03/26/80
Cooling Water Source: Dardanelle Reservoir

Licensee: Arkansas Power & Light
Licensed Power(MWT): 2.82E+03
Net Electrical Power(MWH): 5.50E+06
Initial Criticality: 12/05/78

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	4.56E+00
CR-51	1.17E-05
CO-58	6.71E-05
CO-60	1.22E-06
KR-85	2.68E+00
KR-85M	1.62E+00
RB-88	9.17E-04
SR-89	7.22E-07
SR-90	1.10E-07
NB-95	3.36E-06
ZR-95	2.23E-06
NB-97	1.27E-07
I-131	7.02E-04
XE-131M	2.49E+00
I-132	1.20E-07
I-133	9.70E-05
XE-133	1.63E+03
XE-133M	1.76E+00
XE-135	5.07E+01
XE-135M	4.34E-06
CS-137	1.25E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.38E-04
AR-41	3.18E-04
CR-51	2.65E-02
MN-54	1.24E-01
FE-55	4.33E-02
CO-57	2.67E-03
CO-58	8.56E-01
FE-59	2.56E-03
CO-60	1.09E-01
NI-65	5.24E-05
KR-85	6.30E-03
KR-85M	2.22E-03
KR-88	4.40E-04
RB-88	3.71E-02
Y-88	4.77E-05
SR-89	5.05E-04
SR-92	3.33E-04
NB-95	6.17E-03
ZR-95	3.38E-03
NB-97	1.00E-05

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
MO-99	9.67E-04
TC-99M	7.41E-04
RU-103	1.24E-04
AG-110M	8.87E-03
SN-113	4.92E-05
SB-122	2.84E-03
SB-124	7.26E-02
SB-125	1.82E-01
SB-126	8.78E-04
I-131	7.30E-02
XE-131M	3.24E-01
I-132	3.62E-03
TE-132	1.44E-03
I-133	2.31E-03
XE-133	3.45E+01
XE-133M	2.65E-01
CS-134	1.30E-01
I-134	1.61E-04
I-135	4.72E-04
XE-135	1.23E-02
XE-135M	1.55E-03
CS-136	2.97E-03
CS-137	1.48E-01
CS-138	7.14E-04
BA-140	5.05E-04
LA-140	1.94E-03
NP-239	3.21E-06

Total Airborne Tritium Released	1.46E+01 Ci
Total Liquid Tritium Released	2.98E+02 Ci
Volume of Waste Released (Prior to Dilution)	3.73E+07 liters
Volume of Dilution Water Used During Period	2.61E+11 liters

Installation: Arkansas One
Unit No.: 1&2

Location: 6 Mi WNW Russellville, AR

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-313
Thermal Power(MWH): 1.80E+07
Commercial Operation: 12/19/74
Cooling Water Source: Dardanelle Reservoir

Licensee: Arkansas Power & Light
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 5.83E+06
Initial Criticality: 08/06/74

Unit Number: 2 Type: PWR
Docket Number: 50-368
Thermal Power(MWH): 1.75E+07
Commercial Operation: 03/26/80
Cooling Water Source: Dardanelle Reservoir

Licensee: Arkansas Power & Light
Licensed Power(MWT): 2.82E+03
Net Electrical Power(MWH): 5.50E+06
Initial Criticality: 12/05/78

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
14	Cask Shipment	Hanford, WA
33	Unshielded Van/Truck	Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CO-58	1.55E+01	1.43E+01
CO-60	4.54E+00	1.60E+00
CR-51		4.00E-01
CS-134	2.13E+01	3.58E+01
CS-137	3.23E+01	4.12E+01
FE-55	7.31E+00	2.10E+00
MN-54	2.37E+00	
NB-95	1.18E+00	8.00E-01
NI-63	1.28E+01	2.00E+00
SB-125	6.77E-01	1.40E+00
ZR-95	7.12E-01	5.00E-01

B

C-14	6.52E-01	4.00E-01
CO-58	2.17E+00	1.50E+00
CO-60	9.86E+00	4.60E+00
CS-134	1.35E+01	8.00E+00
CS-137	3.16E+01	6.53E+01
FE-55	1.98E+01	9.20E+00
I-131	3.00E-02	
MN-54		6.00E-01
NI-63	2.23E+01	1.02E+01
SR-90	1.20E-02	1.00E-01
TC-99	6.40E-02	1.00E-01

Installation: Arkansas One
Unit No.: 1&2

Location: 6 Mi WNW Russellville, AR

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.13E+01 Ci 2.56E+03	non-compacted burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.24E+02 Ci 4.58E+01	compacted/incin erated burial volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Beaver Valley
Unit No.: 1

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-334
Thermal Power(MWH): 2.05E+07
Commercial Operation: 10/01/76
Cooling Water Source: Ohio River

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 6.30E+06
Initial Criticality: 05/10/76

Airborne Effluents (Ground Level Releases)

Nuclide Released	Activity (Ci)
CO-58	3.73E-04
CO-60	3.02E-05
KR-85	5.67E+00
NB-95M	3.13E-07
MO-99	1.45E-06
TC-99M	1.42E-06
I-131	4.47E-04
XE-131M	1.28E-03
I-133	4.39E-05
XE-133	7.03E+01
XE-133M	3.01E-05
XE-135	1.48E+01
CS-137	1.55E-05
CE-141	1.93E-06

Installation: Beaver Valley
Unit No.: 2

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-412
Thermal Power(MWH): 1.82E+07
Commercial Operation: 11/17/87
Cooling Water Source: Ohio River

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 5.64E+06
Initial Criticality: 08/04/87

Airborne Effluents (Ground Level Releases)

Nuclide Released	Activity (Ci)
AR-41	3.74E+00
MN-54	1.55E-06
CO-58	1.09E-05
FE-59	5.00E-07
CO-60	2.31E-06
KR-85	5.86E+00
KR-85M	2.43E-02
KR-87	1.09E-02
KR-88	3.23E-02
SR-89	1.09E-07
SR-90	1.73E-08
MO-99	2.93E-07
TC-99M	2.85E-07
I-131	2.54E-04
XE-131M	1.09E-03
XE-133	3.66E+01
XE-133M	7.72E-03
CS-134	1.55E-06
XE-135	4.81E+00
XE-135M	2.73E-03
CS-137	2.55E-06
XE-138	9.54E-03

Installation: Beaver Valley
Unit No.: 1&2

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-334
Thermal Power(MWH): 2.05E+07
Commercial Operation: 10/01/76
Cooling Water Source: Ohio River
Unit Number: 2 Type: PWR
Docket Number: 50-412
Thermal Power(MWH): 1.82E+07
Commercial Operation: 11/17/87
Cooling Water Source: Ohio River

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 6.30E+06
Initial Criticality: 05/10/76

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 5.64E+06
Initial Criticality: 08/04/87

Airborne Effluents (Elevated Releases)

Nuclide Released	Activity (Ci)
AR-41	2.03E-02
MN-54	7.28E-05
CO-58	7.38E-08
KR-85	9.64E+00
KR-85M	7.70E-03
KR-87	5.12E-04
KR-88	4.75E-03
RB-88	2.84E-04
I-131	6.02E-05
XE-131M	2.12E-01
XE-133	3.44E+00
XE-133M	4.96E-03
XE-135	1.05E-01

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.10E-04
AR-41	6.72E-04
CR-51	8.75E-03
MN-54	1.75E-03
FE-55	2.25E-01
CO-57	9.68E-05
CO-58	3.36E-02
FE-59	9.66E-03
CO-60	3.52E-02
KR-85	1.90E-03
SR-89	9.87E-06
ZR-NB-95	1.99E-03
NB-97	8.74E-03
MO-99	3.39E-05
TC-99M	4.91E-05
RU-103	4.46E-05
AG-110M	8.73E-03
SB-124	1.69E-04
SB-125	4.21E-03
I-131	1.18E-03
I-133	1.17E-04
XE-133	2.71E-02
XE-133M	2.01E-04

Installation: Beaver Valley
Unit No.: 1&2

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CS-134	9.78E-05
XE-135	5.93E-04
CS-137	7.20E-04

Total Airborne Tritium Released	2.17E+02 Ci
Total Liquid Tritium Released	4.65E+02 Ci
Volume of Waste Released (Prior to Dilution)	6.51E+06 liters
Volume of Dilution Water Used During Period	4.13E+09 liters

Installation: Beaver Valley
Unit No.: 1&2

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-334
Thermal Power(MWH): 2.05E+07
Commercial Operation: 10/01/76
Cooling Water Source: Ohio River

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 6.30E+06
Initial Criticality: 05/10/76

Unit Number: 2 Type: PWR
Docket Number: 50-412
Thermal Power(MWH): 1.82E+07
Commercial Operation: 11/17/87
Cooling Water Source: Ohio River

Licensee: Duquesne Light
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 5.64E+06
Initial Criticality: 08/04/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
8	Truck	Barnwell, SC
1	Truck	Beatty, NV
21	Truck	Oak Ridge, TN
1	Truck	Wampum, PA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M		2.07E-01
AM-241	1.21E-05	5.09E-05
BA-133	1.41E-04	1.54E-03
BE-7		2.92E-05
C-14	6.44E-02	4.78E-01
CE-144/PR-144	3.51E-04	3.95E-03
CM-242	6.43E-05	3.04E-05
CM-243/244	4.55E-05	1.23E-05
CO-57	1.89E-01	1.67E-01
CO-58	3.50E+01	2.60E+01
CO-60	2.47E+01	3.82E+01
CR-51	1.64E-01	2.06E-03
CS-134	5.54E-01	4.35E-03
CS-137	1.61E+00	3.66E-02
FE-55	4.80E+00	1.47E+01
FE-59	3.63E-02	1.29E-02
H-3	4.02E-01	6.71E-01
I-129	1.03E-02	1.46E-03
I-131	2.66E-01	1.50E-06
MN-54	1.35E+00	2.25E-01
NB-94		1.99E-03
NB-95	3.64E-03	1.04E-02
NI-59	2.69E-01	1.98E-01
NI-63	2.99E+01	1.90E+01
Others		8.84E-04
P-32	4.15E-01	1.04E-02
PU-238	7.29E-04	5.36E-06
PU-239/240	2.69E-04	6.93E-06

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
(by type of waste)		
A		
PU-241	5.20E-02	1.57E-02
SB-124	5.60E-02	
SB-125	5.23E-02	3.36E-02
SN-113	7.61E-02	
SR-89	3.86E-03	2.73E-02
SR-90	7.70E-03	1.31E-02
TC-99	2.45E-04	6.56E-04
ZR-95		1.39E-02
B		
AG-110M	7.95E-02	7.94E-01
AM-241	2.61E-04	1.32E-03
BE-7	9.20E-02	4.56E-01
C-14	7.74E-02	4.08E-02
CM-242	1.79E-04	4.88E-03
CM-243/244	5.11E-04	2.82E-03
CO-57	1.33E-02	1.82E-02
CO-58	8.02E-01	1.67E+00
CO-60	2.98E+01	1.57E+01
CR-51	4.18E-07	
CS-134	1.95E-01	8.61E+00
CS-137	8.52E-01	1.99E+01
FE-55	3.71E+01	2.38E+01
FE-59	2.35E-05	
H-3	6.51E+00	1.44E+01
I-129	2.55E-03	4.37E-02
I-131		2.29E-01
MN-54	2.14E+00	1.15E+00
NB-95	6.11E-02	3.80E-01
NI-59	3.72E-02	1.02E+00
NI-63	2.21E+01	1.12E+01
P-32	7.64E-02	8.67E-02
PU-238	2.90E-04	1.94E-03
PU-239/240	2.08E-04	9.89E-04
PU-241	3.14E-02	1.76E-01
RU-103	5.95E-07	
SB-125	8.91E-02	2.26E-01
SR-89	9.51E-04	4.71E-03
SR-90	9.36E-03	
TC-99	5.66E-03	3.85E-02
ZN-65	3.93E-03	
ZR-95	3.30E-04	
ZR/NB-97		1.45E-02

Installation: Beaver Valley
Unit No.: 1&2

Location: Shippingport, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.49E+02	Volume shipped to processor
	m3 1.06E+02	Volume buried
	Ci 4.62E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 8.44E+02	Volume shipped to processor
	m3 5.64E+01	Volume buried
	Ci 8.73E+00	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: Big Rock Point
Unit No.: 1

Location: 4 Mi NE Charlevoix, MI

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-155
Thermal Power(MWH): 8.97E+05
Commercial Operation: 03/29/63
Cooling Water Source: Lake Michigan

Licensee: Consumers Power
Licensed Power(MWT): 2.40E+02
Net Electrical Power(MWH): 2.71E+05
Initial Criticality: 09/27/62

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	1.61E-04
CR-51	2.97E-05
MN-54	9.15E-05
CO-58	7.11E-07
CO-60	1.68E-04
ZN-65	3.62E-06
AS-76	4.58E-05
BR-82	7.75E-04
KR-85M	5.29E+01
KR-87	2.07E+02
KR-88	1.56E+02
SR-89	5.87E-05
SR-90	1.18E-06
SR-91	1.71E-03
MO-99	2.38E-05
AG-110M	7.37E-06
I-131	4.29E-03
I-133	5.71E-03
XE-133	5.86E+01
CS-134	2.27E-06
I-135	5.55E-04
XE-135	2.09E+02
XE-135M	2.23E+02
CS-137	7.41E-05
XE-138	8.87E+02
BA-140	2.52E-04
LA-140	5.72E-04
NP-239	1.15E-05
Unidentified	1.71E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	2.10E-04
MN-54	6.76E-02
CO-58	9.28E-04
FE-59	8.49E-03
CO-60	4.52E-02
ZN-65	5.32E-04
SR-89	1.15E-04
SR-90	2.90E-04
AG-110M	3.32E-04
SB-124	2.44E-04
CS-134	2.98E-04
CS-137	1.69E-02

Installation: Big Rock Point
Unit No.: 1

Location: 4 Mi NE Charlevoix, MI

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)	
Unidentified	9.18E-03	
Total Airborne Tritium Released		3.29E+00 Ci
Total Liquid Tritium Released		1.08E+00 Ci
Volume of Waste Released (Prior to Dilution)		6.00E+05 liters
Volume of Dilution Water Used During Period		6.51E+10 liters

Installation: Braidwood
Unit No.: 1

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-456
Thermal Power(MWH): 2.19E+07
Commercial Operation: 07/29/88
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.15E+06
Initial Criticality: 05/29/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	4.87E-01
KR-85	2.91E-02
KR-85M	9.69E-04
KR-87	2.80E-04
KR-88	1.33E-03
I-131	2.91E-05
XE-131M	5.65E-03
I-132	1.29E-06
I-133	5.00E-06
XE-133	7.56E+01
XE-133M	9.36E-03
XE-135	9.48E-01

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	1.66E-01
NA-24	1.37E-04
AR-41	3.03E-06
CR-51	1.06E-02
MN-54	1.64E-02
FE-55	1.17E-01
CO-57	4.83E-04
CO-58	1.47E-01
FE-59	3.59E-03
CO-60	3.13E-02
ZN-65	5.95E-05
BR-82	1.63E-05
KR-85	2.67E-03
SR-89	1.66E-04
SR-92	5.47E-05
NB-95	4.69E-03
ZR-95	2.20E-03
ZR-97	1.01E-04
TC-99M	1.40E-05
RU-105	1.79E-05
AG-110M	3.03E-04
SN-113	2.81E-04
SN-117M	6.08E-06
SB-122	2.08E-04
SB-124	2.38E-03
SB-125	1.65E-02
SB-126	1.57E-05
I-131	1.01E-04
I-132	3.67E-05

Installation: Braidwood
Unit No.: 1

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
TE-132	5.08E-04
I-133	5.91E-05
XE-133	2.20E-03
XE-133M	1.66E-04
CS-134	8.90E-04
I-135	4.31E-05
XE-135	2.95E-04
CS-137	1.39E-03
HF-181	6.40E-06
W-187	2.32E-06

Total Airborne Tritium Released	5.54E+01 Ci
Total Liquid Tritium Released	9.58E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.03E+07 liters
Volume of Dilution Water Used During Period	9.40E+09 liters

Installation: Braidwood
Unit No.: 2

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-457
Thermal Power(MWH): 2.67E+07
Commercial Operation: 10/17/88
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.75E+06
Initial Criticality: 03/08/88

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.59E-01
KR-85	2.07E-02
KR-85M	9.69E-04
KR-87	2.80E-04
KR-88	1.46E-03
I-131	7.55E-06
XE-131M	5.65E-03
I-132	2.18E-05
I-133	3.89E-06
XE-133	1.52E+02
XE-133M	9.75E-03
XE-135	3.03E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	1.66E-01
NA-24	1.37E-04
AR-41	3.03E-06
CR-51	1.06E-02
MN-54	1.64E-02
FE-55	1.17E-01
CO-57	4.83E-04
CO-58	1.47E-01
FE-59	3.59E-03
CO-60	3.13E-02
ZN-65	5.95E-05
BR-82	1.63E-05
KR-85	2.67E-03
SR-89	1.66E-04
SR-92	5.47E-05
NB-95	4.69E-03
ZR-95	2.20E-03
ZR-97	1.01E-04
TC-99M	1.40E-05
RU-105	1.79E-05
AG-110M	3.03E-04
SN-113	2.81E-04
SN-117M	6.08E-06
SB-122	2.08E-04
SB-124	2.38E-03
SB-125	1.65E-02
SB-126	1.57E-05
I-131	1.01E-04
I-132	3.67E-05

Installation: Braidwood
Unit No.: 2

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)	
TE-132	5.08E-04	
I-133	5.91E-05	
XE-133	2.20E-03	
XE-133M	1.66E-04	
CS-134	8.90E-04	
I-135	4.31E-05	
XE-135	2.95E-04	
CS-137	1.39E-03	
HF-181	6.40E-06	
W-187	2.32E-06	
Total Airborne Tritium Released		2.16E+02 Ci
Total Liquid Tritium Released		9.58E+02 Ci
Volume of Waste Released (Prior to Dilution)		2.03E+07 liters
Volume of Dilution Water Used During Period		9.40E+09 liters

Installation: Braidwood
Unit No.: 1&2

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-456
Thermal Power(MWH): 2.19E+07
Commercial Operation: 07/29/88
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.15E+06
Initial Criticality: 05/29/87

Unit Number: 2 Type: PWR
Docket Number: 50-457
Thermal Power(MWH): 2.67E+07
Commercial Operation: 10/17/88
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.75E+06
Initial Criticality: 03/08/88

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
2	Exclusive Use Vehicle	Quadrex, Oak Ridge, TN
31	Exclusive Use Vehicle	U.S. Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
BE-7		2.72E-01
C-14	1.28E-01	4.99E-01
CO-57	1.02E-01	2.47E-01
CO-58	1.27E+01	1.29E+01
CO-60	7.13E+00	1.11E+01
CR-51	1.17E+00	2.20E-01
CS-134		3.68E+00
CS-137	1.93E-01	5.79E+00
FE-55	6.13E+01	5.08E+01
FE-59	1.09E+00	
H-3	8.63E-01	
MN-54	2.29E+00	6.89E+00
NB-95	1.28E+00	3.43E-01
NI-63	1.05E+01	7.18E+00
SB-125	4.31E-01	
SN-113	1.36E-01	5.94E-02
SN-125		1.76E-01
ZR-95	6.09E-01	1.69E-01

B

BE-7		5.06E-03
C-14	3.30E-01	1.08E-01
CM-242		1.15E-03
CM-244		2.62E-04
CO-57	1.19E-01	
CO-58	2.69E+01	1.68E+00
CO-60	6.70E+00	3.83E+01
CR-51	3.68E+00	
CS-137	1.74E-01	
FE-55	3.71E+01	5.25E+01

Installation: Braidwood
 Unit No.: 1&2

Location: 24 Mi SSW of Joliet, IL

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

B

FE-59	9.83E-01	1.94E+00
I-129		2.97E-04
MN-54	6.56E+00	3.64E+00
NB-95	2.99E+00	
NI-59		4.97E-01
NI-63	1.32E+01	1.74E+00
PU-239	1.81E-02	
PU-241	5.40E-01	9.40E-03
SR-90		2.45E-02
TC-99		3.81E-03
ZN-65	2.50E-01	
ZR-95	5.84E-01	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.09E+02 Ci 8.02E+02	burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.89E+02 Ci 8.19E+00	before volume reduction
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Browns Ferry
Unit No.: 1&2&3

Location: 10 Mi NW Decatur, AL

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-259
Thermal Power(MWH): 0.00E+00
Commercial Operation: 08/01/74
Cooling Water Source: Tennessee River
Unit Number: 2 Type: BWR
Docket Number: 50-260
Thermal Power(MWH): 2.57E+07
Commercial Operation: 03/01/75
Cooling Water Source: Tennessee River
Unit Number: 3 Type: BWR
Docket Number: 50-296
Thermal Power(MWH): 0.00E+00
Commercial Operation: 03/01/77
Cooling Water Source: Tennessee River

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/17/73

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 8.39E+06
Initial Criticality: 07/20/74

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/08/76

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	2.51E-01
AR-41	9.06E+01
CR-51	1.53E-02
MN-54	7.77E-04
MN-56	1.05E-01
CO-58	5.85E-04
CO-60	5.92E-03
ZN-65	2.81E-03
KR-85M	2.77E+03
KR-87	1.23E+03
KR-88	4.58E+03
RB-88	1.82E+00
SR-89	2.17E-03
SR-90	1.18E-06
SR-91	2.54E-02
Y-91M	4.83E-02
Y-92	3.80E-02
MO/TC-99M	7.85E-03
RU-103	9.63E-05
AG-110M	1.32E-03
I-131	1.39E-02
I-132	1.22E-01
I-133	1.11E-01
XE-133	6.89E+03
XE-133M	2.49E+02
CS-134	2.03E-04
I-134	6.87E-02
I-135	1.06E-01
XE-135	9.05E+02
CS-136	1.47E-04
CS-137	1.43E-03
BA-139	1.93E+00
BA-140	1.98E-03
LA-140	1.13E-03
CE-141	3.93E-05

Installation: Browns Ferry
Unit No.: 1&2&3

Location: 10 Mi NW Decatur, AL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.01E+00
CR-51	1.53E-01
MN-54	4.59E-02
FE-55	1.50E-02
CO-58	4.26E-02
CO-60	1.36E-01
ZN-65	1.09E-01
KR-85	2.19E-02
SR-89	6.13E-02
SR-90	7.54E-03
SR-91	4.90E-03
Y-91M	5.96E-04
SR-92	3.68E-04
MO/TC-99M	2.91E-01
RU-103	8.74E-04
TC-104	4.57E-10
AG-110M	1.26E-03
SB-124	5.97E-05
SB-125	4.25E-04
I-131	4.03E-02
I-132	9.83E-04
I-133	7.93E-02
XE-133	5.14E-02
XE-133M	3.12E-04
CS-134	3.12E-02
I-134	5.68E-06
I-135	1.96E-02
XE-135	6.81E-02
XE-135M	2.54E-07
CS-136	1.04E-03
CS-137	3.56E-01
BA-140	4.60E-03
LA-140	3.78E-04

Total Airborne Tritium Released	1.90E+01 Ci
Total Liquid Tritium Released	2.85E+01 Ci
Volume of Waste Released (Prior to Dilution)	3.33E+07 liters
Volume of Dilution Water Used During Period	1.73E+11 liters

Installation: Browns Ferry
Unit No.: 1&2&3

Location: 10 Mi NW Decatur, AL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-259
Thermal Power(MWH): 0.00E+00
Commercial Operation: 08/01/74
Cooling Water Source: Tennessee River

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/17/73

Unit Number: 2 Type: BWR
Docket Number: 50-260
Thermal Power(MWH): 2.57E+07
Commercial Operation: 03/01/75
Cooling Water Source: Tennessee River

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 8.39E+06
Initial Criticality: 07/20/74

Unit Number: 3 Type: BWR
Docket Number: 50-296
Thermal Power(MWH): 0.00E+00
Commercial Operation: 03/01/77
Cooling Water Source: Tennessee River

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/08/76

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
44	Sole Use Truck	Barnwell, SC
65	Sole Use Truck	Quadrex, Oak Ridge, TN
13	Sole Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
BA/LA-140	1.15E+00	3.95E+00
CO-60	2.75E+01	1.98E+01
CR-51		4.00E+00
CS-134	5.10E+00	1.72E+00
CS-137	3.30E+01	2.65E+01
FE-55	3.51E+00	4.35E+00
I-131	1.00E+00	4.00E+00
MN-54	2.51E+00	1.00E+00
NI-63	1.93E+01	3.20E+01
ZN-65	5.90E+00	2.70E+00

B

CO-60	3.10E+01	6.52E+01
CS-137		6.99E+00
FE-55	2.64E+01	2.50E+01
NI-63	3.93E+01	2.59E+00
SB-125	3.16E+00	

C

CO-60	7.91E+01	
FE-55	1.62E+01	
NI-63	4.30E+00	

Installation: Browns Ferry
Unit No.: 1&2&3

Location: 10 Mi NW Decatur, AL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.83E+02 Ci 2.06E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.22E+02 Ci 1.08E+03	
C. Irradiated Components, Control Rods, etc.	m3 7.00E+00 Ci 3.41E+04	
D. Other (describe)	m3 Ci	

Installation: Brunswick
Unit No.: 1&2

Location: 20 Mi S Wilmington, NC

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-325
Thermal Power(MWH): 5.90E+06
Commercial Operation: 03/18/77
Cooling Water Source: Cape Fear River
Unit Number: 2 Type: BWR
Docket Number: 50-324
Thermal Power(MWH): 4.20E+06
Commercial Operation: 11/03/75
Cooling Water Source: Cape Fear River

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 1.82E+06
Initial Criticality: 10/08/76

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 1.26E+06
Initial Criticality: 03/20/75

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	4.06E+01
CR-51	3.66E-04
MN-54	3.43E-04
CO-57	4.19E-08
CO-58	2.54E-05
CO-60	1.16E-03
KR-85M	5.80E+01
KR-87	4.31E+00
KR-88	5.23E+01
SR-89	1.71E-04
SR-90	5.92E-07
I-131	4.81E-03
I-132	1.63E-02
I-133	1.69E-02
XE-133	2.59E+02
CS-134	1.04E-05
I-135	1.52E-02
XE-135	5.46E+01
XE-135M	1.50E+01
CS-137	3.21E-05
XE-137	3.14E+00
XE-138	1.44E+00
BA-140	2.36E-04
LA-140	3.49E-04
CE-141	1.09E-06
AM-241	2.73E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.98E-05
CR-51	1.84E-03
MN-54	6.32E-03
FE-55	3.31E-03
CO-58	1.02E-03
FE-59	1.12E-05
CO-60	3.55E-02
ZN-69M	1.75E-06
AS-76	2.96E-06
SR-90	5.92E-06

Installation: Brunswick
Unit No.: 1&2

Location: 20 Mi S Wilmington, NC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SR-92	6.54E-06
NB-95	2.06E-05
NT-95M	1.02E-05
TC-99M	5.22E-06
AG-110M	7.17E-05
SB-125	4.06E-05
XE-133	1.08E-02
XE-133M	1.03E-04
CS-134	1.04E-04
XE-135	2.25E-02
XE-135M	2.51E-05
CS-137	1.10E-03
BA-139	5.65E-06
BA-140	5.09E-06
AM-241	1.51E-05

Total Airborne Tritium Released	1.08E+01 Ci
Total Liquid Tritium Released	4.24E+01 Ci
Volume of Waste Released (Prior to Dilution)	2.50E+07 liters
Volume of Dilution Water Used During Period	1.03E+11 liters

Installation: Brunswick
Unit No.: 1&2

Location: 20 Mi S Wilmington, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-325
Thermal Power(MWH): 5.90E+06
Commercial Operation: 03/18/77
Cooling Water Source: Cape Fear River

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 1.82E+06
Initial Criticality: 10/08/76

Unit Number: 2 Type: BWR
Docket Number: 50-324
Thermal Power(MWH): 4.20E+06
Commercial Operation: 11/03/75
Cooling Water Source: Cape Fear River

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 1.26E+06
Initial Criticality: 03/20/75

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
91	Sole Use	CNSI, Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-60	2.52E+01	2.48E+01
CS-137	2.30E+00	2.30E+00
FE-55	6.27E+01	6.21E+01
MN-54	6.10E+00	6.09E+00
NI-63	2.80E+00	2.78E+00
B		
CO-58	3.21E+00	2.10E+00
CO-60	2.22E+01	2.28E+01
CR-51		8.20E+00
FE-55	6.66E+01	5.97E+01
MN-54	6.21E+00	6.60E+00
NI-63	1.70E+00	4.00E-01
C		
CO-60	5.04E+01	4.38E+01
FE-55	4.50E+01	5.14E+01
MN-54		6.06E-01
NI-63	4.20E+00	3.09E+00
D		
CO-58		2.20E+00
CO-60		2.24E+01
CR-51		9.60E+00
FE-55		5.87E+01
MN-54		6.50E+00

Installation: Brunswick
Unit No.: 1&2

Location: 20 Mi S Wilmington, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.93E+02 Ci 1.69E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.12E+02 Ci 1.10E+02	
C. Irradiated Components, Control Rods, etc.	m3 8.48E+00 Ci 5.26E+04	
D. Other (describe)	m3 Ci	

Installation: Byron
Unit No.: 1

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-454
Thermal Power (MWH): 2.77E+07
Commercial Operation: 09/16/85
Cooling Water Source: Rock River

Licensee: Commonwealth Edison Co.
Licensed Power (MWT): 3.41E+03
Net Electrical Power (MWH): 8.99E+06
Initial Criticality: 02/02/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	3.56E-02
KR-85	2.27E+00
KR-85M	1.07E-01
KR-88	1.73E-02
I-131	2.26E-04
XE-131M	1.92E+00
I-133	2.73E-05
XE-133	2.19E+02
XE-133M	1.32E+00
XE-135	2.09E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	1.16E-03
MN-54	3.02E-03
FE-55	1.71E+00
CO-57	1.55E-04
CO-58	1.19E-02
FE-59	8.97E-04
CO-60	4.90E-02
ZN-65	9.03E-04
KR-79	1.26E-05
KR-85	1.43E-03
KR-88	1.06E-04
SR-90	8.70E-06
NB-95	5.56E-04
ZR-95	1.11E-04
RU-103	1.78E-05
RU-105	1.42E-05
AG-110M	6.47E-04
SN-113	2.80E-04
SN-117M	3.94E-04
SB-124	3.76E-03
SB-125	8.93E-02
TE-125M	1.74E-01
I-131	1.01E-03
XE-131M	1.28E-02
XE-133	1.02E+00
XE-133M	9.76E-03
CS-134	6.09E-04
KE-135	1.04E-03
CS-137	1.23E-03
HP-181	7.07E-06

Installation: Byron
Unit No.: 1

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	2.36E+00 Ci
Total Liquid Tritium Released	7.92E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.95E+07 liters
Volume of Dilution Water Used During Period	1.00E+10 liters

Installation: Byron
Unit No.: 2

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-455
Thermal Power(MWH): 2.12E+07
Commercial Operation: 08/21/87
Cooling Water Source: Rock River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.98E+06
Initial Criticality: 01/09/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.62E-02
KR-85	2.19E+00
KR-85M	8.73E-02
KR-88	1.78E-02
I-131	2.10E-04
XE-131M	1.53E+00
I-133	1.23E-05
XE-133	1.44E+02
XE-133M	7.23E-01
XE-135	1.53E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	1.16E-03
MN-54	3.02E-03
FE-55	1.71E+00
CO-57	1.55E-04
CO-58	1.19E-02
FE-59	8.97E-04
CO-60	4.90E-02
ZN-65	9.03E-04
KR-79	1.26E-05
KR-85	1.43E-03
KR-88	1.06E-04
SR-90	8.70E-06
NB-95	5.56E-04
ZR-95	1.11E-04
RU-103	1.78E-05
RU-105	1.42E-05
AG-110M	6.47E-04
SN-113	2.80E-04
SN-117M	3.94E-04
SB-124	3.76E-03
SB-125	8.93E-02
TE-125M	1.74E-01
I-131	1.01E-03
XE-131M	1.28E-02
XE-133	1.02E+00
XE-133M	9.76E-03
CS-134	6.09E-04
XE-135	1.04E-03
CS-137	1.23E-03
HF-181	7.07E-06

Installation: Byron
Unit No.: 2

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	7.19E-01 Ci
Total Liquid Tritium Released	7.92E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.95E+07 liters
Volume of Dilution Water Used During Period	1.00E+10 liters

Installation: Byron
Unit No.: 1&2

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-454
Thermal Power(MWH): 2.77E+07
Commercial Operation: 09/16/85
Cooling Water Source: Rock River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.99E+06
Initial Criticality: 02/02/85

Unit Number: 2 Type: PWR
Docket Number: 50-455
Thermal Power(MWH): 2.12E+07
Commercial Operation: 08/21/87
Cooling Water Source: Rock River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.98E+06
Initial Criticality: 01/09/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
15	Exclusive Use	Barnwell, SC
8	Exclusive Use	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
AM-241	3.00E-05	
C-14	1.46E+00	1.83E+00
CM-242	3.00E-05	
CM-244	5.50E-05	
CO-57		5.60E-01
CO-58	4.50E+00	9.64E+00
CO-60	3.43E+00	2.54E+01
CS-134	3.50E+01	1.90E-01
CS-137	3.90E+01	3.20E-01
FE-55	3.14E+00	3.81E+01
H-3	8.40E-04	1.80E-01
I-129	1.00E-03	
MN-54	1.36E+00	8.12E+00
NI-63	7.56E+00	1.47E+01
PU-238	4.50E-05	
PU-239	1.90E-05	
PU-241	6.80E-03	6.00E-02
SB-125	4.50E+00	8.60E-01
SR-90	4.90E-03	7.00E-02
TC-99	4.10E-03	

B

AM-241	1.50E-02	
C-14	1.02E+00	9.70E-01
CM-242	1.10E-02	
CM-244	8.20E-02	
CO-57		3.00E-02
CO-58	1.02E+00	4.77E+00
CO-60	1.92E+01	1.73E+01
CR-51		6.92E+00
CS-134	4.58E+00	2.77E+00

Installation: Byron
 Unit No.: 1&2

Location: 3 Mi SW Byron, IL

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) (by type of waste)	Jan-June	July-Dec
B		
CS-137	2.73E+01	1.45E+01
FE-55	2.95E+01	2.70E+01
FE-59		2.00E-01
H-3	1.78E+00	2.49E+00
I-129	2.10E-01	1.00E-01
MN-54	1.24E+00	1.25E+00
NB-95		8.30E+00
NI-63	1.08E+01	9.00E+00
PU-238	1.30E-02	
PU-239	5.00E-03	
PU-241	1.60E+00	8.30E-01
SB-125	5.50E-01	4.80E-01
SN-113		1.10E-01
SR-90	2.60E-01	1.70E-01
TC-99	8.40E-01	4.20E-01
ZR-95		2.35E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 6.60E+01 Ci 8.70E+02	non-compacted, buried
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 9.27E+01 Ci 8.01E+00	super-compacted then buried
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Callaway
Unit No.: 1

Location: 10 Mi SE Fulton, MO

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-483
Thermal Power (MWH): 2.48E+07
Commercial Operation: 12/19/84
Cooling Water Source: Missouri River

Licensee: Union Electric Company
Licensed Power (MWT): 3.57E+03
Net Electrical Power (MWH): 8.09E+06
Initial Criticality: 10/02/84

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	9.89E-01
CR-51	1.53E-06
CO-57	2.20E-07
CO-58	1.92E-05
CO-60	2.57E-07
BR-82	7.69E-07
KR-85	6.50E+01
KR-85M	1.51E-01
KR-87	1.86E-01
KR-88	3.72E-01
RB-88	1.34E-04
NB-95	1.62E-06
MO-99	1.11E-08
I-131	4.64E-04
XE-131M	3.45E+00
I-132	2.84E-07
I-133	1.40E-05
XE-133	3.18E+02
XE-133M	1.38E+00
XE-135	1.14E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	9.41E-05
MN-54	2.78E-04
CO-58	6.80E-04
CO-60	1.70E-03
ZN-65	2.69E-06
BR-82	5.57E-07
NB-95	7.06E-05
ZR-95	4.97E-05
KU-103	1.50E-06
SB-125	1.84E-05
I-131	1.32E-03
XE-131M	5.89E-03
I-133	8.48E-06
XE-133	4.93E-01
XE-133M	6.36E-03
CS-134	1.14E-04
XE-135	4.58E-03
CS-137	1.94E-04

Installation: Callaway
Unit No.: 1

Location: 10 Mi SE Fulton, MO

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	5.27E+01 Ci
Total Liquid Tritium Released	5.92E+02 Ci
Volume of Waste Released (Prior to Dilution)	7.07E+07 liters
Volume of Dilution Water Used During Period	1.54E+09 liters

Installation: Callaway
Unit No.: 1

Location: 10 Mi SE Fulton, MO

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-483
Thermal Power(MWH): 2.48E+07
Commercial Operation: 12/19/84
Cooling Water Source: Missouri River

Licensee: Union Electric Company
Licensed Power(MWT): 3.57E+03
Net Electrical Power(MWH): 8.09E+06
Initial Criticality: 10/02/84

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
2	Truck	ATG, Richland, WA
4	Truck	Quadrex, Oak Ridge, TN
8	Cask	Richland, WA
3	Truck	Richland, WA
9	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CO-58		4.44E+01
CO-60	4.04E+01	2.32E+01
CS-134		1.56E+00
CS-137		1.93E+00
FE-55	3.21E+01	9.89E+00
MN-54	3.48E+00	1.43E+01
NI-63	2.14E+01	5.25E+00
ZN-65		1.21E+00

B

CO-58	2.34E+01	1.48E+00
CO-60	1.30E+01	5.52E+01
FE-55	4.48E+01	2.27E+00
MN-54	7.47E+00	1.24E+01
NB-95	9.34E+00	
NI-63		2.64E+01
SB-125		2.08E+00
ZR-95	1.92E+00	

D

CE-144		2.07E+01
CO-60		5.15E+01
CS-137		2.78E+01

Installation: Callaway
Unit No.: 1

Location: 10 Mi SE Fulton, MO

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 3.78E+01 Ci 1.02E+03	burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.81E+01 Ci 5.77E+00	volume sent for reprocessing
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Solidified oil and oil sludges	m3 2.64E+00 Ci 6.31E-03	shipped for burial

Installation: Calvert Cliffs
Unit No.: 1&2

Location: 45 Mi SE Washington D.C.

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-317
Thermal Power(MWH): 1.29E+07
Commercial Operation: 05/08/75
Cooling Water Source: Chesapeake Bay
Unit Number: 2 Type: PWR
Docket Number: 50-318
Thermal Power(MWH): 2.10E+07
Commercial Operation: 04/01/77
Cooling Water Source: Chesapeake Bay

Licensee: Baltimore Gas & Electric
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 4.11E+06
Initial Criticality: 10/07/74

Licensee: Baltimore Gas & Electric
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 6.59E+06
Initial Criticality: 11/30/76

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.90E-02
KR-85	3.93E+01
KR-85M	5.93E+00
KR-87	1.38E-05
SR-90	6.12E-07
I-131	1.67E-02
XE-131M	6.38E+01
I-133	2.03E-02
XE-133	5.63E+03
XE-133M	5.08E+01
CS-134	5.34E-06
XE-135	8.11E+01
CS-137	4.67E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.25E-03
CR-51	4.67E-02
MN-54	1.15E-02
CC-57	7.69E-05
CO-58	2.66E-01
FE-59	7.11E-04
CO-60	6.60E-02
ZN-65	5.58E-05
KR-85	6.59E-02
KR-85M	5.58E-07
SR-89	1.51E-03
SR-90	5.27E-04
SR-92	2.96E-04
NB-95	5.48E-02
ZR-95	2.77E-02
NB-97	6.00E-03
ZR-97	3.55E-04
MO-99	8.22E-05
TC-99M	1.65E-03
RU-103	3.89E-03
RU-106	9.37E-03
AG-110M	1.66E-02
SN-113	6.65E-03

Installation: Calvert Cliffs
Unit No.: 1&2

Location: 45 Mi SE Washington D.C.

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SB-122	1.61E-03
SB-124	9.13E-04
SB-125	1.14E-02
TE-127	2.10E-03
TE-129	8.87E-03
I-131	4.15E-02
XE-131M	3.67E-03
I-132	1.08E-04
TE-132	1.77E-05
I-133	4.72E-02
XE-133	7.47E-01
XE-133M	3.66E-03
CS-134	3.13E-01
I-135	1.67E-03
XE-135	8.34E-03
XE-135M	1.42E-03
CS-136	2.78E-03
CS-137	4.60E-01
BA-139	3.04E-04
CE-139	1.98E-05
BA-140	1.01E-03
LA-140	2.49E-03
CE-141	3.82E-04
CE-144	1.77E-02
W-187	7.40E-04

Total Airborne Tritium Released	9.79E+00 Ci
Total Liquid Tritium Released	1.77E+03 Ci
Volume of Waste Released (Prior to Dilution)	4.38E+08 liters
Volume of Dilution Water Used During Period	1.48E+12 liters

Installation: Calvert Cliffs
Unit No.: 1&2

Location: 45 Mi SE Washington D.C.

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-317
Thermal Power(MWH): 1.29E+07
Commercial Operation: 05/08/75
Cooling Water Source: Chesapeake Bay

Licensee: Baltimore Gas & Electric
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 4.11E+06
Initial Criticality: 10/07/74

Unit Number: 2 Type: PWR
Docket Number: 50-318
Thermal Power(MWH): 2.10E+07
Commercial Operation: 04/01/77
Cooling Water Source: Chesapeake Bay

Licensee: Baltimore Gas & Electric
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 6.59E+06
Initial Criticality: 11/30/76

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
14	Motor Surface Transit	CNSI, Barnwell, SC
25	Motor Surface Transit	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	4.34E+00	5.48E+00
CO-60	2.30E+00	1.15E+00
CS-134	1.35E+01	3.26E+01
CS-137	2.74E+01	4.91E+01
FE-55	4.35E+00	1.25E+00
H-3	3.97E+01	
I-131	1.37E+00	
NI-63	5.48E+00	8.82E+00
B		
AG-110M	1.50E+00	1.37E+00
C-14	2.10E+00	1.99E+00
CE-144	2.08E+00	1.97E+00
CO-58	1.56E+00	1.48E+00
CO-60	1.04E+01	9.82E+00
CR-51	9.70E+00	9.36E+00
CS-134	2.78E+00	2.63E+00
CS-137	1.10E+01	1.04E+01
FE-55	3.63E+01	3.45E+01
NB-95	1.05E+00	1.01E+00
NI-63	1.34E+01	1.27E+01
RU-106	2.59E+00	2.45E+00
SB-125	4.87E+00	4.62E+00
C		
CO-58		1.48E+00
CO-60		3.27E+01
FE-55		5.83E+01
MN-54		4.39E+00
NI-63		1.63E+00
D		
C-14		8.80E+00

Installation: Calvert Cliffs
Unit No.: 1&2

Location: 45 Mi SE Washington D.C.

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

D

CE-144	1.21E+01
CO-60	9.30E+00
CS-137	1.80E+00
FE-55	4.63E+01
NI-63	1.05E+01
PU-241	3.30E+00
RU-106	2.20E+00
SB-125	2.20E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 9.77E+01 Ci 5.79E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.87E+01 m3 9.35E+02 Ci 2.18E+00	Burial Volume Generated Volume
C. Irradiated Components, Control Rods, etc.	m3 1.04E+00 Ci 5.75E+03	Burial Volume
D. Other (describe) Cartridge Filters	m3 1.02E+01 Ci 2.01E+00	Burial Volume

Installation: Catawba
Unit No.: 1

Location: 6 Mi NNW of Rock Hill, SC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-413
Thermal Power(MWH): 2.11E+07
Commercial Operation: 06/29/85
Cooling Water Source: Lake Wylie

Licensee: Duke Power Co
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.03E+06
Initial Criticality: 01/07/85

Airborne Effluents

Nuclide Released	Activity (Ci)
F-18	9.55E-05
NA-24	1.49E-07
AR-41	2.00E+02
CR-51	2.07E-04
MN-54	1.14E-05
MN-56	1.81E-07
CO-57	3.76E-08
CO-58	2.12E-04
CO-60	3.31E-05
SE-75	1.01E-06
BR-80M	5.41E-07
BR-82	3.64E-07
KR-85	2.11E-01
KR-85M	3.89E-01
KR-87	5.92E-02
KR-88	3.94E-01
RB-88	4.03E-05
RB-89	1.25E-07
Y-91M	5.33E-10
NB-97	8.01E-10
ZR-97	6.84E-09
MO-99	3.43E-09
RU-106	2.06E-08
SB-124	3.71E-10
SB-126	4.49E-08
I-131	2.87E-04
TE-131M	4.41E-08
XE-131M	1.62E+00
I-132	2.66E-05
I-133	2.65E-04
XE-133	2.09E+02
XE-133M	3.33E+00
CS-134	1.15E-08
I-134	3.20E-05
I-135	3.48E-06
XE-135	1.17E+01
XE-135M	1.10E+00
CS-136	1.90E-05
CS-137	1.22E-08
CS-138	1.02E-05
XE-138	3.87E-04
BA-139	6.19E-08
CE-141	7.98E-07
W-187	9.62E-10

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
F-18	1.98E-03
NA-24	4.92E-05
AR-41	4.68E-06
CR-51	2.36E-02
MN-54	1.16E-02
FE-55	1.33E-01
CO-57	8.12E-04
CO-58	1.82E-01
FE-59	2.69E-03
CO-60	5.79E-02
ZN-65	1.40E-04
SE-75	2.92E-05
BR-82	1.96E-06
KR-85	4.36E-03
KR-88	9.87E-06
RB-89	1.04E-05
SR-91	1.82E-05
SR-92	2.65E-04
NB-95	3.56E-03
ZR-95	1.89E-03
NB-97	1.97E-03
NB-97M	3.48E-06
ZR-97	6.34E-04
RU-103	1.28E-05
AG-110M	8.95E-04
SN-113	3.89E-04
SB-122	2.15E-04
SB-124	2.58E-03
SB-125	2.92E-02
SB-126	8.93E-06
I-131	7.08E-04
TE-131M	5.19E-06
I-132	5.05E-07
BA-133	1.88E-06
I-133	1.10E-04
XE-133	5.73E-04
XE-133M	8.21E-06
CS-134	2.16E-03
I-135	5.62E-06
XE-135	2.08E-05
CS-137	4.44E-03
CS-138	4.97E-07
XE-138	3.02E-06
BA-139	6.02E-06
BA-140	1.19E-05
LA-140	6.61E-05
AC-228	1.34E-06
TH-228	2.39E-03

Total Airborne Tritium Released	7.31E+01 Ci
Total Liquid Tritium Released	3.86E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.13E+08 liters
Volume of Dilution Water Used During Period	8.41E+10 liters

Installation: Catawba
Unit No.: 2

Location: 6 Mi NNW of Rock Hill, SC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-414
Thermal Power(MWH): 2.76E+07
Commercial Operation: 08/19/86
Cooling Water Source: Lake Wylie

Licensee: Duke Power Co
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 9.27E+06
Initial Criticality: 05/08/86

Airborne Effluents

Nuclide Released	Activity (Ci)
F-18	9.55E-05
NA-24	1.49E-07
AR-41	2.00E+02
CR-51	2.07E-04
MN-54	1.14E-05
MN-56	1.81E-07
CO-57	3.76E-08
CO-58	2.12E-04
CO-60	3.31E-05
SE-75	1.01E-06
BR-80M	5.41E-07
BR-82	3.64E-07
KR-85	2.11E-01
KR-85M	3.89E-01
KR-87	5.92E-02
KR-88	3.94E-01
RB-88	4.03E-05
RB-89	1.25E-07
Y-91M	5.33E-10
NB-97	8.01E-10
ZR-97	6.84E-09
MO-99	3.43E-09
RU-106	2.06E-08
SB-124	3.71E-10
SB-126	4.49E-08
I-131	2.87E-04
TE-131M	4.41E-08
XE-131M	1.62E+00
I-132	2.66E-05
I-133	2.65E-04
XE-133	2.09E+02
XE-133M	3.33E+00
CS-134	1.15E-08
I-134	3.20E-05
I-135	3.48E-06
XE-135	1.17E+01
XE-135M	1.10E+00
CS-136	1.90E-05
CS-137	1.22E-08
CS-138	1.02E-05
XE-138	3.87E-04
BA-139	6.19E-08
CE-141	7.98E-07
W-187	9.62E-10

Installation: Catawba
Unit No.: 2

Location: 6 Mi NNW of Rock Hill, SC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
F-18	1.98E-03
NA-24	4.92E-05
AR-41	4.68E-06
CR-51	2.36E-02
MN-54	1.16E-02
FE-55	1.33E-01
CO-57	8.12E-04
CO-58	1.82E-01
FE-59	2.69E-03
CO-60	5.79E-02
ZN-65	1.40E-04
SE-75	2.92E-05
BR-82	1.96E-06
KR-85	4.36E-03
KR-88	9.87E-06
RB-89	1.04E-05
SR-91	1.82E-05
SR-92	2.65E-04
NB-95	3.56E-03
ZR-95	1.89E-03
NB-97	1.97E-03
NB-97M	3.48E-06
ZR-97	6.34E-04
RU-103	1.28E-05
AG-110M	8.95E-04
SN-113	3.89E-04
SB-122	2.15E-04
SB-124	2.58E-03
SB-125	2.92E-02
SB-126	8.93E-06
I-131	7.08E-04
TE-131M	5.19E-06
I-132	5.05E-07
BA-133	1.88E-06
I-133	1.10E-04
XE-133	5.73E-04
XE-133M	8.21E-06
CS-134	2.16E-03
I-135	5.62E-06
XE-135	2.08E-05
CS-137	4.44E-03
CS-138	4.97E-07
XE-138	3.02E-06
BA-139	6.02E-06
BA-140	1.19E-05
LA-140	6.61E-05
AC-228	1.34E-06
TH-228	2.39E-03

Total Airborne Tritium Released	8.31E+01 Ci
Total Liquid Tritium Released	3.86E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.13E+08 liters
Volume of Dilution Water Used During Period	8.41E+10 liters

Installation: Catawba
Unit No.: 1&2

Location: 6 Mi NNW of Rock Hill, SC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-413
Thermal Power(MWH): 2.11E+07
Commercial Operation: 06/29/85
Cooling Water Source: Lake Wylie

Licensee: Duke Power Co
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.03E+06
Initial Criticality: 01/07/85

Unit Number: 2 Type: PWR
Docket Number: 50-414
Thermal Power(MWH): 2.76E+07
Commercial Operation: 08/19/86
Cooling Water Source: Lake Wylie

Licensee: Duke Power Co
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 9.27E+06
Initial Criticality: 05/08/86

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
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31

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CO-58	4.60E+00	3.23E+00
CO-60	1.50E+01	1.21E+01
CS-134	5.93E+00	3.74E+00
CS-136	2.83E-06	
CS-137	1.14E+01	6.18E+00
FE-55	4.33E+01	5.89E+01
I-131	1.52E-05	
LA-140	2.62E-02	
MN-54	9.31E+00	4.54E+00
NI-63	1.04E+01	9.20E+00
SB-122	3.56E-06	
SB-125	3.87E-06	2.22E+00

B

C-14		1.51E+00
CO-58	5.83E+01	9.14E+00
CO-60	7.84E+00	1.39E+01
CS-134		1.41E+00
CS-137	1.02E+00	1.91E+00
FE-55	1.99E+01	6.22E+01
H-3	1.53E+00	6.84E-01
MN-54	3.77E+00	3.02E+00
NI-63	7.74E+00	6.25E+00

D

CO-58	2.82E+01	1.68E+01
CO-60	4.20E+00	1.13E+01
CR-51	3.60E+00	
FE-55	5.23E+01	5.66E+01
MN-54	4.00E+00	4.00E+00
NB-95	1.20E+00	
NI-63	5.80E+00	1.00E+01

Installation: Catawba
Unit No.: 1&2

Location: 6 Mi NNW of Rock Hill, SC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.61E+02 Ci 7.98E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.51E+01 Ci 6.18E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Dewatered Filters	m3 1.20E+01 Ci 1.28E+02	

Installation: Clinton
Unit No.: 1

Location: 6 Mi E Clinton, IL

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-461
Thermal Power (MWH): 1.57E+07
Commercial Operation: 11/24/87
Cooling Water Source: Salt Creek

Licensee: Illinois Power
Licensed Power (MWT): 2.89E+03
Net Electrical Power (MWH): 4.94E+06
Initial Criticality: 02/27/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.60E-01
CR-51	2.42E-03
MN-54	7.84E-06
CO-60	2.74E-05
KR-85	1.20E+00
KR-85M	2.29E-01
KR-87	1.04E+00
SR-89	1.14E-05
I-131	5.33E-05
XE-131M	4.11E-04
I-133	1.76E-05
XE-133	1.23E-01
XE-133M	8.75E-05
XE-135	3.65E-01
XE-135M	6.82E-01
XE-137	2.27E-01
XE-138	2.95E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	1.78E-03
MN-54	4.00E-03
FE-55	5.22E-04
CO-58	1.70E-03
FE-59	2.43E-04
CO-60	9.98E-03

Total Airborne Tritium Released	4.77E+00 Ci
Total Liquid Tritium Released	2.36E+00 Ci
Volume of Waste Released (Prior to Dilution)	2.20E+06 liters
Volume of Dilution Water Used During Period	1.18E+08 liters

Installation: Clinton
Unit No.: 1

Location: 6 Mi E Clinton, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-461
Thermal Power(MWH): 1.57E+07
Commercial Operation: 11/24/87
Cooling Water Source: Salt Creek

Licensee: Illinois Power
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 4.94E+06
Initial Criticality: 02/27/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Truck	Barnwell, SC
11	Truck	Oak Ridge, TN
38	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CO-58		1.25E+00
CO-60	2.92E+01	3.25E+01
CR-51	2.63E+00	
FE-55	5.62E+01	4.89E+01
H-3	2.96E+00	
MN-54	6.63E+00	1.53E+01
Others	2.38E+00	2.03E+00
B		
C-14	1.10E+00	
CO-58		1.86E+00
CO-60	1.64E+01	3.25E+01
CR-51	1.07E+01	1.10E+00
FE-55	6.43E+01	4.86E+01
H-3	3.40E+00	
MN-54	4.10E+00	1.42E+01
Others		1.72E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.03E+02 Ci 2.12E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.03E+01 Ci 1.39E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Comanche Peak
Unit No.: 1

Location: 4.5 Mi N of Glen Rose, TX

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-445
Thermal Power(MWH): 2.20E+07
Commercial Operation: 08/13/90
Cooling Water Source: Squaw Creek Reservoir

Licensee: TU Electric Company
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.95E+06
Initial Criticality: 04/03/90

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	8.40E-01
BR-82	8.54E-07
KR-85M	2.85E+00
KR-87	3.24E+00
KR-88	2.19E+01
RB-88	1.35E-06
I-131	8.31E-04
XE-131M	5.56E-02
I-133	9.51E-07
XE-133	1.62E+03
XE-133M	1.10E+00
XE-135	1.06E+02
XE-135M	1.15E+00
XE-138	2.09E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	8.34E-05
CR-51	2.41E-02
MN-54	1.66E-03
FE-55	2.21E-01
CO-57	1.15E-04
CO-58	5.97E-02
FE-59	4.68E-03
CO-60	1.16E-02
ZN-65	2.60E-05
SE-75	1.78E-04
BR-82	1.65E-05
KR-85	1.21E-02
KR-85M	1.35E-04
KR-88	4.38E-05
RB-88	2.23E-04
SR-92	9.00E-06
NB-95	1.44E-03
ZR-95	6.09E-04
NB-97	2.67E-05
MO-99	8.48E-04
TC-99M	1.90E-04
RU-105	1.15E-05
AG-110M	9.82E-04
IN-113M	5.67E-05
SN-113	5.71E-05
SN-117M	5.51E-06
SB-122	5.20E-04

Installation: Comanche Peak
Unit No.: 1

Location: 4.5 Mi N of Glen Rose, TX

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SB-124	7.90E-03
SB-125	2.52E-02
SB-126	1.50E-04
SB-127	1.06E-05
I-131	1.24E-02
XE-131M	7.37E-02
I-133	3.17E-04
XE-133	4.55E+00
YE-133M	2.48E-02
CS-134	1.04E-02
XE-135	1.79E-01
CS-136	2.65E-04
CS-137	1.30E-02
CS-138	1.77E-05
LA-140	1.33E-04
LA-141	7.85E-04

Total Airborne Tritium Released	3.02E+00 Ci
Total Liquid Tritium Released	6.11E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.52E+08 liters
Volume of Dilution Water Used During Period	4.21E+11 liters

Installation: Comanche Peak
 Unit No.: 1

Location: 4.5 Mi N of Glen Rose, TX

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Type: PWR Licensee: TU Electric Company
 Docket Number: 50-445 Licensed Power(MWT): 3.41E+03
 Thermal Power(MWH): 2.20E+07 Net Electrical Power(MWH): 6.95E+06
 Commercial Operation: 08/13/90 Initial Criticality: 04/03/90
 Cooling Water Source: Squaw Creek Reservoir

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Truck	Barnwell, SC
1	Truck	Quadrex, Barnwell, SC
14	Truck	SEG/ALARON

Estimate of Major Nuclide Composition (%)
 (by type of waste)

Jan-June Jul-Dec

A

C-14		4.77E+00
CO-58	3.42E+01	7.20E+00
CO-60	1.47E+01	6.65E+01
CS-134		2.41E+00
CS-137	1.50E+00	3.17E+00
FE-55	1.98E+01	
H-3		4.87E+00
MN-54	1.77E+01	9.03E+00
NI-63	1.08E+01	
Others	1.30E+00	2.44E+00

B

CO-58	2.57E+01	1.70E+01
CO-60	1.41E+01	1.40E+01
CR-51	4.53E+00	2.38E+00
FE-55	2.64E+01	5.41E+01
FE-59	2.25E+00	
H-3	9.59E+00	
I-131	2.69E+00	
MN-54	3.91E+00	3.62E+00
NB-95	5.23E+00	2.04E+00
NI-63		3.55E+00
Others	2.65E+00	3.25E+00
ZR-95	2.95E+00	

D

CO-60		1.18E+00
FE-55		4.30E+00
H-3		9.46E+01

Installation: Comanche Peak
Unit No.: 1

Location: 4.5 Mi N of Glen Rose, TX

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.20E+01 Ci 2.31E+02	Buried Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 8.47E+01 Ci 1.92E+00	Compacted, Buried Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Oil (incinerated by processor)	m3 N/A Ci 2.86E-03	Incinerated

Installation: Donald C. Cook
Unit No.: 1&2

Location: 11 Mi SSW St. Joseph, MI

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-315
Thermal Power(MWH): 1.63E+07
Commercial Operation: 08/27/75
Cooling Water Source: Lake Michigan
Unit Number: 2 Type: PWR
Docket Number: 50-316
Thermal Power(MWH): 4.89E+06
Commercial Operation: 07/01/78
Cooling Water Source: Lake Michigan

Licensee: Indiana Michigan Power Co.
Licensed Power(MWT): 3.25E+03
Net Electrical Power(MWH): 4.99E+06
Initial Criticality: 01/18/75

Licensee: Indiana Michigan Power Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 1.43E+06
Initial Criticality: 03/10/78

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.48E+00
MN-54	2.53E-06
CO-58	2.50E-04
CO-60	1.18E-04
KR-85	1.57E+01
KR-85M	9.37E-02
KR-87	6.44E-02
KR-88	1.30E-01
NB-95	2.43E-06
ZR/NB-95	1.42E-05
AG-110M	4.65E-08
I-130	1.53E-06
I-131	7.37E-03
XE-131M	8.09E+00
I-132	1.11E-03
I-133	1.90E-03
XE-133	1.69E+02
XE-133M	4.15E-01
CS-134	5.81E-04
I-134	6.04E-04
I-135	1.56E-03
XE-135	7.98E+00
XE-135M	2.35E-01
CS-136	3.15E-06
CS-137	1.03E-03
XE-138	7.43E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.69E-02
CR-51	4.93E-02
MN-54	1.34E-02
FE-55	4.27E-01
CO-57	1.17E-03
CO-58	2.09E-01
FE-59	2.25E-03
CO-60	9.50E-02
ZN-65	3.64E-03
KR-85	9.58E-05

Installation: Donald C. Cook
Unit No.: 1&2

Location: 11 Mi SSW St. Joseph, MI

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
RB-88	4.75E-04
SR-90	2.27E-03
NB-95	9.85E-03
ZR-95	1.01E-02
RU-103	1.20E-04
AG-110M	7.07E-02
SN-113	1.53E-03
SB-122	5.91E-04
SB-124	6.73E-02
SB-125	3.78E-02
I-131	6.60E-03
XE-131M	1.69E-04
I-132	4.33E-03
I-133	1.03E-02
XE-133	1.02E-02
XE-133M	7.86E-05
CS-134	2.45E-02
I-134	3.13E-03
I-135	9.53E-03
XE-135	3.25E-03
XE-135M	1.59E-02
CS-136	7.44E-05
CS-137	3.74E-02
CS-138	4.01E-03
LA-140	5.64E-05

Total Airborne Tritium Released	1.96E+01 Ci
Total Liquid Tritium Released	4.33E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.83E+08 liters
Volume of Dilution Water Used During Period	1.76E+12 liters

Installation: Cooper
Unit No.: 1

Location: 70 Mi S Omaha, NE

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-298
Thermal Power (MWH): 1.93E+07
Commercial Operation: 07/01/74
Cooling Water Source: Missouri River

Licensee: Nebraska Public Power District
Licensed Power (MWT): 2.38E+03
Net Electrical Power (MWH): 6.23E+06
Initial Criticality: 02/21/74

Airborne Effluents

Nuclide Released	Activity (Ci)
KR-83M	1.18E-01
KR-85	6.63E-01
KR-85M	2.13E-01
KR-87	6.96E-01
KR-88	6.96E-01
KR-89	3.29E+00
I-131	9.09E-05
XE-133	4.92E-01
XE-133M	9.84E-03
I-135	3.81E-05
XE-135	8.67E-01
XE-135M	2.37E-01
XE-137	3.87E+00
CS-138	4.01E-04
XE-138	2.89E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	9.01E-04
CR-51	7.19E-02
MN-54	1.19E+00
FE-55	2.26E-01
CO-58	1.02E-01
CO-60	2.25E+00
ZN-65	3.26E-03
SR-89	8.55E-03
AG-110M	1.29E-02
I-131	1.82E-04
CS-134	1.97E-02
CS-137	7.55E-02

Total Liquid Tritium Released	1.46E+01 Ci
Volume of Waste Released (Prior to Dilution)	7.74E+06 liters
Volume of Dilution Water Used During Period	6.10E+10 liters

Installation: Cooper
Unit No.: 1

Location: 70 Mi S Omaha, NE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-298
Thermal Power(MWH): 1.93E+07
Commercial Operation: 07/01/74
Cooling Water Source: Missouri River

Licensee: Nebraska Public Power District
Licensed Power(MWT): 2.38E+03
Net Electrical Power(MWH): 6.23E+06
Initial Criticality: 02/21/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
23	Exclusive Use Vehicle	Barnwell, SC
5	Exclusive Use Vehicle	Beatty, NV
16	Exclusive Use Vehicle	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M	1.03E+00	1.15E+00
C-14	6.27E-01	1.30E-01
CM-242	2.45E-06	9.16E-07
CO-58	4.43E+00	5.09E+00
CO-60	5.11E+01	3.08E+01
CR-51	2.51E+00	3.55E+01
CS-134	5.92E-02	1.28E-02
CS-137	6.76E-01	3.40E-01
FE-55	1.18E+01	1.18E+01
FE-59		2.92E-01
H-3	8.18E-03	2.12E-03
MN-54	2.54E+01	1.35E+01
NI-59	1.14E-02	7.78E-03
NI-63	1.14E+00	5.23E-01
PU-241	2.17E-04	6.41E-05
SR-90	5.72E-03	2.41E-03
TC-99	2.57E-04	8.29E-05
TRU		6.37E-06
ZN-65	1.26E+00	8.39E-01

B

AG-110M	7.79E-01	3.18E-01
AM-241	2.39E-06	9.39E-07
C-14	1.56E-01	7.70E-02
CE-141	2.23E-03	1.15E-03
CE-144	7.51E-01	3.03E-01
CM-242	1.12E-05	4.32E-06
CM-243/244	8.11E-06	3.18E-06
CO-57	1.90E-03	5.70E-04
CO-58	3.32E+00	1.43E+00
CO-60	4.59E+01	4.30E+01
CR-51	4.96E-01	1.20E-01
CS-134	1.39E+00	5.48E-01
CS-137	2.83E+00	1.12E+00
FE-55	2.79E+01	4.21E+01
FE-59	1.08E-02	
H-3	7.68E-03	3.95E-03

Installation: Cooper
Unit No.: 1

Location: 70 Mi S Omaha, NE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

B

MN-54	1.49E+01	6.01E+00
NB-94		9.63E-06
NI-59	1.43E-02	3.77E-02
NI-63	6.82E-01	4.58E+00
PU-238	7.76E-06	3.05E-06
PU-239/240		1.25E-06
PU-241	8.30E-04	2.81E-04
PU239/240	3.17E-06	
SB-125	3.51E-02	1.30E-02
SR-90	2.18E-03	8.75E-04
TC-99	5.44E-05	1.42E-02
ZN-65	8.42E-01	3.42E-01

C

AM-241		8.18E-10
AM-243		6.29E-11
C-14		5.09E-03
CM-242		1.24E-07
CM-243/244		1.87E-08
CO-60		4.91E+01
CR-51		3.80E-02
FE-55		4.61E+01
H-3		6.94E-05
MN-54		1.53E+00
NB-94		6.05E-05
NI-59		1.55E-02
NI-63		2.88E+00
NP-237		5.90E-10
PU-238		6.10E-06
PU-239/240		6.80E-09
PU-241		9.05E-07
PU-242		6.22E-12
SB-125		3.61E-01
TC-99		2.28E-05
ZR-95		4.70E-03

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.09E+02 Ci 1.37E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.27E+01 m3 7.17E+01 m3 6.26E+00 m3 1.66E+01 Ci 5.60E+00	compacted non-compacted non-compacted compacted & incinerated
C. Irradiated Components, Control Rods, etc.	m3 1.15E+01 Ci 9.94E+04	
D. Other (describe)	m3 Ci	

Installation: Crystal River
Unit No.: 3

Location: 70 Mi N Tampa, FL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-302
Thermal Power(MWH): 1.62E+07
Commercial Operation: 03/13/77
Cooling Water Source: Gulf of Mexico

Licensee: Florida Power
Licensed Power(MWT): 2.54E+03
Net Electrical Power(MWH): 5.30E+06
Initial Criticality: 01/14/77

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	8.66E-09
AR-41	4.08E-03
CR-51	6.52E-07
MN-54	9.46E-09
MN-56	1.55E-07
CO-57	1.99E-09
CO-58	5.29E-06
CO-60	5.09E-07
ZN-69	2.34E-08
BR-82	9.84E-07
KR-85	6.88E+01
KR-85M	1.31E+00
KR-87	2.84E-04
KR-88	1.32E-03
RB-88	8.32E-05
Y-91M	8.18E-10
SR-92	6.11E-07
Y-92	2.72E-06
Y-93	3.05E-06
NB-95	8.21E-09
NB-97	6.19E-09
ZR-97	6.17E-10
TC-101	3.53E-07
SB-122	8.79E-10
I-131	5.51E-04
XE-131M	7.21E+00
I-132	1.59E-05
TE-132	1.07E-07
I-133	5.97E-05
XE-133	6.83E+02
XE-133M	2.56E+00
CS-134	1.02E-07
I-135	4.88E-06
XE-135	2.24E+01
XE-135M	2.10E-04
CS-137	2.30E-07
CS-138	7.11E-06
BA-139	2.17E-05
CE-141	6.21E-07
LA-142	7.33E-07
CE-143	6.50E-07
CE-144	6.85E-07

Installation: Crystal River
Unit No.: 3

Location: 70 Mi N Tampa, FL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	5.37E-04
AR-41	4.96E-05
CR-51	8.68E-02
MN-54	1.74E-02
FE-55	1.94E-02
MN-56	9.49E-06
CO-57	8.61E-04
CO-58	4.72E-01
FE-59	5.23E-03
CO-60	1.13E-01
CU-64	8.51E-04
ZN-65	7.96E-06
ZN-69	6.75E-06
KR-85	1.66E-01
KR-85M	1.39E-04
KR-87	1.37E-05
KR-88	7.99E-05
RB-88	5.15E-04
SR-89	1.53E-02
SR-90	7.63E-04
Y-91	1.86E-03
SR-92	6.87E-03
Y-92	8.61E-05
NB-95	4.68E-02
ZR-95	3.11E-02
NB-97	3.06E-02
ZR-97	7.74E-04
MO-99	3.27E-02
TC-99M	3.66E-03
RU-103	7.45E-03
RU-106	8.55E-03
AG-110M	1.79E-02
SB-122	1.28E-03
SB-124	1.94E-02
SB-125	1.49E-01
TE-129	8.41E-02
TE-129M	1.50E-02
I-131	2.32E-03
XE-131M	1.07E-01
I-132	2.73E-04
TE-132	1.19E-03
I-133	2.93E-04
XE-133	6.99E+00
XE-133M	4.72E-02
CS-134	1.74E-01
XE-135	5.45E-02
XE-135M	2.12E-05
CS-137	2.38E-01
BA-139	7.65E-05
BA-140	5.88E-05
LA-140	4.60E-03
CE-141	2.49E-03

Installation: Crystal River
Unit No.: 3

Location: 70 Mi N Tampa, FL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
LA-142	1.22E-05
CE-143	6.48E-05
CE-144	4.63E-03
PA-144	8.68E-03
ND-147	9.48E-06
W-187	4.38E-05
NP-239	3.04E-04

Total Airborne Tritium Released	1.50E+01 Ci
Total Liquid Tritium Released	3.64E+02 Ci
Volume of Waste Released (Prior to Dilution)	3.35E+07 liters
Volume of Dilution Water Used During Period	3.55E+10 liters

Installation: Crystal River
Unit No.: 3

Location: 70 Mi N Tampa, FL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-302
Thermal Power(MWH): 1.62E+07
Commercial Operation: 03/13/77
Cooling Water Source: Gulf of Mexico

Licensee: Florida Power
Licensed Power(MWT): 2.54E+03
Net Electrical Power(MWH): 5.30E+06
Initial Criticality: 01/14/77

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
8	Exclusive Use Vehicle	CNSI, Barnwell, SC
14	Exclusive Use Vehicle	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
C-14		1.20E+00
CO-58	1.46E+01	6.70E+00
CO-60	1.05E+01	5.90E+00
CS-134	2.18E+01	2.02E+01
CS-137	3.41E+01	5.16E+01
FE-55		5.20E+00
H-3	9.20E+00	
MN-54	1.30E+00	
NI-63		1.00E+00
SR-89	2.70E+00	
B		
C-14	1.60E+00	5.90E+00
CO-58	1.99E+01	1.75E+01
CO-60	1.41E+01	1.32E+01
CR-51	2.60E+00	
CS-134	5.20E+00	4.50E+00
CS-137	8.70E+00	8.90E+00
FE-55	2.48E+01	2.94E+01
MN-54		1.70E+00
NI-63	1.07E+01	1.02E+01
TC-99	1.90E+00	1.50E+00
C		
CO-60	3.30E+01	
FE-55	6.60E+01	
D		
C-14		3.80E+00
CO-60		3.80E+00
CS-134		1.40E+00
CS-137		3.30E+00
FE-55		8.60E+00
H-3		7.43E+01
NI-63		3.30E+00

Installation: Crystal River
Unit No.: 3

Location: 70 Mi N Tampa, FL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.16E+02 Ci 2.13E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.94E+02 Ci 1.94E+00	
C. Irradiated Components, Control Rods, etc.	m3 4.10E-01 Ci 1.15E+02	
D. Other (describe) Radiologically contaminated waste oil	m3 3.19E+01 Ci 6.70E-03	

Installation: Davis-Besse
Unit No.: 1

Location: 21 Mi E Toledo, OH

Effluent and Waste Disposal Annual Report for 1992

Type: PWR

Licensee: Toledo Edison Co.

Docket Number: 50-346

Licensed Power (MWT): 2.77E+03

Thermal Power (MWH): 2.41E+07

Net Electrical Power (MWH): 7.65E+06

Commercial Operation: 07/31/78

Initial Criticality: 08/12/77

Cooling Water Source: Lake Erie

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-58	2.84E-06
KR-85	3.84E-01
I-131	2.97E-04
I-133	7.77E-04
XE-133	2.97E+01
CS-134	4.30E-07
XE-135	6.11E+00
CS-137	6.56E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	2.67E-06
CR-51	6.19E-04
MN-54	1.27E-04
FE-55	9.37E-03
CO-57	4.57E-05
CO-58	1.80E-02
FE-59	3.90E-05
CO-60	1.22E-02
SR-90	3.57E-06
NB-95	2.39E-04
ZR-95	4.33E-04
NB-97	5.73E-06
ZR-97	1.18E-03
TC-99M	4.80E-06
RU-103	2.17E-04
AG-110M	4.92E-02
SN-113	9.13E-04
SB-124	1.35E-04
SB-125	3.44E-03
I-131	2.64E-04
I-133	1.38E-05
XE-133	3.83E-03
XE-133M	2.06E-05
CS-134	5.22E-03
XE-135	2.07E-04
CS-137	7.80E-03
CS-138	3.64E-06
BA-140	4.36E-05
CE-144	7.46E-04

Total Airborne Tritium Released	2.16E+01 Ci
Total Liquid Tritium Released	3.80E+02 Ci
Volume of Waste Released (Prior to Dilution)	3.05E+08 liters
Volume of Dilution Water Used During Period	4.23E+10 liters

Installation: Davis-Besse
Unit No.: 1

Location: 21 Mi E Toledo, OH

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-346
Thermal Power(MWH): 2.41E+07
Commercial Operation: 07/31/78
Cooling Water Source: Lake Erie

Licensee: Toledo Edison Co.
Licensed Power(MWT): 2.77E+03
Net Electrical Power(MWH): 7.65E+06
Initial Criticality: 08/12/77

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
4	Truck	Barnwell, SC
1	Truck	Quadrex, Oak Ridge, TN
1	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M	5.00E+00	3.00E-01
CO-58	1.80E+01	1.55E+01
CO-60	1.50E+01	7.90E+00
CS-134	1.20E+01	2.26E+01
CS-137	1.60E+01	3.47E+01
FE-55	2.10E+01	1.11E+01
NI-63	1.00E+01	5.50E+00

B

CO-58		3.00E-01
CO-60		1.87E+01
FE-55		7.09E+01

D

CO-58	1.20E+01	
CO-60	4.20E+01	
FE-55	2.90E+01	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.91E+01 Ci 6.60E+00	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.50E+00 Ci 3.60E-01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Dewatered primary system cart. filters	m3 4.50E+00 Ci 3.40E+01	

Installation: Diablo Canyon
Unit No.: 1&2

Location: 12 Mi WSW of San Luis Obispo

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-275
Thermal Power(MWH): 2.34E+07
Commercial Operation: 05/07/85
Cooling Water Source: Pacific Ocean
Unit Number: 2 Type: PWR
Docket Number: 50-323
Thermal Power(MWH): 2.91E+07
Commercial Operation: 03/13/86
Cooling Water Source: Pacific Ocean

Licensee: Pacific Gas & Electric Co
Licensed Power(MWT): 3.34E+03
Net Electrical Power(MWH): 7.45E+06
Initial Criticality: 04/29/84

Licensee: Pacific Gas & Electric Co
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 9.25E+06
Initial Criticality: 08/19/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.17E+00
CR-51	1.02E-04
MN-54	5.12E-05
CO-57	7.16E-06
CO-58	1.70E-03
CO-60	6.93E-04
KR-85	2.36E-01
ZR-95	2.56E-05
XE-133	1.02E+00
XE-135	2.31E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	2.57E-04
NA-24	3.00E-04
CR-51	1.78E-02
MN-54	3.56E-02
FE-55	1.75E-01
CO-57	1.38E-03
CO-58	1.90E-01
FE-59	1.27E-03
CO-60	1.22E-01
BR-82	9.69E-06
SR-89	2.03E-04
SR-90	8.61E-05
SR-92	4.12E-07
ZR-95	1.25E-02
MO-99	6.95E-04
AG-110M	2.70E-04
SN-113	4.60E-04
SN-117M	2.84E-05
SB-122	6.13E-04
SB-124	3.73E-03
SB-125	1.70E-01
I-131	2.91E-03
XE-131M	1.45E-04
I-132	1.21E-05
TE-132	3.35E-04
I-133	1.93E-03

Installation: Diablo Canyon
Unit No.: 1&2

Location: 12 Mi WSW of San Luis Obispo

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-133	6.56E-04
CS-134	1.41E-03
I-134	6.40E-10
I-135	1.21E-04
XE-135	2.27E-04
CS-137	4.62E-03
CS-138	1.69E-10
BA-139	3.42E-08
CE-139	3.93E-06
LA-140	2.43E-05
LA-142	1.82E-07
CE-144	5.78E-05

Total Airborne Tritium Released	1.38E+02 Ci
Total Liquid Tritium Released	1.22E+03 Ci
Volume of Waste Released (Prior to Dilution)	4.59E+08 liters
Volume of Dilution Water Used During Period	5.61E+11 liters

Installation: Diablo Canyon
 Unit No.: 1&2

Location: 12 Mi WSW of San Luis Obispo

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Unit Number: 1 Type: PWR
 Docket Number: 50-275
 Thermal Power(MWH): 2.34E+07
 Commercial Operation: 05/07/85
 Cooling Water Source: Pacific Ocean

Licensee: Pacific Gas & Electric Co
 Licensed Power(MWT): 3.34E+03
 Net Electrical Power(MWH): 7.45E+06
 Initial Criticality: 04/29/84

Unit Number: 2 Type: PWR
 Docket Number: 50-323
 Thermal Power(MWH): 2.91E+07
 Commercial Operation: 03/13/86
 Cooling Water Source: Pacific Ocean

Licensee: Pacific Gas & Electric Co
 Licensed Power(MWT): 3.41E+03
 Net Electrical Power(MWH): 9.25E+06
 Initial Criticality: 08/19/85

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
12	Truck	Barnwell, SC
18	Truck	Beatty, NV
5	Truck	Hanford, WA
4	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
 (by type of waste)

	Jan-June	Jul-Dec
A		
CO-58		8.59E+00
CO-60	2.85E+01	2.06E+01
CS-134	6.79E+00	1.52E+00
CS-137	9.89E+00	2.01E+00
FE-55	2.17E+01	2.59E+01
MN-54	2.09E+00	3.12E+00
NI-59	1.71E+00	
NI-63	2.69E+01	3.64E+01
B		
C-14		1.28E+00
CO-58	2.17E+01	4.26E+00
CO-60	7.63E+00	1.00E+01
CR-51	4.15E+00	
CS-137		2.57E+00
FE-55	4.03E+01	5.34E+01
H-3	8.27E+00	7.20E+00
NB-95	4.70E+00	2.13E+00
NI-63	6.77E+00	1.56E+01
ZR-95	3.23E+00	1.53E+00

Installation: Diablo Canyon
Unit No.: 1&2

Location: 12 Mi WSW of San Luis Obispo

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.11E+01	Dewatered in HIC (metal)
	m3 5.10E+00	Cement Solidified
	m3 4.30E+00	Cement Encapsulated
	Ci 9.84E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 8.97E+01	Compacted
	m3 8.26E+00	Ash/Metal
	Ci 1.11E+01	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: Dresden
Unit No.: 1

Location: 14 Mi SW Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-10
Thermal Power(MWH): 0.00E+00
Commercial Operation: 07/04/60
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 7.00E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 10/15/59

Airborne Effluents

Nuclide Released	Activity (Ci)
FE-55	1.69E-05
CO-60	5.04E-06
SR-89	5.63E-07
SR-90	1.03E-07
CS-137	1.06E-05

Installation: Dresden
Unit No.: 2&3

Location: 14 Mi SW Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 2 Type: BWR
Docket Number: 50-237
Thermal Power(MWH): 1.41E+07
Commercial Operation: 06/09/70
Cooling Water Source: Kankakee River
Unit Number: 3 Type: BWR
Docket Number: 50-249
Thermal Power(MWH): 1.02E+07
Commercial Operation: 11/16/71
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 2.53E+03
Net Electrical Power(MWH): 4.18E+06
Initial Criticality: 01/07/70

Licensee: Commonwealth Edison
Licensed Power(MWT): 2.53E+03
Net Electrical Power(MWH): 3.06E+06
Initial Criticality: 01/31/71

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	5.62E-04
MN-54	1.74E-03
FE-55	1.34E-02
CO-58	4.37E-04
FE-59	2.06E-04
CO-60	5.82E-03
ZN-65	3.18E-05
KR-85	2.52E-03
KR-85M	1.31E-01
KR-87	7.22E-01
KR-88	6.92E-02
SR-89	3.04E-04
SR-90	3.87E-06
RU-103	7.67E-06
I-131	1.03E-03
I-133	6.19E-03
XE-133	3.81E-01
I-135	5.56E-04
XE-135	8.10E+00
XE-135M	3.75E+00
CS-137	1.02E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	6.13E-06
CO-60	7.40E-05
SR-90	2.58E-06
XE-133	7.70E-06
XE-135	1.39E-05
CS-137	6.04E-05
PB-212	3.14E-06
BI-214	2.66E-06

Installation: Dresden
Unit No.: 1&2&3

Location: 14 Mi SW Joliet, IL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	4.93E-03
FE-55	1.79E-03
CO-58	3.94E-06
FE-59	8.15E-05
CO-60	1.07E-02
SR-89	7.81E-06
SR-90	7.39E-06
XE-135	1.64E-05
CS-137	4.38E-03
BY-214	1.60E-05

Total Airborne Tritium Released	5.15E+00 Ci
Total Liquid Tritium Released	4.26E+00 Ci
Volume of Waste Released (Prior to Dilution)	1.02E+07 liters
Volume of Dilution Water Used During Period	1.25E+10 liters

Installation: Dresden
Unit No.: 1&2&3

Location: 14 Mi SW Joliet, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-10
Thermal Power(MWH): 0.00E+00
Commercial Operation: 07/04/60
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 7.00E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 10/15/59

Unit Number: 2 Type: BWR
Docket Number: 50-237
Thermal Power(MWH): 1.41E+07
Commercial Operation: 06/09/70
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 2.53E+03
Net Electrical Power(MWH): 4.18E+06
Initial Criticality: 01/07/70

Unit Number: 3 Type: BWR
Docket Number: 50-249
Thermal Power(MWH): 1.02E+07
Commercial Operation: 11/16/71
Cooling Water Source: Kankakee River

Licensee: Commonwealth Edison
Licensed Power(MWT): 2.53E+03
Net Electrical Power(MWH): 3.06E+06
Initial Criticality: 01/31/71

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
108	Motor freight	CNSI, Barnwell, SC
15	Motor freight	CNSI, Channahon, IL
13	Motor freight	Quadrex, Oak Ridge, TN
17	Motor freight	SEG, Oak Ridge, TN
38	Motor freight	US Ecology, Beatty, NV

Irradiated Fuel Shipments (Disposition)

Number of Shipments	Mode of Transportation	Destination
1	Motor freight	Babcock&Wilcox Lynchburg, VA

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-60	6.66E+01	4.70E+01
CS-137	3.02E+00	4.61E+00
FE-55	1.34E+00	2.86E+01
MN-54	1.42E+01	9.63E+00
NI-63	1.16E+01	9.03E+00
B		
CO-60	2.12E+01	2.12E+01
CS-137	5.14E+00	5.14E+00
FE-55	6.44E+01	6.44E+01
MN-54	6.15E+00	6.15E+00
NI-59	1.32E+00	1.32E+00
NI-63	1.02E+00	1.02E+00
C		
CO-60		5.29E+01
FE-55		4.22E+01
MN-54		2.01E+00

Installation: Dresden
Unit No.: 1&2&3

Location: 14 Mi SW Joliet, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

C		
	NI-63	3.39E+00
D		
	CO-60	2.42E+01
	CS-137	2.84E+00
	FE-55	6.43E+01
	FE-59	1.45E+00
	MN-54	4.40E+00
	NI-63	1.13E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.14E+02	Dewatered or Solidified
	Ci 2.29E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.86E+03	Non-compacted
	Ci 3.98E+01	
C. Irradiated Components, Control Rods, etc.	m3 4.85E+01	Burial Volume
	Ci 3.09E+04	
D. Other (describe)		
Sewage Treatment Plant dirt	m3 3.26E+01	Non-compacted
	Ci 1.27E-01	

Installation: Duane Arnold
Unit No.: 1

Location: 8 Mi NW Cedar Rapids, IA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-331
Thermal Power(MWH): 1.10E+07
Commercial Operation: 02/01/75
Cooling Water Source: Cedar Rapids River

Licensee: Iowa Electric Light & Power
Licensed Power(MWT): 1.66E+03
Net Electrical Power(MWH): 3.43E+06
Initial Criticality: 03/23/74

Airborne Effluents

Nuclide Released	Activity (Ci)
N-13	1.20E+01
CR-51	8.97E-04
MN-54	4.68E-04
CO-58	7.89E-05
FE-59	5.64E-05
CO-60	1.36E-03
KR-85	2.58E-04
KR-85M	1.73E+00
SR-89	2.44E-05
SR-90	2.44E-07
I-131	9.27E-05
I-133	1.09E-04
XE-133	2.48E+00
I-135	2.49E-06
XE-135	1.31E+01
XE-135M	1.81E+01
CS-137	7.67E-07
BA-140	1.69E-06
CE-144	2.42E-06

Total Airborne Tritium Released

7.52E+00 Ci

Installation: Duane Arnold
Unit No.: 1

Location: 8 Mi NW Cedar Rapids, IA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-331
Thermal Power(MWH): 1.10E+07
Commercial Operation: 02/01/75
Cooling Water Source: Cedar Rapids River

Licensee: Iowa Electric Light & Power
Licensed Power(MWT): 1.66E+03
Net Electrical Power(MWH): 3.43E+06
Initial Criticality: 03/23/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
12	Exclusive-Use Vehicle	Barnwell, SC
5	Exclusive-Use Vehicle	Oak Ridge, TN
2	Exclusive-Use Vehicle	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M		1.10E-01
C-14	1.90E-01	1.10E-01
CO-58	5.11E+00	1.59E+00
CO-60	3.43E+01	2.94E+01
CR-51	5.50E-01	1.23E+00
CS-134	4.00E-01	8.00E-02
CS-137	1.23E+00	3.90E-01
FE-55	3.99E+01	5.13E+01
FE-59	5.80E-01	3.10E-01
H-3	1.00E-02	1.00E-02
MN-54	1.68E+01	1.46E+01
NI-63	6.70E-01	5.40E-01
ZN-65	3.00E-01	3.30E-01

B

C-14		1.00E-02
CO-60	3.00E+01	2.98E+01
CS-137		1.10E-01
FE-55	6.70E+01	6.44E+01
MN-54	1.00E+00	3.56E+00
NI-63	2.00E+00	2.11E+00

C

CO-58		1.00E-02
CO-60		3.52E+01
CR-51		1.57E+00
FE-55		5.72E+01
MN-54		3.74E+00
NI-59		1.00E-02
NI-63		2.35E+00

Installation: Duane Arnold
Unit No.: 1

Location: 8 Mi NW Cedar Rapids, IA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.09E+01 Ci 7.91E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.04E+02	Before Volume Reduction to Waste Processor
	m3 1.09E+01	Burial Volume
	m3 7.30E+01	Burial Volume Reduction To Waste Processor
	Ci 1.97E+01	
C. Irradiated Components, Control Rods, etc.	m3 8.30E+01 Ci 4.13E+04	Burial Volume
D. Other (describe)	m3 Ci	

Installation: Joseph M. Farley
Unit No.: 1

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-348
Thermal Power(MWH): 1.86E+07
Commercial Operation: 12/01/77
Cooling Water Source: Chatahoochee River

Licensee: Southern Nuclear
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 5.65E+06
Initial Criticality: 08/09/77

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.65E+01
CO-58	1.54E-09
CO-60	2.01E-04
KR-85	4.05E+00
KR-85M	7.51E-01
I-131	1.79E-04
XE-131M	6.65E-01
I-133	2.88E-06
XE-133	5.95E+02
XE-133M	5.55E-01
XE-135	5.43E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	4.50E-02
MN-54	2.51E-03
FE-55	2.33E-02
CO-57	2.31E-05
CO-58	3.49E-02
FE-59	1.28E-03
CO-60	3.98E-02
ZN-65	1.46E-05
SR-90	8.93E-06
Y-91M	3.97E-06
SR-92	5.54E-04
NB-95	3.40E-03
ZR-95	1.49E-03
NB-97	1.50E-04
MO-99	1.03E-05
TC-99M	4.20E-06
TC-101	3.83E-06
RU-103	1.94E-04
RU-105	5.47E-05
RU-106	4.41E-05
AG-110M	2.13E-02
SB-124	3.43E-05
SB-125	7.10E-04
I-131	1.48E-05
TE-131	7.23E-07
I-132	1.05E-04
TE-132	1.14E-04
XE-133	9.33E-03
XE-133M	8.58E-06
CS-134	9.94E-05

Installation: Joseph M. Farley
Unit No.: 1

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-135	1.30E-05
CS-137	1.58E-03
XE-137	9.62E-05
BA-139	4.04E-06
CE-143	3.36E-06
CE-144	3.18E-04
PR-144	2.60E-04

Total Airborne Tritium Released	2.96E+01 Ci
Total Liquid Tritium Released	8.18E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.89E+08 liters
Volume of Dilution Water Used During Period	5.53E+10 liters

Installation: Joseph M. Farley
Unit No.: 2

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-364
Thermal Power(MWH): 1.76E+07
Commercial Operation: 07/30/81
Cooling Water Source: Chatahoochee River

Licensee: Southern Nuclear
Licensed Power(MWT): 2.65E+03
Net Electrical Power(MWH): 5.41E+06
Initial Criticality: 05/08/81

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.34E+01
CO-58	4.86E-09
CO-60	3.03E-05
I-131	1.63E-05
XE-133	3.39E+00
XE-135	3.73E-03

Liquid Effluents

Nuclide Released	Activity (Ci)
AR-41	1.11E-05
CR-51	3.75E-02
MN-54	2.56E-03
FE-55	3.00E-02
CO-57	4.65E-05
CO-58	4.82E-02
FE-59	2.00E-03
CO-60	3.39E-02
ZN-65	1.74E-06
KR-88	6.03E-06
RB-88	1.05E-05
SR-90	1.00E-05
SR-92	2.58E-04
NB-95	4.29E-03
ZR-95	1.84E-03
NB-97	2.42E-04
TC-99M	1.45E-05
RU-103	8.98E-05
RU-105	7.25E-05
RU-106	2.71E-05
AG-110M	1.30E-02
SB-124	4.99E-06
SB-125	3.62E-04
I-131	3.23E-05
I-132	5.58E-05
TE-132	6.04E-05
XE-133	1.16E-02
CS-134	2.26E-04
XE-135	1.98E-06
CS-137	1.40E-03
BA-139	9.25E-06
CE-144	2.57E-05
PR-144	5.80E-04

Installation: Joseph M. Farley
Unit No.: 2

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	6.47E+01 Ci
Total Liquid Tritium Released	7.90E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.68E+08 liters
Volume of Dilution Water Used During Period	6.06E+10 liters

Installation: Joseph M. Farley
Unit No.: 1&2

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-348
Thermal Power (MWH): 1.86E+07
Commercial Operation: 12/01/77
Cooling Water Source: Chatahoochee River

Licensee: Southern Nuclear
Licensed Power (MWT): 2.65E+03
Net Electrical Power (MWH): 5.65E+06
Initial Criticality: 08/09/77

Unit Number: 2 Type: PWR
Docket Number: 50-364
Thermal Power (MWH): 1.76E+07
Commercial Operation: 07/30/81
Cooling Water Source: Chatahoochee River

Licensee: Southern Nuclear
Licensed Power (MWT): 2.65E+03
Net Electrical Power (MWH): 5.41E+06
Initial Criticality: 05/08/81

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
108	Highway	CNSI, Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
CO-58	1.20E+01	4.52E+01
CO-60	2.25E+01	1.54E+01
CS-134	1.30E+00	
CS-137	1.70E+00	1.70E+00
FE-55	3.38E+01	1.44E+01
MN-54	4.40E+00	3.10E+00
NI-63	2.00E+01	1.56E+01
RU-106		1.20E+00

B

AG-110M		1.20E+00
C-14	1.00E+00	1.30E+00
CO-58	1.19E+01	1.24E+01
CO-60	1.60E+01	1.48E+01
CR-51	4.40E+00	2.30E+00
FE-55	2.41E+01	4.11E+01
H-3	4.00E+00	
MN-54	2.20E+00	2.40E+00
NB-95	1.60E+01	6.10E+00
NI-63	4.70E+00	1.10E+01
PU-241	1.70E+00	1.60E+00
ZR-95	1.09E+01	2.90E+00

Installation: Joseph M. Parley
Unit No.: 1&2

Location: Dothan, AL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.68E+02 Ci 2.14E+03	burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 7.09E+01 Ci 9.80E+00	burial volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Fermi
Unit No.: 2

Location: Laguna Beach, MI

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-341
Thermal Power(MWH): 1.76E+07
Commercial Operation: 01/23/88
Cooling Water Source: Lake Erie

Licensee: Detroit Edison Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 5.41E+06
Initial Criticality: 06/21/85

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	6.47E-04
AR-41	2.94E+00
CR-51	1.66E-03
MN-54	5.06E-05
CO-58	2.47E-05
CO-60	1.14E-04
ZN-65	2.01E-05
SE-75	4.92E-06
BR-82	1.70E-04
KR-85M	1.92E+00
KR-87	2.34E+00
KR-88	8.23E+00
KR-89	2.48E+00
RE-89	7.61E-01
SR-89	2.93E-04
SR-90	5.02E-06
SR-91	9.85E-03
Y-91M	1.43E-02
TC-99M	5.07E-03
BA-131	1.21E-05
I-131	4.17E-03
TE-131M	6.66E-05
I-132	5.00E-02
I-133	2.73E-02
XE-133	4.14E+01
I-134	4.67E-02
I-135	3.36E-02
XE-135	1.88E+01
XE-135M	2.79E+01
XE-137	3.80E+01
CS-138	1.42E+00
XE-138	6.43E+01
BA-139	6.98E-01
CS-139	2.53E-01
BA-140	5.37E-04
LA-140	6.18E-04
HF-181	1.50E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	7.27E-05
MN-54	1.32E-05
CO-60	6.65E-05
XE-133	2.04E-05

Installation: Permi
Unit No.: 2

Location: Laguna Beach, MI

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)	
XE-135	2.25E-05	
Total Airborne Tritium Released		2.88E+01 Ci
Total Liquid Tritium Released		3.52E-01 Ci
Volume of Waste Released (Prior to Dilution)		4.01E+05 liters
Volume of Dilution Water Used During Period		1.96E+10 liters

Installation: James A. Fitzpatrick
Unit No.: 1

Location: 36 Mi N Syracuse, NY

Effluent and Waste Disposal Annual Report for 1992

Type: BWR

Licensee: Power Authority of the State
of NY

Docket Number: 50-333

Licensed Power(MWT): 2.44E+03

Thermal Power(MWH): 0.00E+00

Net Electrical Power(MWH): 0.00E+00

Commercial Operation: 07/28/75

Initial Criticality: 11/17/74

Cooling Water Source: Lake Ontario

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.38E-01
MN-54	1.88E-06
CO-60	1.26E-04
ZN-65	1.74E-04
KR-85M	1.55E+01
KR-87	7.57E+00
KR-88	2.05E+00
SR-90	7.89E-09
RU-103	3.53E-07
SB-125	5.93E-06
I-131	1.04E-04
XE-131M	7.28E+01
I-133	3.51E-06
XE-133	1.03E+01
XE-133M	3.83E+01
CS-134	1.71E-06
XE-135	4.77E+00
XE-135M	1.03E+01
CS-137	1.04E-05
XE-137	2.75E-01
XE-138	8.87E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	1.04E-03
MN-54	4.33E-04
FE-55	3.41E-03
CO-58	2.20E-04
CO-60	5.11E-03
ZN-65	1.04E-03
NB-97	5.82E-05
AG-110M	2.00E-05
SB-125	3.75E-06
TE-132	2.75E-07
CS-134	4.14E-05
CS-137	9.20E-05

Total Airborne Tritium Released	1.44E+00 Ci
Total Liquid Tritium Released	2.85E+00 Ci
Volume of Waste Released (Prior to Dilution)	3.43E+06 liters
Volume of Dilution Water Used During Period	2.03E+11 liters

Installation: James A. Fitzpatrick
Unit No.: 1

Location: 36 Mi N Syracuse, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR

Licensee: Power Authority of the State
of NY

Docket Number: 50-333

Licensed Power(MWT): 2.44E+03

Thermal Power(MWH): 0.00E+00

Net Electrical Power(MWH): 0.00E+00

Commercial Operation: 07/28/75

Initial Criticality: 11/17/74

Cooling Water Source: Lake Ontario

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	Rail	Alaron, Wampum, PA
4	Truck	Alaron, Wampum, PA
23	Truck	Barnwell, SC
37	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CO-58	6.54E-01	
CO-60	1.40E+01	2.77E+01
CR-51	9.24E-01	
CS-134	9.59E-01	9.48E-01
CS-137	1.41E+00	1.83E+00
FE-55	3.68E+01	3.15E+01
FE-59	2.72E-01	
MN-54	7.75E+00	4.27E+00
NI-59		1.19E-01
NI-63	3.18E-01	1.18E+00
ZN-65	3.68E+01	3.24E+01

B

C-14	4.77E-01	4.74E-01
CO-60	1.35E+01	1.34E+01
CS-137	2.38E+00	2.36E+00
FE-55	1.44E+01	1.43E+01
MN-54	5.81E+00	5.83E+00
NI-63	1.61E-01	1.37E-01
ZN-65	6.32E+01	6.35E+01

Type of Waste

Unit

Description

A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.05E+02 Ci 1.66E+03	Direct buried
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.48E+02 Ci 6.94E+00	Offsite for volume reduction
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Port Calhoun
Unit No.: 1

Location: 19 Mi N Omaha, NE

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-285
Thermal Power(MWH): 7.94E+06
Commercial Operation: 06/20/74
Cooling Water Source: Missouri River

Licensee: Omaha Public Power
Licensed Power(MWT): 1.50E+03
Net Electrical Power(MWH): 2.54E+06
Initial Criticality: 08/06/73

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.10E+00
FE-55	2.70E-04
KR-85	9.42E-01
KR-85M	1.74E-02
SR-89	2.31E-07
SR-90	1.40E-06
I-131	2.92E-04
XE-131M	2.03E+00
I-132	2.21E-05
I-133	1.91E-06
XE-133	1.45E+02
XE-133M	1.19E+00
XE-135	1.19E+00
CS-137	2.41E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	1.76E-04
C-14	8.87E-02
CR-51	1.58E-02
MN-54	8.11E-03
FE-55	1.41E-01
CO-57	3.06E-04
CO-58	1.51E-01
FE-59	5.56E-04
CO-60	1.37E-02
ZN-65	5.81E-05
SE-75	6.20E-04
BR-82	2.55E-05
KR-88	3.05E-05
SR-89	1.46E-04
SR-90	2.38E-04
NB-95	8.82E-03
ZR-95	5.70E-03
TC-99M	2.37E-04
RU-103	4.74E-04
RH-106	9.70E-04
RU-106	1.03E-03
AG-110M	9.07E-03
SN-113	3.86E-04
SN-117M	1.67E-05
SB-122	2.00E-04
SB-124	1.01E-02
SB-125	7.42E-02

Installation: Fort Calhoun
Unit No.: 1

Location: 19 Mi N Omaha, NE

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SB-126	8.00E-06
I-131	2.04E-02
XE-131M	7.51E-03
I-132	4.68E-04
TE-132	1.41E-03
I-133	2.25E-04
XE-133	2.49E-01
XE-133M	1.02E-03
CS-134	6.50E-03
XE-135	1.29E-04
CS-136	3.12E-04
CS-137	1.12E-02
BA-140	6.20E-03
LA-140	1.06E-02
CE-141	5.16E-05
CE-144	5.21E-04
PR-144	4.63E-04
HF-181	2.04E-04

Total Airborne Tritium Released	6.09E+00 Ci
Total Liquid Tritium Released	1.06E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.13E+08 liters
Volume of Dilution Water Used During Period	5.45E+11 liters

Installation: Fort Calhoun
 Unit No.: 1

Location: 19 Mi N Omaha, NE

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Type: PWR
 Docket Number: 50-285
 Thermal Power (MWH): 7.94E+06
 Commercial Operation: 06/20/74
 Cooling Water Source: Missouri River

Licensee: Omaha Public Power
 Licensed Power (MWT): 1.50E+03
 Net Electrical Power (MWH): 2.54E+06
 Initial Criticality: 08/06/73

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
13	Closed Sole Use Vehicle	Barnwell, SC
56	Closed Sole Use Vehicle	Beatty, NV

Estimate of Major Nuclide Composition (%)
 (by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CO-58		1.90E+00
CO-60		1.46E+01
CS-134		2.25E+01
CS-137		5.54E+01
MN-54		1.80E+00
SR-89		1.50E+00
B		
CO-58	1.30E+01	1.38E+01
CO-60	1.32E+01	1.39E+01
CS-134	2.29E+01	2.38E+01
CS-137	3.84E+01	3.68E+01
SB-125	3.00E+00	3.10E+00
TC-99	7.90E+00	7.60E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 3.29E+01	Liquid System Filters
	Ci 4.39E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.07E+01	compacted
	m3 1.09E+01	Compacted & Incinerated Vol
	Ci 1.57E+00	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: Fort St. Vrain
Unit No.: 1

Location: 35 Mi N Denver, CO

Effluent and Waste Disposal Annual Report for 1992

Type: HTG
Docket Number: 50-267
Thermal Power(MWH): 0.00E+00
Commercial Operation: 07/01/79
Cooling Water Source: South Platte River

Licensee: Public Service Co of Colorado
Licensed Power(MWT): 8.42E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 01/31/74

Airborne Effluents

Nuclide Released	Activity (Ci)
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Liquid Effluents

Nuclide Released	Activity (Ci)
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CO-60	4.35E-05
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Total Airborne Tritium Released	6.09E-02 Ci
Total Liquid Tritium Released	1.92E-01 Ci
Volume of Waste Released (Prior to Dilution)	2.52E+07 liters
Volume of Dilution Water Used During Period	2.20E+09 liters

Installation: Fort St. Vrain
Unit No.: 1

Location: 35 Mi N Denver, CO

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: HTG
Docket Number: 50-267
Thermal Power(MWH): 0.00E+00
Commercial Operation: 07/01/79
Cooling Water Source: South Platte River

Licensee: Public Service Co of Colorado
Licensed Power(MWT): 8.42E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 01/31/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
70	Public Highway	US Ecology, Beatty, NV

Estimate of Major Nuclide Composition (%)
(by type of waste)

Annual

B

CO-60	7.69E+00
FE-55	8.58E+01
H-3	5.60E+00

C

CO-60	2.16E+01
FE-55	5.41E+01
H-3	5.30E+00
MN-54	1.36E+00
NI-63	1.76E+01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 Ci	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.34E+01 Ci 7.88E+00	
C. Irradiated Components, Control Rods, etc.	m3 3.66E+02 Ci 3.27E+04	
D. Other (describe)	m3 Ci	

Installation: R. E. Ginna
Unit No.: 1

Location: 16 Mi NE Rochester, NY

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-244
Thermal Power(MWH): 1.08E+07
Commercial Operation: 07/01/70
Cooling Water Source: Lake Ontario

Licensee: Rochester Gas&Electric
Licensed Power(MWT): 1.52E+03
Net Electrical Power(MWH): 3.48E+06
Initial Criticality: 11/08/69

Airborne Effluents

Nuclide Released	Activity (Ci)
C-14	2.90E+00
AR-41	3.71E+00
KR-85	6.57E+00
KR-85M	1.82E+00
KR-87	3.52E-01
KR-88	8.32E-01
SR-90	2.68E-12
I-131	1.40E-03
XE-131M	3.95E+00
I-133	3.30E-04
XE-133	4.64E+02
XE-133M	6.15E+00
I-135	7.30E-05
XE-135	4.68E+01
XE-135M	3.18E+00
CS-137	3.48E-06
XE-138	1.15E+00
Unidentified	1.18E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	8.05E-04
CO-58	2.30E-03
FE-59	1.97E-05
CO-60	9.63E-04
SR-89	1.10E-02
SR-90	1.07E-03
ZR/NB-95	1.04E-04
MO-99	3.37E-05
AG-110M	1.82E-05
SN-117M	7.99E-05
SB-122	2.26E-03
SB-124	1.50E-02
SB-125	2.26E-03
I-131	6.91E-02
TE-131M	4.42E-03
I-133	6.68E-02
XE-133	2.12E-01
CS-134	6.94E-02
I-135	2.53E-02
XE-135	1.01E-02
CS-136	2.37E-03
CS-137	6.79E-02
BA/LA-140	9.32E-04

Installation: R. E. Ginna
Unit No.: 1

Location: 16 Mi NE Rochester, NY

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	5.77E+01 Ci
Total Liquid Tritium Released	2.13E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.07E+08 liters
Volume of Dilution Water Used During Period	6.00E+11 liters

Installation: R. E. Ginna
Unit No.: 1

Location: 16 Mi NE Rochester, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-244
Thermal Power(MWH): 1.08E+07
Commercial Operation: 07/01/70
Cooling Water Source: Lake Ontario

Licensee: Rochester Gas&Electric
Licensed Power(MWT): 1.52E+03
Net Electrical Power(MWH): 3.48E+06
Initial Criticality: 11/08/69

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
2	Sole Use Truck	Barnwell, SC
10	Sole Use Truck	Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CE-144	3.00E-01	
CO-58	1.78E+01	6.10E+00
CO-60	1.17E+01	2.83E+01
CS-134	2.32E+01	1.09E+01
CS-137	2.32E+01	1.61E+01
FE-55	3.00E+00	7.40E+00
MN-54	2.50E+00	1.00E+00
NI-63	1.17E+01	2.83E+01
SB-124	4.20E+00	
Sr-125	1.70E+00	8.00E+00
SR-90	2.00E-01	
ZN-65	2.00E-01	
B		
CO-58	4.80E+00	
CO-60	2.08E+01	8.30E+00
CS-134	1.11E+01	1.06E+01
CS-137	2.51E+01	2.30E+01
FE-55	3.62E+01	4.88E+01
MN-54		2.00E+00
NI-63	1.90E+00	5.20E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.10E+01 Ci 5.83E+02	burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.36E+01 Ci 1.33E+00	burial volume after incineration
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Grand Gulf
Unit No.: 1

Location: 25 Mi Vicksburg, MS

Effluent and Waste Disposal Annual Report for 1992

Type: BWR

Docket Number: 50-416

Thermal Power(MWH): 2.65E+07

Commercial Operation: 07/01/85

Cooling Water Source: Wells

Licensee: Entergy Operations

Licensed Power(MWT): 3.83E+03

Net Electrical Power(MWH): 8.17E+06

Initial Criticality: 08/18/82

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	3.14E-04
AR-41	2.96E+00
CR-51	1.05E-03
MN-54	6.34E-05
CO-58	2.05E-05
FE-59	1.26E-07
CO-60	9.41E-05
ZN-65	4.24E-06
AS-76	2.29E-04
KR-85M	3.90E-01
KR-87	3.10E-02
KR-88	1.13E+00
RB-88	2.02E-01
SR-89	2.91E-06
MO-99	2.17E-06
TC-99M	2.68E-03
SB-124	7.48E-08
I-130	8.95E-06
I-131	7.53E-03
I-133	1.60E-03
XE-133	1.62E+02
XE-135	4.08E+01
XE-135M	4.11E+00
CS-137	2.89E-07
XE-137	1.47E-01
XE-138	7.23E-01
BA-140	1.42E-06
LA-140	4.02E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
SC-46	3.43E-05
CR-51	4.39E-02
MN-54	6.32E-03
FE-55	4.65E-02
MN-56	2.22E-06
CO-58	3.97E-04
FE-59	6.07E-04
CO-60	1.12E-02
CU-64	7.55E-04
AS-76	1.06E-03
SR-89	6.15E-03
SR-90	8.87E-04
ZR/NB-95	5.54E-06

Installation: Grand Gulf
Unit No.: 1

Location: 25 Mi Vicksburg, MS

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
TC-99M	5.34E-05
AG-110M	5.32E-07
SB-124	1.10E-05
I-131	1.64E-03
I-133	1.19E-04
XE-133	7.00E-03
CS-134	6.25E-05
XE-135	1.93E-03
CS-137	4.36E-05
CE-144	8.72E-06
W-187	1.65E-05

Total Airborne Tritium Released	8.87E+00 Ci
Total Liquid Tritium Released	2.30E+01 Ci
Volume of Waste Released (Prior to Dilution)	2.77E+07 liters
Volume of Dilution Water Used During Period	2.19E+09 liters

Installation: Grand Gulf
 Unit No.: 1

Location: 25 Mi Vicksburg, MS

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Type: BWR
 Docket Number: 50-416
 Thermal Power(MWH): 2.65E+07
 Commercial Operation: 07/01/85
 Cooling Water Source: Wells

Licensee: Entergy Operations
 Licensed Power(MWT): 3.83E+03
 Net Electrical Power(MWH): 8.17E+06
 Initial Criticality: 08/18/82

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
112	Truck	Barnwell, SC
1	Truck	Beatty, NV
5	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
 (by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
All Others	4.00E+00	2.00E+00
CO-60	1.10E+01	1.10E+01
CR-51	3.00E+00	3.00E+00
FE-55	6.90E+01	6.90E+01
MN-54	1.00E+01	1.10E+01
RU-106	3.00E+00	4.00E+00
B		
CO-60	6.00E+00	6.00E+00
FE-55	8.50E+01	8.50E+01
FE-59	2.00E+00	2.00E+00
MN-54	7.00E+00	7.00E+00
D		
CE-144	6.00E+00	6.00E+00
CO-60	7.00E+00	1.80E+01
FE-55	8.70E+01	7.60E+01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.45E+02 Ci 2.64E+03	Reduced Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.48E+01 Ci 1.69E+00	Reduced Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Haddam Neck
Unit No.: 1

Location: 9.5 Mi SE Middletown, CT

Effluent and Waste Disposal Annual Report for 1992

Type: PWR

Licensee: Connecticut Yankee Atomic
Power

Docket Number: 50-213

Licensed Power(MWT): 1.82E+03

Thermal Power(MWH): 1.24E+07

Net Electrical Power(MWH): 3.88E+06

Commercial Operation: 01/01/68

Initial Criticality: 07/24/67

Cooling Water Source: Connecticut River

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.34E-02
CO-58	1.43E-06
CO-60	5.80E-05
KR-85	6.46E-01
KR-85M	2.97E-02
KR-87	5.42E-02
KR-88	4.53E-02
SR-90	3.95E-07
I-131	5.44E-06
XE-131M	3.67E-02
I-133	1.53E-05
XE-133	1.39E+00
XE-133M	1.34E-02
CS-134	8.55E-04
XE-135	2.22E-01
XE-135M	3.41E-02
CS-137	4.47E-03
XE-137	1.44E-01
XE-138	1.26E-01

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	1.32E-04
FE-55	9.76E-02
CO-58	5.99E-03
CO-60	1.72E-02
SR-89	3.14E-04
SR-90	1.03E-03
AG-110M	2.04E-04
I-133	1.82E-03
XE-133	5.30E-03
CS-134	1.38E-02
XE-135	1.24E-04
CS-137	3.46E-02
BA/LA-140	1.71E-05

Total Airborne Tritium Released	1.88E+02 Ci
Total Liquid Tritium Released	8.63E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.30E+08 liters
Volume of Dilution Water Used During Period	6.84E+11 liters

Installation: Haddam Neck
Unit No.: 1

Location: 9.5 Mi SE Middletown, CT

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR

Licensee: Connecticut Yankee Atomic
Power

Docket Number: 50-213

Licensed Power(MWT): 1.82E+03

Thermal Power(MWH): 1.24E+07

Net Electrical Power(MWH): 3.88E+06

Commercial Operation: 01/01/68

Initial Criticality: 07/24/67

Cooling Water Source: Connecticut River

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
16	Truck	Barnwell, SC
5	Truck	Ouadrex, Oak Ridge, TN
5	Truck	Quadrex, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AM-241	9.11E-03	2.50E-03
C-14	1.14E-01	1.04E-02
CE-144	6.00E-02	
CM-242	5.08E-03	1.46E-03
CM-243	4.34E-03	1.03E-03
CM-244	4.34E-03	1.03E-03
CO-58	7.10E+00	5.06E+00
CO-60	2.09E+01	4.01E+00
CR-51	6.00E-02	
CS-134	1.41E+01	3.02E+01
CS-137	2.07E+01	5.07E+01
FE-55	3.04E+01	7.90E+00
FE-59	9.00E-02	
H-3	9.12E-03	2.60E-02
I-129	2.60E-02	2.73E-02
MN-54	2.07E+00	7.16E-01
NI-63	3.70E+00	6.84E-01
NP-237	9.32E-07	
PU-238	1.40E-02	4.40E-03
PU-239	2.26E-03	7.58E-04
PU-240	2.26E-03	7.58E-04
PU-241	3.10E-01	1.29E-01
PU-242	4.53E-06	
SR-90	2.50E-01	5.04E-01
TC-99	1.30E-02	7.62E-03

B

AM-241	9.94E-02	1.04E-01
C-14	4.71E-02	4.94E-02
CM-242	4.68E-03	4.92E-03
CM-243	4.57E-02	4.80E-02
CM-244	4.57E-02	4.08E-02
CO-58	3.96E+00	4.16E+00
CO-60	2.48E+01	2.60E+01
CS-134	1.82E+01	1.91E+01
CS-137	2.66E+01	2.79E+01

Installation: Haddam Neck
 Unit No.: 1

Location: 9.5 Mi SE Middletown, CT

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

	Jan-June	July-Dec
B		
FE-55	1.33E+01	1.39E+01
H-3	1.02E+01	5.71E+00
I-129	1.08E-03	1.14E-03
MN-54	1.39E+00	1.46E+00
NI-63	7.68E-01	8.07E-01
PU-238	1.38E-01	1.45E-01
PU-239	2.35E-02	2.47E-02
PU-240	2.35E-02	
PU-241	3.94E-01	4.14E-01
SR-90	7.52E-03	7.90E-03
TC-99	1.20E-03	1.26E-03
C		
AM-241		2.60E-10
C-14		4.61E-03
CM-242		2.44E-09
CM-243		1.46E-10
CM-244		1.46E-10
CO-58		2.15E+00
CO-60		4.58E+01
CR-51		2.03E+00
FE-55		4.28E+01
FE-59		1.71E-01
H-3		2.52E-03
MN-54		3.39E+00
NB-94		8.76E-05
NI-59		3.20E-02
NI-63		3.66E+00
NP-237		2.17E-11
PU-238		3.68E-10
PU-239		6.51E-11
PU-240		6.51E-11
PU-241		9.04E-08
TC-99		4.13E-06

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.72E+01	Dewatered
	Ci 1.23E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.04E+02	Burial Volume
	Ci 8.81E+00	after compaction
C. Irradiated Components, Control Rods, etc.	m3 9.41E+00	Dewatered
	Ci 2.35E+02	Burial Volume
D. Other (describe)	m3	
	Ci	

Installation: Harris
Unit No.: 1

Location: 20 Mi SW Raleigh, NC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-400
Thermal Power(MWH): 1.74E+07
Commercial Operation: 05/02/87
Cooling Water Source: Makeup Reservoir

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.77E+03
Net Electrical Power(MWH): 5.41E+06
Initial Criticality: 01/03/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	6.05E-01
CR-51	1.14E-05
CO-58	2.42E-05
CO-60	1.19E-04
KR-85	1.07E+01
KR-85M	2.74E+01
KR-87	9.22E+00
KR-88	1.87E+01
CD-109	2.19E-05
I-131	6.26E-04
XE-131M	2.33E+00
I-133	7.85E-05
XE-133	1.21E+03
XE-133M	1.83E+01
CS-134	4.97E-06
XE-135	5.61E+01
XE-135M	1.49E-01
CS-137	7.50E-06
XE-138	9.25E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	2.64E-05
CR-51	4.39E-03
MN-54	1.52E-03
FE-55	6.06E-02
CO-57	3.68E-04
CO-58	1.57E-01
FE-59	1.76E-04
CO-60	3.37E-02
SR-92	9.53E-06
NB-95	6.07E-04
ZR-95	3.18E-04
MO-99	4.28E-05
TC-99M	3.74E-05
RU-103	1.94E-05
CD-109	3.39E-04
AG-110M	7.55E-05
SB-122	1.01E-04
SB-124	8.51E-05
SB-125	3.89E-02
I-131	1.31E-02
XE-131M	4.74E-04
I-132	3.39E-07

Installation: Harris
Unit No.: 1

Location: 20 Mi SW Raleigh, NC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
TE-132	3.16E-05
I-133	3.41E-04
XE-133	4.90E-02
XE-133M	1.50E-03
CS-134	3.33E-04
I-135	1.06E-06
XE-135	3.01E-04
CS-137	9.56E-04
CS-138	3.21E-08
BA-140	4.00E-05
LA-140	1.22E-04
CE-143	6.96E-06
CE-144	3.71E-06
PR-144	3.23E-04
HF-181	2.86E-05

Total Airborne Tritium Released	4.37E-01 Ci
Total Liquid Tritium Released	9.02E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.13E+08 liters
Volume of Dilution Water Used During Period	2.62E+10 liters

Installation: Harris
Unit No.: 1

Location: 20 Mi SW Raleigh, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-400
Thermal Power (MWH): 1.74E+07
Commercial Operation: 05/02/87
Cooling Water Source: Makeup Reservoir

Licensee: Carolina Power & Light
Licensed Power (MWT): 2.77E+03
Net Electrical Power (MWH): 5.41E+06
Initial Criticality: 01/03/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
9	Truck	Barnwell, SC
91	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AM-241	4.09E-05	9.15E-06
C-14	1.40E-02	4.28E-01
CM-243	2.32E-04	
CO-58	1.62E+00	4.67E+00
CO-60	6.03E+01	1.89E+01
CS-134		4.85E-01
CS-137	2.84E-01	1.12E+00
FE-55	2.67E+01	4.14E+01
H-3	5.60E-03	1.56E-01
MN-54	8.46E-01	4.98E+00
NB-95		8.80E-02
NI-63	1.02E+01	2.77E+01
PU-238	3.53E-05	
PU-239	3.12E-05	
SR-90	1.29E-03	3.70E-03
ZR-95		3.94E-02

E

C-14	5.28E-02	1.86E-01
CE-144	1.84E-04	8.79E-01
CO-58	3.31E+00	9.41E+00
CO-60	1.49E+01	2.03E+01
CS-134	6.90E-05	3.12E-01
CS-137	1.32E-04	1.38E+00
FE-55	7.30E+01	6.18E+01
H-3	2.27E-01	5.38E-01
MN-54	1.83E+00	1.62E+00
NB-95	1.13E+00	1.52E-01
NI-59	2.72E+00	4.42E-01
NI-63	2.88E+00	2.80E+00
ZR-95		1.29E-01

Installation: Harris
Unit No.: 1

Location: 20 Mi SW Raleigh, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 3.47E+01 Ci 2.87E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.65E+01 Ci 2.82E+00	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Edwin I. Hatch
Unit No.: 1&2

Location: 11 Mi N Baxley, GA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-321
Thermal Power (MWH): 2.02E+07
Commercial Operation: 12/31/75
Cooling Water Source: Altamaha River
Unit Number: 2 Type: BWR
Docket Number: 50-366
Thermal Power (MWH): 1.53E+07
Commercial Operation: 09/05/79
Cooling Water Source: Altamaha River

Licensee: Georgia Power
Licensed Power (MWT): 2.44E+03
Net Electrical Power (MWH): 6.16E+06
Initial Criticality: 09/12/74

Licensee: Georgia Power
Licensed Power (MWT): 2.44E+03
Net Electrical Power (MWH): 4.69E+06
Initial Criticality: 07/04/78

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	1.81E-04
MN-54	1.44E-05
CO-58	5.50E-05
CO-60	8.17E-05
ZN-65	1.84E-03
KR-85M	8.14E+00
KR-87	4.38E+01
KR-88	4.20E+00
SR-89	4.44E-04
SR-90	1.31E-06
I-131	3.71E-02
XE-131M	1.28E-05
I-133	4.28E-02
XE-133	1.28E+02
I-135	4.97E-02
XE-135	2.57E+02
XE-135M	1.61E+02
CS-137	7.30E-06
XE-138	4.46E+02
BA-140	8.08E-04
CE-141	4.34E-06
Unidentified	6.41E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	3.85E-02
AR-41	1.21E-05
CR-51	1.95E-02
MN-54	5.36E-03
FE-55	1.49E-03
MN-56	1.42E-04
CO-58	2.99E-03
FE-59	7.89E-05
CO-60	4.23E-02
ZN-65	7.51E-02
ZN-69	5.07E-04
ZN-69M	1.25E-05
AS-76	1.48E-02
KR-85	8.47E-04

Installation: Edwin I. Hatch
Unit No.: 1&2

Location: 11 Mi N Baxley, GA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
KR-87	1.76E-05
KR-88	5.11E-06
RB-88	3.15E-04
SR-89	2.72E-03
SR-90	1.05E-03
SR-91	4.22E-03
Y-91M	4.05E-03
SR-92	9.95E-04
NB-95	6.31E-05
ZR-95	1.91E-05
NB-97	6.04E-03
MO-99	2.73E-03
TC-99M	2.47E-02
RU-103	2.48E-05
SB-124	3.49E-05
SB-125	1.19E-04
I-131	1.88E-02
TE-131	2.17E-05
XE-131M	1.70E-03
I-132	1.96E-03
I-133	2.10E-02
XE-133	2.78E-02
XE-133M	3.49E-04
CS-134	1.41E-02
I-134	1.03E-04
I-135	1.35E-02
XE-135	1.14E-01
XE-135M	2.59E-02
CS-136	5.23E-04
CS-137	5.89E-02
CS-138	1.59E-03
BA-139	1.21E-04
BA-140	1.57E-03
LA-140	1.99E-03
CE-141	3.89E-05
CE-144	1.06E-04
NP-239	3.72E-01

Total Airborne Tritium Released	4.99E+01 Ci
Total Liquid Tritium Released	4.46E+01 Ci
Volume of Waste Released (Prior to Dilution)	3.00E+07 liters
Volume of Dilution Water Used During Period	6.66E+09 liters

Installation: Edwin I. Hatch
Unit No.: 1&2

Location: 11 Mi N Baxley, GA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-321
Thermal Power(MWH): 2.02E+07
Commercial Operation: 12/31/75
Cooling Water Source: Altamaha River

Licensee: Georgia Power
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 6.16E+06
Initial Criticality: 09/12/74

Unit Number: 2 Type: BWR
Docket Number: 50-366
Thermal Power(MWH): 1.53E+07
Commercial Operation: 09/05/79
Cooling Water Source: Altamaha River

Licensee: Georgia Power
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 4.69E+06
Initial Criticality: 07/04/78

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
76	Tractor Trailer	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-60	1.83E+01	1.19E+01
CS-137	1.36E+00	2.66E+00
FE-55	1.24E+01	2.98E+00
Other	1.47E+01	1.95E+01
ZN-65	5.33E+01	6.30E+01
B		
CO-60	3.57E+01	3.34E+01
CS-137	8.79E+00	3.34E+00
FE-55	1.03E+01	4.08E+01
Other	1.19E+01	8.76E+00
ZN-65	3.33E+01	1.37E+01
C		
CO-60		4.96E+01
FE-55		4.53E+01
Other		5.10E+00
D		
CO-60	4.77E+01	
FE-55	4.77E+01	
Other	2.53E+00	
ZN-65	1.99E+00	

Installation: Edwin I. Hatch
Unit No.: 1&2

Location: 11 Mi N Baxley, GA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.36E+02 Ci 1.53E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.63E+02 Ci 1.12E+01	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 4.88E+00 Ci 3.63E+04	Burial Volume
D. Other (describe) Control Rod Drive Filters	m3 1.08E+00 Ci 2.11E+01	Burial Volume

Installation: Hope Creek
Unit No.: 1

Location: 18 Mi SE Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992

Type: BWR

Licensee: Public Serv Elec & Gas Co of
NJ

Docket Number: 50-354

Licensed Power(MWT): 3.29E+03

Thermal Power(MWH): 2.22E+07

Net Electrical Power(MWH): 7.05E+06

Commercial Operation: 12/20/86

Initial Criticality: 06/28/86

Cooling Water Source: Delaware River

Airborne Effluents

Nuclide Released	Activity (Ci)
MN-54	1.27E-03
CO-60	3.50E-04
ZN-65	1.05E-03
KR-83M	1.39E+00
KR-85M	1.39E+00
KR-87	5.58E+00
KR-88	5.58E+00
KR-89	3.76E+01
SR-89	3.38E-10
XE-133	2.75E+00
XE-135	6.98E+00
XE-135M	8.37E+00
XE-137	4.32E+01
XE-138	2.63E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.11E-03
CR-51	9.98E-02
MN-54	7.19E-02
FE-55	2.52E-02
CO-58	2.24E-03
FE-59	1.76E-02
CO-60	1.21E-02
ZN-65	6.63E-02
ZN-69M	9.24E-06
AS-76	5.73E-05
SR-92	2.57E-04
NB-95	1.64E-04
ZR-97	2.23E-05
AG-110M	9.83E-03
XE-133	1.54E-03
XE-135	1.23E-02
CS-137	1.56E-05
LA-140	8.28E-06

Total Airborne Tritium Released	2.26E+01 Ci
Total Liquid Tritium Released	1.25E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.22E+07 liters
Volume of Dilution Water Used During Period	5.61E+10 liters

Installation: Hope Creek
Unit No.: 1

Location: 18 Mi SE Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR

Licensee: Public Serv Elec & Gas Co of
NJ

Docket Number: 50-354

Licensed Power(MWT): 3.29E+03

Thermal Power(MWH): 2.22E+07

Net Electrical Power(MWH): 7.05E+06

Commercial Operation: 12/20/86

Initial Criticality: 06/28/86

Cooling Water Source: Delaware River

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
43	Truck	Barnwell, SC
16	Truck	Oak Ridge, TN
1	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CE-144		2.40E+00
CO-60	2.40E+00	3.50E+00
CR-51	1.37E+01	
FE-55	3.53E+01	4.40E+01
MN-54	4.00E+00	8.80E+00
ZN-65	4.31E+01	4.08E+01

B

CO-60	2.40E+00	2.40E+00
CR-51	1.36E+01	1.36E+01
FE-55	3.52E+01	3.52E+01
MN-54	4.00E+00	4.00E+00
ZN-65	4.30E+01	4.30E+01

C

CO-60	3.93E+01	
FE-55	5.62E+01	
MN-54	2.20E+00	
NI-63	1.90E+00	

D

CO-60	8.50E+00	5.00E+00
FE-55	1.85E+01	7.37E+01
MN-54	1.04E+01	4.90E+00
ZN-65	5.25E+01	1.61E+01

Installation: Hope Creek
Unit No.: 1

Location: 18 Mi SE Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.22E+02	Compacted, burial volume
	Ci 1.89E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.13E+01	Compacted, burial volume
	Ci 6.04E+00	
C. Irradiated Components, Control Rods, etc.	m3 3.25E+00	Burial volume
	Ci 1.98E+04	
D. Other (describe)		
Oil, Freon	m3 1.79E+01	Incinerated
	Ci 2.68E-05	
Oil, Sewage Sludge	m3 2.89E+01	Incinerated
	Ci 2.04E-03	

Installation: Humboldt Bay
Unit No.: 3

Location: 4 Mi SW Eureka, CA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-133
Thermal Power(MWH): 0.00E+00
Commercial Operation: 08/01/63
Cooling Water Source: Humboldt Bay

Licensee: Pacific Gas & Electric
Licensed Power(MWT): 0.00E+00
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 02/16/63

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-60	1.40E-05
SR-90	6.67E-07
Y-90	6.67E-07
CS-137	1.23E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
CO-60	7.21E-05
SR-90	2.95E-04
Y-90	2.95E-04
CS-134	1.53E-05
CS-137	9.13E-03

Total Liquid Tritium Released	1.62E-03 Ci
Volume of Waste Released (Prior to Dilution)	6.85E+05 liters
Volume of Dilution Water Used During Period	6.64E+10 liters

Installation: Humboldt Bay
Unit No.: 3

Location: 4 Mi SW Eureka, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-133
Thermal Power(MWH): 0.00E+00
Commercial Operation: 08/01/63
Cooling Water Source: Humboldt Bay

Licensee: Pacific Gas & Electric
Licensed Power(MWT): 0.00E+00
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 02/16/63

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
2	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
B		
AM-241		3.05E-01
CO-60	5.33E-01	9.33E+00
CS-134	1.54E-01	
CS-137	9.66E+01	3.58E+01
EU-154		1.20E-02
FE-55	4.28E-01	3.60E+01
H-3	1.15E-01	
NI-63	1.23E-01	6.79E+00
FU-241	1.76E-01	3.24E+00
SR-90	8.99E-01	3.62E+00
TC-99		5.79E-01
Y-90	8.99E-01	3.62E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 Ci	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.86E+01 Ci 6.43E-02	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Indian Point
Unit No.: 1&2

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-3
Thermal Power(MWH): 0.00E+00
Commercial Operation: 10/ /62
Cooling Water Source: Hudson River
Unit Number: 2 Type: PWR
Docket Number: 50-247
Thermal Power(MWH): 2.57E+07
Commercial Operation: 08/01/74
Cooling Water Source: Hudson River

Licensee: Consolidated Edison
Licensed Power(MWT): 6.15E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/02/62

Licensee: Consolidated Edison
Licensed Power(MWT): 3.07E+03
Net Electrical Power(MWH): 7.88E+06
Initial Criticality: 05/22/73

Airborne Effluents

Nuclide Released	Activity (Ci)
C-14	8.00E+00
AR-41	1.21E+00
CR-51	6.45E-07
CO-58	4.42E-06
CO-60	7.42E-05
NI-63	5.49E-05
KR-85	5.89E-01
KR-85M	4.04E+00
KR-87	8.58E-01
KR-88	2.50E+00
SR-89	3.11E-06
SR-90	6.85E-08
RU-103	8.17E-08
SB-122	7.15E-07
TE-123M	3.82E-06
I-131	1.30E-02
XE-131M	2.73E+01
I-133	1.85E-02
XE-133	5.09E+03
XE-133M	3.66E+01
CS-134	2.38E-07
I-135	1.41E-02
XE-135	7.93E+01
XE-135M	2.58E+00
CS-137	1.29E-04
XE-137	4.00E-07
XE-138	1.10E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.55E-03
MN-54	9.35E-07
FE-55	7.05E-03

Installation: Indian Point
Unit No.: 1&2

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CO-58	9.24E-06
CO-60	4.11E-03
NI-63	1.34E-02
SR-89	2.67E-05
SR-90	2.05E-05
RU-106	3.96E-02
AG-110M	2.57E-04
TE-123M	1.22E-02
SB-124	4.26E-02
SB-125	9.23E-03
I-131	2.43E-01
XE-131M	1.08E-03
I-132	1.36E-01
I-133	3.17E-01
XE-133	5.44E-01
XE-133M	1.22E-04
CS-134	1.36E-01
I-134	1.24E-01
I-135	2.41E-01
XE-135	2.42E+00
XE-135M	5.13E+00
CS-137	1.69E-01
CS-138	3.58E-02

Total Airborne Tritium Released	2.20E-01 Ci
Total Liquid Tritium Released	6.95E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.41E+08 liters
Volume of Dilution Water Used During Period	1.14E+12 liters

Installation: Indian Point
Unit No.: 1&2

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-3
Thermal Power(MWH): 0.00E+00
Commercial Operation: 10/ /62
Cooling Water Source: Hudson River

Licensee: Consolidated Edison
Licensed Power(MWT): 6.15E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/02/62

Unit Number: 2 Type: PWR
Docket Number: 50-247
Thermal Power(MWH): 2.57E+07
Commercial Operation: 08/01/74
Cooling Water Source: Hudson River

Licensee: Consolidated Edison
Licensed Power(MWT): 3.07E+03
Net Electrical Power(MWH): 7.88E+06
Initial Criticality: 05/22/73

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
22	Truck	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
C-14	8.00E-01	
CE-144		4.62E+00
CO-58		3.53E+00
CO-60	5.87E+01	2.35E+01
CS-134		5.35E+00
CS-137	3.00E-01	1.94E+01
FE-55	2.12E+01	7.68E+00
H-3		2.07E+00
NB-94	2.30E-01	
NB-95	2.30E-01	
NI-63	1.85E+01	1.57E+01
PU-241	6.00E-02	
SB-124		1.32E+00
SB-125		1.41E+00
ZR-95		1.34E+01
B		
AG-108M	2.42E+00	2.42E+00
C-14	5.20E-01	5.20E-01
CO-58	1.56E+00	1.56E+00
CO-60	1.46E+01	1.46E+01
CS-137	1.86E+00	1.86E+00
FE-55	5.65E+01	5.65E+01
NI-63	1.79E+01	1.79E+01
SB-124	1.53E+00	1.53E+00

Installation: Indian Point
Unit No.: 1&2

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

B

SR-89	1.55E+00	1.55E+00
SR-90	1.55E+00	1.55E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.69E+01 Ci 5.94E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.17E+02 Ci 1.32E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Indian Point
Unit No.: 3

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-286
Thermal Power(MWH): 1.47E+07
Commercial Operation: 08/30/76
Cooling Water Source: Hudson River

Licensee: Power Authority of the State of NY
Licensed Power(MWT): 3.02E+03
Net Electrical Power(MWH): 4.76E+06
Initial Criticality: 04/06/76

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.24E-01
CO-58	1.24E-05
KR-85	1.61E-01
KR-85M	6.76E-04
I-131	6.35E-05
XE-131M	6.37E-02
XE-133	2.07E+01
XE-133M	2.18E-02
XE-135	3.70E-01
CS-137	6.69E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
AR-41	1.79E-05
CR-51	4.28E-03
MN-54	3.36E-03
FE-55	6.50E-02
CO-57	8.59E-05
CO-58	5.16E-02
FE-59	6.42E-04
CO-60	3.96E-02
NI-63	1.10E-02
ZN-65	1.14E-04
SR-90	2.14E-06
NB-95	9.26E-04
ZR-95	3.23E-04
TC-99M	5.74E-05
AG-110M	1.03E-02
SN-113	6.09E-06
SB-124	2.44E-03
SB-125	2.08E-02
I-131	3.15E-04
XE-131M	1.23E-02
I-133	4.49E-05
XE-133	6.24E-01
XE-133M	4.60E-03
CS-134	9.41E-05
XE-135	2.73E-03
CS-137	1.37E-03
CS-138	1.71E-04
LA-140	1.36E-05
CE-144	8.31E-04

Installation: Indian Point
Unit No.: 3

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	5.86E+00 Ci
Total Liquid Tritium Released	4.50E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.33E+06 liters
Volume of Dilution Water Used During Period	1.14E+12 liters

Installation: Indian Point
Unit No.: 3

Location: 3 Mi SW Peekskill, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-286
Thermal Power (MWH): 1.47E+07
Commercial Operation: 08/30/76
Cooling Water Source: Hudson River

Licensee: Power Authority of the State of NY
Licensed Power (MWT): 3.02E+03
Net Electrical Power (MWH): 4.76E+05
Initial Criticality: 04/06/76

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	Truck	Alaron, Wampum, PA Vol.red
4	Truck/Cask	Barnwell, SC
5	Truck	Quadrex, Oak Ridge, TN Vol.red.
5	Truck	SEG, Oak Ridge, TN Vol. red.

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A		
CO-58	1.40E+01	
CO-60	1.10E+01	
CR-51	1.50E+00	
CS-134	2.00E+01	
CS-137	1.80E+01	
FE-55	2.60E+01	
MN-54	1.40E+00	
NI-63	5.90E+00	
D		
CO-58	5.00E+00	
CO-60	2.80E+01	
CS-137	2.00E+00	
FE-55	5.90E+01	
NI-63	5.00E+00	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.72E+01 Ci 2.23E+02	non-compacted
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 Ci	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)		
Dry comp. contaminated equip.-vol. red.	m3 1.64E+02 Ci 7.36E-01	

Installation: Kewaunee
Unit No.: 1

Location: 27 Mi ESE Green Bay, WI

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-305
Thermal Power(MWH): 1.24E+07
Commercial Operation: 06/16/74
Cooling Water Source: Lake Michigan

Licensee: Wisconsin Public Service
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.94E+06
Initial Criticality: 03/07/74

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	7.70E-01
CO-58	1.28E-06
CO-60	3.96E-07
KR-85	3.34E-03
I-131	1.19E-07
XE-131M	7.42E-05
I-133	1.75E-07
XE-133	7.94E-01
XE-133M	7.90E-04
XE-135	3.45E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	6.02E-03
MN-54	4.85E-04
FE-55	9.95E-03
CO-57	6.94E-05
CO-58	2.96E-02
FE-59	7.08E-04
CO-60	9.52E-03
SR-90	1.71E-05
NB-95	2.15E-03
ZR-95	1.40E-03
AG-110M	2.17E-03
SN-113	4.45E-04
SN-117M	8.89E-05
SB-124	5.70E-04
SB-125	1.02E-03
XE-133	4.44E-05
XE-135	5.62E-06

Total Airborne Tritium Released	1.22E+01 Ci
Total Liquid Tritium Released	2.90E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.26E+08 liters
Volume of Dilution Water Used During Period	6.10E+11 liters

Installation: Kewaunee
Unit No.: 1

Location: 27 Mi ESE Green Bay, WI

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-305
Thermal Power(MWH): 1.24E+07
Commercial Operation: 06/16/74
Cooling Water Source: Lake Michigan

Licensee: Wisconsin Public Service
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.94E+06
Initial Criticality: 03/07/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	CNSI 14-170-2	Barnwell, SC
3	CNSI 14-190H	Barnwell, SC
2	CNSI Van	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M	1.59E-01	
C-14	1.35E+00	
CM-242	3.44E-05	
CO-57	1.11E-01	
CO-58	1.95E-01	
CO-60	3.25E+01	
CS-134	8.15E-01	
CS-137	1.47E+00	
FE-55	2.75E+01	
H-3	3.82E-06	
MN-54	2.04E+00	
NB-95	8.54E-04	
NI-63	3.25E+01	
SB-125	1.21E+00	
SN-113	2.88E-02	
SR-89	5.65E-03	
SR-90	5.74E-03	
TC-99	1.80E-03	
TRU	1.17E-05	
ZN-65	2.73E-02	
ZR-95	4.02E-04	

B

AG-110M		2.06E+00
C-14		1.16E+00
CO-57		1.74E-01
CO-58		4.28E+00
CO-60		2.46E+01
CR-51		2.19E-02
FE-55		6.19E+01
FE-59		8.46E-03
MN-54		1.03E+00
NB-95		1.39E-01
NI-63		3.43E+00
SB-124		1.30E-02
SB-125		7.98E-01
SN-113		1.11E-01

Installation: Kewaunee
 Unit No.: 1

Location: 27 Mi ESE Green Bay, WI

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

B			
	TRU		3.94E-02
	ZR-95		2.55E-01
D			
	AG-110M	3.45E-02	
	C-14	2.99E+00	
	CO-57	9.25E-02	
	CO-58	2.98E-01	
	CO-60	1.91E+01	
	FE-55	5.87E+01	
	MN-54	8.60E-01	
	NB-95	2.31E-02	
	NI-63	1.52E+01	
	SB-125	2.35E+00	
	SN-113	5.53E-02	
	TRU	3.45E-03	
	ZN-65	9.93E-02	
	ZR-95	1.06E-02	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 8.95E+00 Ci 1.63E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.59E+01 m3 5.55E+00 Ci 3.99E-01	Compacted Non-compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Dewatered filter	m3 8.95E+00 Ci 2.93E+01	Burial Volume

Installation: LaCrosse
Unit No.: 1

Location: 19 Mi S LaCrosse, WI

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-409
Thermal Power(MWH): 0.00E+00
Commercial Operation: 11/01/69
Cooling Water Source: Mississippi River

Licensee: Dairyland Power
Licensed Power(MWT): 0.00E+00
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 07/11/67

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-60	1.45E-06
ZN-65	3.60E-08
SR-90	3.40E-05
CS-134	1.26E-07
CS-137	1.26E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	8.10E-05
FE-55	1.06E-02
CO-60	2.85E-02
SR-90	1.80E-04
CS-137	1.30E-02

Total Airborne Tritium Released	1.94E-01 Ci
Total Liquid Tritium Released	1.83E-01 Ci
Volume of Waste Released (Prior to Dilution)	2.69E+05 liters
Volume of Dilution Water Used During Period	4.02E+09 liters

Installation: LaCrosse
Unit No.: 1

Location: 19 Mi S LaCrosse, WI

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR	Licensee: Dairyland Power
Docket Number: 50-409	Licensed Power(MWT): 0.00E+00
Thermal Power(MWH): 0.00E+00	Net Electrical Power(MWH): 0.00E+00
Commercial Operation: 11/01/69	Initial Criticality: 07/11/67
Cooling Water Source: Mississippi River	

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
11	Sole Use	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Annual
B	
CO-60	4.25E+01
CS-137	2.22E+00
FE-55	4.70E+01
FE-59	6.80E-01
MN-54	1.83E+00
NI-63	5.38E+00
PU-241	4.50E-01
SR-90	3.21E-03

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 Ci	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.72E+00 m3 3.73E+01 Ci 4.36E-01	Buried Shipped
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: LaSalle
Unit No.: 1

Location: 11 Mi SE Ottawa, IL

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-373
Thermal Power(MWH): 1.99E+07
Commercial Operation: 01/01/84
Cooling Water Source: Reservoir

Licensee: Commonwealth Edison Company
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 6.45E+06
Initial Criticality: 06/21/82

Liquid Effluents

Nuclide Released	Activity (Ci)	
MN-54	1.78E-05	
FE-55	2.70E-06	
CO-60	2.12E-04	
SR-89	1.10E-07	
SR-90	3.00E-08	
CS-134	1.40E-05	
CS-137	3.77E-05	
Total Liquid Tritium Released		2.96E-05 Ci
Volume of Waste Released (Prior to Dilution)		2.05E+03 liters
Volume of Dilution Water Used During Period		1.94E+06 liters

Installation: LaSalle
Unit No.: 1&2

Location: 11 Mi SE Ottawa, IL

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-373
Thermal Power(MWH): 1.99E+07
Commercial Operation: 01/01/84
Cooling Water Source: Reservoir
Unit Number: 2 Type: BWR
Docket Number: 50-374
Thermal Power(MWH): 1.78E+07
Commercial Operation: 10/19/84
Cooling Water Source: Reservoir

Licensee: Commonwealth Edison Company
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 6.45E+06
Initial Criticality: 06/21/82

Licensee: Commonwealth Edison Company
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 5.78E+06
Initial Criticality: 03/10/84

Airborne Effluents

Nuclide Released	Activity (Ci)
MN-54	6.02E-05
CO-60	1.23E-03
KR-85	1.32E-03
KR-85M	3.19E+01
KR-87	3.45E+01
KR-88	4.72E+01
I-131	1.41E-03
I-133	1.12E-01
XE-133	5.99E-03
XE-135	4.31E+00

Total Airborne Tritium Released

3.68E+01 Ci

Installation: LaSalle
Unit No.: 1&2

Location: 11 Mi SE Ottawa, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-373
Thermal Power(MWH): 1.99E+07
Commercial Operation: 01/01/84
Cooling Water Source: Reservoir

Licensee: Commonwealth Edison Company
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 6.45E+06
Initial Criticality: 06/21/82

Unit Number: 2 Type: BWR
Docket Number: 50-374
Thermal Power(MWH): 1.78E+07
Commercial Operation: 10/19/84
Cooling Water Source: Reservoir

Licensee: Commonwealth Edison Company
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 5.78E+06
Initial Criticality: 03/10/84

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
28	Truck	Barnwell, SC
6	Truck	Beatty, NV
34	Truck	Oak Ridge, TN
31	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CO-60	1.00E+01	1.30E+01
FE-55	8.60E+01	7.80E+01
MN-54	2.00E+00	4.00E+00
NI-63		3.00E+00
B		
CO-60	2.60E+01	2.70E+01
CR-51	7.00E+00	
FE-55	2.20E+01	2.20E+01
FE-59	1.30E+01	1.30E+01
MN-54	2.70E+01	2.80E+01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.40E+02 Ci 5.47E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.32E+03 Ci 1.62E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Limerick
Unit No.: 1

Location: 21 Mi NW Philadelphia, PA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-352
Thermal Power(MWH): 1.97E+07
Commercial Operation: 02/01/86
Cooling Water Source: Schuylkill River

Licensee: PECO Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 6.23E+06
Initial Criticality: 12/22/84

Airborne Effluents (South Stack)

Nuclide Released	Activity (Ci)
AR-41	2.75E-05
CR-51	2.41E-04
CO-60	1.61E-05
I-131	2.25E-04
I-133	4.90E-06
XE-133	1.09E+00
XE-135	7.32E-01
CS-137	5.71E-06
CE-144	5.45E-05

Installation: Limerick
Unit No.: 2

Location: 21 Mi NW Philadelphia, PA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-353
Thermal Power(MWH): 2.67E+07
Commercial Operation:
Cooling Water Source: Schuylkill River

Licensee: PECO Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 8.49E+06
Initial Criticality: 08/12/89

Airborne Effluents (South Stack)

Nuclide Released	Activity (Ci)
AR-41	1.29E-01
MN-54	6.53E-06
CO-60	2.71E-05
ZN-65	4.49E-08
I-131	1.29E-04
I-133	7.81E-04
XE-133	6.96E+01
XE-135	5.41E+01
XE-135M	1.54E+01

Installation: Limerick
Unit No.: 1&2

Location: 21 Mi NW Phildelphia, PA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-352
Thermal Power(MWH): 1.97E+07
Commercial Operation: 02/01/86
Cooling Water Source: Schuylkill River
Unit Number: 2 Type: BWR
Docket Number: 50-353
Thermal Power(MWH): 2.67E+07
Commercial Operation:
Cooling Water Source: Schuylkill River

Licensee: PECO Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 6.23E+06
Initial Criticality: 12/22/84

Licensee: PECO Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 8.49E+06
Initial Criticality: 08/12/89

Airborne Effluents (North Stack)

Nuclide Released	Activity (Ci)
AR-41	6.48E-01
CR-51	1.02E-05
MN-54	5.78E-06
CO-58	7.23E-06
CO-60	9.52E-06
ZN-65	1.08E-05
KR-85	2.25E+00
KR-85M	1.65E+00
KR-88	1.43E-01
I-131	7.27E-04
I-133	4.84E-03
XE-133	6.48E+02
XE-133M	1.62E-03
XE-135	6.38E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	4.38E-03
MN-54	4.23E-03
FE-55	5.54E-03
CO-58	1.06E-03
FE-59	3.17E-05
CO-60	6.93E-03
ZN-65	4.60E-03
SR-89	1.26E-03
SR-90	6.07E-05
XE-133	1.61E-02
CS-134	4.61E-04
XE-135	3.04E-03
CS-137	9.47E-04

Total Liquid Tritium Released	1.05E+01 Ci
Volume of Waste Released (Prior to Dilution)	1.17E+07 liters
Volume of Dilution Water Used During Period	3.99E+08 liters

Installation: Limerick
Unit No.: 1&2

Location: 21 Mi NW Phildelphia, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-352
Thermal Power(MWH): 1.97E+07
Commercial Operation: 02/01/86
Cooling Water Source: Schuylkill River

Licensee: PECC Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 6.23E+06
Initial Criticality: 12/22/84

Unit Number: 2 Type: BWR
Docket Number: 50-353
Thermal Power(MWH): 2.67E+07
Commercial Operation:
Cooling Water Source: Schuylkill River

Licensee: PECO Energy Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 8.49E+06
Initial Criticality: 08/12/89

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
51	Truck	Barnwell, SC
47	Truck	Beatty, NV
13	Truck	Quadrex, Barnwell, SC
2	Truck	Quadrex, Beatty, NV
1	Truck	SEG, Barnwell, SC
169	Truck	SEG, Beatty, NV

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A	Jan-June	Jul-Dec
AM-241		2.76E-07
BA/LA-140	1.00E-01	4.03E-02
C-14	2.30E-01	1.18E-01
CE-141		9.05E-06
CE-144		2.91E-01
CM-242		3.99E-03
CM-243		1.37E-06
CO-58	4.02E+00	6.50E+00
CO-60	1.88E+01	1.76E+01
CR-51	6.17E+00	2.49E+01
CS-134	3.91E+00	2.13E+00
CS-137	1.07E+01	3.04E+00
FE-55	7.02E+00	2.14E+00
FE-59		1.50E+00
H-3	7.00E-02	8.65E-03
I-131	2.60E-01	1.92E-01
MN-54	1.11E+01	1.51E+01
NI-59		4.75E+00
NI-63	1.86E+00	3.23E-01
P-32		2.76E-02
PU-238		3.53E-05
PU-239		7.06E-05
SR-89	2.00E-02	3.05E-02
SR-90	3.00E-02	5.63E-03
ZN-65	3.56E+01	2.13E+01

Installation: Limerick
Unit No.: 1&2

Location: 21 Mi NW Philidelphia, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
B		
BA/LA-140	1.25E+00	5.00E-02
C-14	3.90E-01	3.30E-01
CE-141	8.00E-01	
CE-144	1.00E-01	
CO-58	2.55E+00	2.69E+00
CO-60	1.68E+01	2.30E+01
CR-51	1.71E+01	1.69E+01
CS-134	3.21E+00	1.04E+00
CS-137	8.85E+00	3.75E+00
FE-55	1.84E+01	2.43E+01
H-3	2.70E-01	1.00E-02
I-131	1.78E+00	4.80E-01
MN-54	4.79E+00	6.22E+00
NI-63	1.42E+00	1.35E+00
SB-125		1.30E-01
SR-89	1.40E-01	1.00E-02
SR-90	1.00E-01	
ZN-65	2.30E+01	1.98E+01
C		
CO-60		3.66E+01
CR-51		4.60E-01
FE-55		5.71E+01
MN-54		4.09E+00
NI-59		1.00E-02
NI-63		1.72E+00
SB-125		1.00E-02
D		
CO-58		2.80E+00
CO-60	3.30E+01	2.24E+01
CR-51		2.47E+01
CS-134		2.20E-01
CS-137	7.00E-02	1.49E+00
FE-55	5.27E+01	2.48E+01
H-3		7.00E-02
I-131		1.00E-02
MN-54	3.46E+00	5.95E+00
NI-63	2.03E+00	1.04E+00
SB-125		1.00E-01
ZN-65	8.68E+00	1.64E+01

Installation: Limerick
Unit No.: 1&2

Location: 21 Mi NW Philidelphia, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.05E+02 Ci 7.84E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.33E+01 Ci 5.89E+00	
C. Irradiated Components, Control Rods, etc.	m3 5.08E+00 Ci 9.30E+04	
D. Other (describe) CRD Filters & Trash	m3 4.06E+00 Ci 9.91E+01	
Ash-incineration	m3 2.86E+00 Ci 1.57E+00	

Installation: Maine Yankee
Unit No.: 1

Location: 3.9 Mi S Wicasset, ME

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-309
Thermal Power(MWH): 1.66E+07
Commercial Operation: 12/28/72
Cooling Water Source: Back River

Licensee: Maine Yankee Atomic Power
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 5.36E+06
Initial Criticality: 10/23/72

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.55E-03
CR-51	2.84E-05
CO-58	1.98E-05
CO-60	4.09E-04
SE-75	1.99E-06
KR-85	1.52E+01
KR-85M	2.18E-02
KR-87	2.99E-03
KR-88	4.17E-03
SR-89	3.48E-04
SR-90	8.63E-07
RU-103	4.16E-04
I-131	3.84E-03
XE-131M	1.10E+01
I-133	8.09E-04
XE-133	3.71E+02
XE-133M	1.09E+00
CS-134	4.90E-06
I-135	2.25E-08
XE-135	2.56E+00
XE-135M	9.96E-03
CS-137	1.74E-04
XE-138	2.44E-03

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	6.37E-05
CR-51	1.34E-02
MN-54	6.19E-04
FE-55	4.88E-02
MN-56	5.59E-06
CO-57	1.35E-04
CO-58	5.72E-02
FE-59	7.68E-04
CO-60	3.04E-02
ZN-65	6.25E-06
SE-75	8.94E-05
KR-85	5.99E-04
KR-85M	5.08E-06
ZR/NB-95	1.73E-03
MO-99	8.46E-06
TC-99M	1.86E-05
RU-103	3.28E-04
AG-110M	1.90E-02

Installation: Maine Yankee
Unit No.: 1

Location: 3.9 Mi S Wicasset, ME

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SN-113	2.30E-04
SB-122	2.93E-04
SB-124	2.93E-02
SB-125	2.63E-02
I-131	4.15E-03
XE-131M	5.98E-03
I-132	1.37E-05
TE-132	4.94E-05
I-133	7.67E-04
XE-133	3.44E-01
XE-133M	1.59E-03
CS-134	2.57E-03
XE-135	5.15E-04
XE-135M	4.26E-05
CS-137	1.32E-02
BA-LA-140	2.81E-04
CE-141	2.31E-04
LA-141	4.20E-04
CE-144	3.66E-04

Total Airborne Tritium Released	3.97E+00 Ci
Total Liquid Tritium Released	2.17E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.22E+08 liters
Volume of Dilution Water Used During Period	6.76E+11 liters

Installation: Maine Yankee
Unit No.: 1

Location: 3.9 Mi S Wicasset, ME

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-309
Thermal Power(MWH): 1.66E+07
Commercial Operation: 12/28/72
Cooling Water Source: Back River

Licensee: Maine Yankee Atomic Power
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 5.36E+06
Initial Criticality: 10/23/72

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
18	Trucking over highway	CNSI, Barnwell, SC
6	Trucking over highway	Quadrex, Oak Ridge, TN
6	Trucking over highway	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
CO-58	5.43E+01	2.10E+00
CO-60	1.11E+01	2.14E+01
CR-51	8.89E+00	
CS-134		3.60E+00
CS-137	2.08E+00	2.68E+01
FE-55	2.75E+00	4.90E+00
NI-63	1.36E+01	3.98E+01
SB-124	1.01E+00	
ZR-95	1.91E+00	

B

CO-58	1.96E+00	1.11E+00
CO-60	4.23E+01	3.92E+01
CS-134	1.68E+00	1.44E+00
CS-137	8.61E+00	8.60E+00
FE-55	2.10E+01	3.02E+01
NI-63	2.28E+01	1.92E+01
SB-125	1.06E+00	

C

CO-60		5.15E+01
FE-55		2.84E+01
H-3		1.17E+01
NI-63		7.02E+00

D

CE-144	3.89E+01	
CO-60	4.08E+00	9.55E+01
CS-134	4.52E+00	
CS-137	3.23E+01	
FE-55	9.14E+00	
H-3		3.30E+00
PU-241	1.11E+01	

Installation: Maine Yankee
Unit No.: 1

Location: 3.9 Mi S Wicasset, ME

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.24E+01 Ci 5.20E+02	non-compacted
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.35E+02 Ci 3.53E+00	partially compacted
C. Irradiated Components, Control Rods, etc.	m3 1.70E+00 Ci 7.54E+03	non-compacted
D. Other (describe) Biological Waste	m3 2.30E+00 Ci 1.85E-03	non-compacted
Oil Solvent	m3 1.05E+00 Ci 1.18E-01	pre- incineration

Installation: McGuire
Unit No.: 1

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-369
Thermal Power(MWH): 2.28E+07
Commercial Operation: 12/01/81
Cooling Water Source: Lake Norman

Licensee: Duke Power Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.49E+06
Initial Criticality: 08/08/81

Airborne Effluents

Nuclide Released	Activity (Ci)
F-18	6.34E-07
NA-24	1.10E-08
CL-38	4.34E-08
AR-41	1.82E+01
CR-51	9.43E-06
MN-56	2.66E-10
CO-58	1.38E-05
CO-60	3.84E-05
BR-82	2.61E-07
BR-84	2.63E-09
KR-85	3.33E+01
KR-85M	1.67E+00
KR-87	2.75E-01
KR-88	2.01E+00
RB-88	1.42E-04
SB-125	1.18E-05
I-131	1.07E-03
XE-131M	2.51E+00
I-132	1.06E-03
I-133	4.59E-04
XE-133	3.11E+02
XE-133M	4.74E+00
I-134	1.26E-09
I-135	7.53E-07
XE-135	3.10E+01
XE-135M	5.34E-02
CS-137	1.77E-05
CS-138	1.83E-07
XE-138	4.40E-02
CE-143	1.58E-10

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	5.75E-05
F-18	1.02E-05
NA-24	1.04E-03
K-40	3.27E-05
AR-41	1.44E-06
CR-51	2.66E-02
MN-54	9.44E-03
FE-55	2.16E-02
CO-57	3.92E-04
CO-58	1.04E-01
FE-59	1.48E-03

Installation: McGuire
Unit No.: 1

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CO-60	6.87E-02
ZN-65	5.85E-05
BR-82	2.19E-05
KR-85	3.39E-04
KR-85M	6.75E-07
RB-86	3.73E-05
RB-88	2.17E-05
SR-89	3.14E-05
SR-92	3.03E-04
Y-92	3.14E-05
NB-95	7.88E-03
ZR-95	3.83E-03
NB-97	4.57E-04
ZR-97	1.10E-05
TC-99M	1.59E-05
RU-106	2.35E-04
AG-110M	4.86E-03
SN-113	4.05E-04
CD-115	9.69E-06
SB-122	4.76E-04
SB-124	7.46E-03
SB-125	5.64E-02
I-131	4.39E-03
XE-131M	4.50E-05
I-132	4.58E-04
TE-132	1.48E-05
I-133	5.11E-04
XE-133	1.17E-01
XE-133M	1.11E-03
CS-134	1.32E-03
I-134	1.33E-05
I-135	4.06E-05
XE-135	3.19E-03
XE-135M	3.74E-06
CS-136	6.97E-07
CS-137	3.62E-03
CS-138	4.48E-05
BA-140	2.99E-06
LA-140	1.27E-04
CE-141	1.21E-05
CE-143	2.50E-06
CE-144	1.11E-04
W-187	1.52E-05

Total Airborne Tritium Released	3.00E+01 Ci
Total Liquid Tritium Released	4.33E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.17E+06 liters
Volume of Dilution Water Used During Period	3.53E+12 liters

Installation: McGuire
Unit No.: 2

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-370
Thermal Power(MWH): 2.04E+07
Commercial Operation: 03/01/84
Cooling Water Source: Lake Norman

Licensee: Duke Power Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.78E+06
Initial Criticality: 05/08/83

Airborne Effluents

Nuclide Released	Activity (Ci)
F-18	6.34E-07
NA-24	1.10E-08
CL-38	4.34E-08
AR-41	1.82E+01
CR-51	9.43E-06
MN-56	2.66E-10
CO-58	1.38E-05
CO-60	3.84E-05
BR-82	2.61E-07
BR-84	2.63E-09
KR-85	3.33E+01
KR-85M	1.67E+00
KR-87	2.75E-01
KR-88	2.01E+00
RB-88	1.42E-04
SB-125	1.18E-05
I-131	1.07E-03
XE-131M	2.51E+00
I-132	1.06E-03
I-133	4.59E-04
XE-133	3.11E+02
XE-133M	4.74E+00
I-134	1.26E-09
I-135	7.53E-07
XE-135	3.10E+01
XE-135M	5.34E-02
CS-137	1.77E-05
CS-138	1.83E-07
XE-138	4.40E-02
CE-143	1.58E-10

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	5.75E-05
F-18	1.02E-05
NA-24	1.04E-03
K-40	3.27E-05
AR-41	1.44E-06
CR-51	2.66E-02
MN-54	9.44E-03
FE-55	2.16E-02
CO-57	3.92E-04
CO-58	1.04E-01
FE-59	1.48E-03

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CO-60	6.87E-02
ZN-65	5.85E-05
BR-82	2.19E-05
KR-85	3.39E-04
KR-85M	6.75E-07
RB-86	3.73E-05
RB-88	2.17E-05
SR-89	3.14E-05
SR-92	3.03E-04
Y-92	3.14E-05
NB-95	7.88E-03
ZR-95	3.83E-03
NB-97	4.57E-04
ZR-97	1.10E-05
TC-99M	1.59E-05
RU-106	2.35E-04
AG-110M	4.86E-03
SN-113	4.05E-04
CD-115	9.69E-06
SB-122	4.76E-04
SB-124	7.46E-03
SB-125	5.64E-02
I-131	4.39E-03
XE-131M	4.50E-05
I-132	4.58E-04
TE-132	1.48E-05
I-133	5.11E-04
XE-133	1.17E-01
XE-133M	1.11E-03
CS-134	1.32E-03
I-134	1.33E-05
I-135	4.06E-05
XE-135	3.19E-03
XE-135M	3.74E-06
CS-136	6.97E-07
CS-137	3.62E-03
CS-138	4.48E-05
BA-140	2.99E-06
LA-140	1.27E-04
CE-141	1.21E-05
CE-143	2.50E-06
CE-144	1.11E-04
W-187	1.52E-05

Total Airborne Tritium Released	3.00E+01 Ci
Total Liquid Tritium Released	4.33E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.17E+06 liters
Volume of Dilution Water Used During Period	3.53E+12 liters

Installation: McGuire
Unit No.: 1&2

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-369
Thermal Power(MWH): 2.28E+07
Commercial Operation: 12/01/81
Cooling Water Source: Lake Norman

Licensee: Duke Power Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.49E+06
Initial Criticality: 08/08/81

Unit Number: 2 Type: PWR
Docket Number: 50-370
Thermal Power(MWH): 2.04E+07
Commercial Operation: 03/01/84
Cooling Water Source: Lake Norman

Licensee: Duke Power Co.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.78E+06
Initial Criticality: 05/08/83

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
41		

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M	2.46E-02	
C-14	3.73E-02	
CE-144	3.52E-05	
CM-242	2.45E-04	
CO-51	3.25E-05	
CO-57	1.00E-02	1.00E-01
CO-58	1.35E+00	3.90E+00
CO-60	1.58E+01	1.46E+01
CR-51	5.87E-05	
CS-134	3.63E+00	4.53E+00
CS-137	6.71E+00	7.90E+00
FE-55	2.20E+01	2.02E+01
FE-59	1.49E-04	
H-3	4.65E-02	
MN-54	1.07E+00	2.27E+00
NB-95	3.90E-02	
NI-63	4.92E+01	4.57E+01
RU-103	1.28E-05	
RU-106	5.06E-06	
SB-125	3.77E-01	8.30E-01
SN-113	2.50E-03	
SR-90	9.10E-04	
TE-125M	1.21E-02	
TRU	1.88E-04	
ZN-65	6.24E-06	
ZR-95	3.19E-03	

B

AM-241	3.63E-03	
CD-109	7.71E-04	
CE-139	7.13E-05	
CE-144	1.00E-01	1.00E-01

Installation: McGuire
Unit No.: 1&2

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
B		
CO-57	3.44E-05	
CO-58	2.42E+00	2.42E+00
CO-60	1.84E+01	1.84E+01
CS-137	2.20E-01	2.20E-01
FE-55	5.98E+01	5.97E+01
MN-54	7.18E-01	7.20E-01
NI-63	1.75E+01	1.75E+01
PU-241	5.69E-01	5.70E-01
RA-226	1.19E-04	
SA-113	3.17E-05	
SB-125	2.50E-01	2.50E-01
SN-113	8.80E-05	
SR-90	1.80E-01	1.80E-01
TRU	1.00E-02	1.00E-02
Y-88	1.85E-04	
ZN-65	1.57E-04	
D		
AM-241	1.31E-05	
C-14	2.06E-02	1.19E-01
CE-144	4.25E-01	
CM-242	1.04E-02	
CO-57		5.68E-02
CO-58	3.00E+00	6.57E-01
CO-60	1.24E+01	1.80E+01
CS-134		1.16E-01
CS-137	9.17E-02	5.70E-01
FE-55	7.60E+01	6.21E+01
H-3	6.19E-03	5.14E-02
MN-54	1.94E+00	1.63E+00
NE-95	1.85E+00	8.53E-02
NI-63	3.28E+00	1.55E+01
PU-241	1.75E-01	2.40E-01
SB-125	8.98E-02	5.12E-01
SR-90	1.94E-03	4.63E-01
TE-125M	3.04E-03	
TRU	4.41E-03	
ZR-95	8.50E-01	

Installation: McGuire
Unit No.: 1&2

Location: 17 Mi N of Charlotte, NC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 7.31E+01 Ci 1.01E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.43E+01 m3 1.30E+01 Ci 3.43E+01	brokered and non-compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Filters and mercuric waste	m3 9.57E+00 Ci 2.55E+01	
Filters and Sludge	m3 1.48E+01 Ci 1.20E+02	

Installation: Millstone
Unit No.: 1

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-245
Thermal Power(MWH): 1.14E+07
Commercial Operation: 03/01/71
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 2.01E+03
Net Electrical Power(MWH): 3.61E+06
Initial Criticality: 10/26/70

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	3.56E-04
MN-54	1.33E-04
CO-57	3.15E-07
CO-58	2.40E-05
CO-60	2.58E-04
ZN-65	3.38E-04
SR-89	5.04E-05
SR-90	7.02E-07
I-131	2.31E-04
I-133	7.13E-04
XE-133	3.15E+00
XE-135	1.31E+00
CS-137	7.55E-05
BA-140	2.06E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.77E-05
CR-51	1.01E-03
MN-54	4.31E-02
FE-55	6.64E-02
CO-57	7.34E-06
CO-58	1.50E-03
FE-59	1.15E-04
CO-60	2.51E-01
ZN-65	4.75E-02
ZN-69M	9.31E-06
SR-89	8.41E-05
SR-90	2.83E-03
Y-93	1.06E-04
NB-97	5.83E-05
MO-99	1.62E-05
TC-99M	1.81E-05
AG-110M	8.91E-04
I-131	1.37E-03
I-133	9.51E-05
XE-133	1.46E-04
CS-134	6.65E-05
XE-135	3.67E-05
CS-137	4.65E-02
BA-139	2.65E-05
BA-140	8.84E-05
LA-142	3.31E-05
CE-143	3.28E-05

Installation: Millstone
Unit No.: 1

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	3.93E+01 Ci
Total Liquid Tritium Released	7.34E+00 Ci
Volume of Waste Released (Prior to Dilution)	9.12E+06 liters
Volume of Dilution Water Used During Period	6.51E+11 liters

Installation: Millstone
Unit No.: 1

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-245
Thermal Power(MWH): 1.14E+07
Commercial Operation: 03/01/71
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 2.01E+03
Net Electrical Power(MWH): 3.61E+06
Initial Criticality: 10/26/70

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
35	Truck	CNSI, Barnwell, SC
6	Truck	Quadrex, Oak Ridge, TN
2	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M		2.60E-01
C-14	1.31E+00	6.00E-02
CM-244	4.00E-02	
CO-58	2.10E-01	1.08E+00
CO-60	7.97E+00	4.99E+00
CR-51		2.18E+01
CS-134		2.00E-02
CS-137	1.83E+00	3.88E+00
FE-55	1.86E+01	8.73E+00
FE-59		1.60E-01
H-3	1.30E-01	2.00E-02
I-131		1.00E-02
LA-140		1.00E-02
MN-54	3.51E+00	3.89E+00
MO-99		1.00E-02
NI-63	5.30E-01	3.50E-01
PU-241	1.30E-01	
SR-89	4.00E-02	
SR-90	3.00E-02	1.00E-02
ZN-65	6.56E+01	5.47E+01

B

AG-110M		9.74E-03
C-14	6.07E-01	1.79E-02
CO-57		8.12E-03
CO-58		4.19E-01
CO-60	1.75E+01	2.45E+01
CR-51	3.42E-01	3.42E-01
CS-134	1.06E-01	3.25E-01
CS-137	1.34E+00	5.73E-01
FE-55	6.98E+01	6.46E+01
H-3	4.26E+00	9.27E-01
MN-54	2.33E+00	3.28E+00
NB-95		3.25E-03
NI-63	1.56E+00	2.27E+00
PU-241	5.73E-01	5.22E-01
SB-125		2.86E-01

Installation: Millstone
 Unit No.: 1

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

B			
	SR-90		1.93E-01
	TC-99		1.62E-03
	ZN-65	1.95E+00	2.00E+00
	ZR-95		4.87E-03
C			
	C-14		1.00E-02
	CO-58		6.00E-02
	CO-60		3.54E+01
	FE-55		5.69E+01
	HF-175		2.00E-02
	HF-181		2.00E-02
	MN-54		2.05E+00
	NI-59		3.00E-02
	NI-63		5.19E+00
	TA-182		3.60E-01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.44E+02	Dewatered Burial Volume
	Ci 8.09E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.29E+02	Burial Volume after compaction
	Ci 3.38E+00	
C. Irradiated Components, Control Rods, etc.	m3 4.80E+00	Dewatered Burial Volume
	Ci 2.29E+04	
D. Other (describe)	m3	
	Ci	

Installation: Millstone
Unit No.: 2

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-336
Thermal Power(MWH): 8.51E+06
Commercial Operation: 12/26/75
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 2.71E+06
Initial Criticality: 10/17/75

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.71E-01
KR-85	5.20E+00
KR-85M	2.17E+00
KR-87	4.39E-05
KR-88	1.57E+00
I-131	7.87E-03
XE-131M	1.80E+00
I-133	5.42E-03
XE-133	5.81E+02
XE-133M	1.94E+00
XE-135	4.21E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.24E-04
AR-41	2.02E-06
CR-51	1.12E-01
W-54	8.71E-03
R-55	1.05E-01
CO-57	4.66E-04
CO-58	3.65E-01
FE-59	2.39E-03
CO-60	4.73E-01
KR-85	3.67E-01
KR-85M	9.98E-04
KR-88	1.91E-04
RB-88	1.67E-03
SR-89	2.81E-03
SR-90	4.33E-04
SR-92	3.57E-03
Y-93	1.62E-04
NB-95	1.33E-02
ZR-95	6.85E-03
NB-97	1.47E-02
MO-99	2.06E-04
TC-99M	2.22E-04
TC-101	1.12E-05
RU-103	6.96E-04
TC-104	3.92E-04
RU-105	6.90E-03
RU-106	1.12E-02
AG-110M	3.60E-02
SB-124	5.04E-02
SB-125	1.15E-01

Installation: Millstone
Unit No.: 2

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
I-131	6.55E-02
XE-131M	7.55E-02
I-132	4.25E-03
I-133	7.37E-03
XE-133	5.50E+00
XE-133M	4.57E-02
CS-134	2.49E-01
I-135	3.12E-05
XE-135	8.23E-02
XE-135M	1.05E-04
CS-136	1.11E-03
CS-137	4.59E-01
CS-138	4.17E-04
XE-138	6.74E-05
BA-139	3.58E-05
LA-140	1.07E-02
CE-141	2.57E-05
LA-141	6.59E-03
BA-142	1.30E-04
LA-142	2.68E-05
CE-143	1.46E-06
CE-144	1.44E-04
NP-239	9.53E-05

Total Airborne Tritium Released	2.80E+01 Ci
Total Liquid Tritium Released	1.06E+02 Ci
Volume of Waste Released (Prior to Dilution)	8.55E+07 liters
Volume of Dilution Water Used During Period	6.82E+11 liters

Installation: Millstone
Unit No.: 2

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-336
Thermal Power(MWH): 8.51E+06
Commercial Operation: 12/26/75
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 2.71E+06
Initial Criticality: 10/17/75

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
21	Truck	CNSI, Barnwell, SC
9	Truck	CNSI, Barwell, SC
10	Truck	Quadrex, Oak Ridge, TN
4	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M	1.00E-02	1.70E-01
C-14	5.90E-01	1.74E+00
CO-57	3.00E-02	
CO-58	7.90E-01	7.39E+00
CO-60	2.71E+01	5.21E+01
CS-134	1.00E+01	6.00E-02
CS-137	2.37E+01	2.30E-01
FE-55	1.09E+01	1.98E+01
H-3		3.00E-02
MN-54	5.90E-01	1.35E+00
NB-95		1.00E-01
NI-63	2.60E+01	1.14E+01
PU-241	4.00E-02	1.70E-01
SB-125	9.00E-02	3.86E+00
SR-89	1.00E-02	
SR-90	6.00E-02	8.00E-02
TC-99		1.20E+00
ZR-95		3.20E-01

B

AG-110M		6.00E-02
C-14	1.26E+00	1.11E+00
CE-141		3.00E-02
CE-144		5.20E-01
CO-57		8.00E-02
CO-58	1.69E+00	8.88E+00
CO-60	3.08E+01	4.03E+01
CR-51		2.27E+00
CS-134	6.89E+00	5.11E-02
CS-137	1.80E+01	1.52E-01
FE-55	2.60E+01	2.58E+01
FE-59		1.00E-01
H-3	2.30E+00	8.46E-04
MN-54	2.66E-02	7.40E-01
NB-95		9.80E-01
NI-63	1.29E+01	1.44E+01

Installation: Millstone
 Unit No.: 2

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

B

PU-241		1.20E-01
RU-103		5.80E-01
RU-106		2.39E+00
SB-124		8.00E-02
SB-125		3.20E-01
SR-89		1.00E-02
SR-90		4.00E-02
ZN-65		1.64E-04
ZR-95		9.00E-01

C

CO-60	5.00E-02	6.00E-02
FE-55	9.60E+01	9.51E+01
MN-54	3.06E+00	3.30E+00
NI-59	1.00E-02	1.00E-02
NI-63	1.02E+00	1.50E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 3.49E+01	Dewatered Burial Volume
	Ci 9.72E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 7.22E+02	Burial Volume after compaction
	Ci 2.70E+03	
C. Irradiated Components, Control Rods, etc.	m3 2.20E+00	Dewatered Burial Volume
	Ci 1.86E+00	
D. Other (describe)	m3	
	Ci	

Installation: Millstone
Unit No.: 3

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-423
Thermal Power(MWH): 2.02E+07
Commercial Operation: 04/23/86
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.57E+06
Initial Criticality: 01/23/86

Airborne Effluents

Nuclide Released	Activity (Ci)
BE-7	2.85E-05
CR-51	1.24E-05
CO-58	4.71E-04
CO-60	6.67E-06
SR-89	2.36E-06
SR-90	1.41E-05
I-131	4.17E-04
XE-131M	2.59E-01
I-133	3.65E-04
XE-133	6.50E-02
XE-133M	3.52E-03
CS-134	2.73E-06
XE-135	2.52E-01
XE-135M	5.55E-01
CS-137	1.03E-05
CE-141	3.91E-06
CE-144	2.26E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	3.89E-04
NA-24	6.65E-04
AR-41	1.38E-04
CR-51	1.33E-02
MN-54	9.50E-02
FE-55	3.80E-01
CO-57	2.58E-03
CO-58	3.43E-01
FE-59	1.63E-04
CO-60	5.26E-01
CU-64	4.86E-04
ZN-65	8.73E-03
ZN-69	1.98E-06
ZN-69M	5.60E-06
AS-76	2.21E-05
KR-85	2.16E-03
KR-85M	1.53E-05
KR-87	9.89E-05
KR-88	2.65E-05
SR-89	3.49E-04
SR-90	1.04E-04
Y-91M	9.38E-06
SR-92	8.17E-03
Y-92	3.40E-05

Installation: Millstone
Unit No.: 3

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
NB-95	2.55E-02
ZR-95	4.43E-03
NB-97	4.07E-02
MO-99	1.46E-06
TC-101	2.06E-04
RU-103	2.96E-06
TC-104	2.46E-06
RU-105	9.01E-03
RU-106	6.65E-03
AG-110M	8.24E-02
SB-122	4.33E-04
SB-124	5.06E-02
SB-125	3.80E-01
SB-126	1.76E-04
I-131	5.98E-04
XE-131M	3.84E-03
I-133	5.19E-04
XE-133	1.65E-02
XE-133M	1.37E-04
CS-134	1.64E-01
I-135	2.50E-04
XE-135	1.32E-02
XE-135M	1.58E-05
CS-137	2.17E-01
XE-137	4.33E-05
CS-138	5.17E-03
XE-138	6.14E-04
BA-139	4.76E-05
BA-140	1.10E-03
LA-140	1.00E-03
LA-141	1.33E-02
BA-142	2.66E-04
CE-144	2.62E-05
PR-144	3.41E-02

Total Airborne Tritium Released	7.16E+01 Ci
Total Liquid Tritium Released	5.96E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.43E+07 liters
Volume of Dilution Water Used During Period	1.57E+12 liters

Installation: Millstone
Unit No.: 3

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-423
Thermal Power(MWH): 2.02E+07
Commercial Operation: 04/23/86
Cooling Water Source: Niantic Bay

Licensee: Northeast Nuclear Energy
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 6.57E+06
Initial Criticality: 01/23/86

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
4	Truck	CNSI, Barnwell, SC
3	Truck	Quadrex, Oak Ridge, TN
1	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AG-110M		2.00E-02
BE-7	1.32E+00	
CO-57	4.20E-01	1.60E-01
CO-58	1.27E+01	4.63E+00
CO-60	1.51E+01	1.71E+01
CS-134	7.49E+00	1.48E+01
CS-137	1.12E+01	2.91E+01
FE-55	1.49E+01	1.08E+01
MN-54	5.87E+00	2.96E+00
NB-95		2.00E-02
NI-63	3.20E+01	1.90E+01
PU-241	2.00E-02	4.00E-02
SB-125	5.00E-02	9.40E-01
SR-90	2.00E-02	7.00E-02
TC-99		2.90E-01
ZN-65	1.80E-01	
ZR-95		8.00E-02

B

AG-110M		2.07E-03
C-14		4.13E-03
CO-57		2.07E-03
CO-58	4.29E+00	4.21E+00
CO-60	5.09E+00	8.30E+00
CR-51	1.64E+00	1.77E+00
CS-134	1.30E+01	7.19E+00
CS-136	2.71E-01	
CS-137	1.50E+01	8.89E+00
FE-55	5.03E+01	5.99E+01
H-3	3.84E+00	2.94E+00
I-131	7.22E-01	
MN-54	1.42E+00	1.61E+00
NB-95	1.22E+00	1.32E+00
NI-63	2.47E+00	3.21E+00
PU-241		1.58E-03
SR-90		1.24E-03
TC-99		4.13E-04

Installation: Millstone
 Unit No.: 3

Location: 3.2 Mi WSW of New London, CT

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
(by type of waste)		
B		
ZN-65		2.53E-02
ZR-95	6.14E-01	6.62E-01
C		
CO-58	1.25E+01	
CO-60	2.04E+01	
CR-51	9.00E-02	
FE-55	5.31E+01	
FE-59	5.00E-02	
MN-54	7.51E+00	
NI-63	6.33E+00	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.07E+01	Dewatered Burial Volume
	Ci 4.80E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.06E+01	Burial Volume after compaction
	Ci 5.06E-01	
C. Irradiated Components, Control Rods, etc.	m3 8.50E-05	Dewatered Burial Volume
	Ci 2.45E-03	
D. Other (describe)	m3	
	Ci	

Installation: Monticello
Unit No.: 1

Location: 23 Mi SE St. Cloud, MN

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-263
Thermal Power(MWH): 1.39E+07
Commercial Operation: 06/30/71
Cooling Water Source: Mississippi River

Licensee: Northern States Power
Licensed Power(MWT): 1.67E+03
Net Electrical Power(MWH): 4.45E+06
Initial Criticality: 12/10/70

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.54E-01
CR-51	7.88E-05
MN-54	6.09E-07
CO-60	5.51E-04
ZN-65	1.38E-03
KR-85M	3.68E+00
KR-87	1.26E+01
KR-88	1.20E+01
KR-89	3.53E+01
SR-89	8.14E-04
SR-90	1.88E-06
I-131	3.33E-02
I-133	2.84E-01
XE-133	3.07E+02
XE-133M	6.40E+00
I-135	4.58E-01
XE-135	1.32E+02
XE-135M	2.03E+02
CS-137	2.32E-04
XE-137	3.93E+02
XE-138	1.96E+02
BA-140	3.62E-03
CE-141	2.06E-04

Total Airborne Tritium Released

1.04E+02 Ci

Installation: Monticello
Unit No.: 1

Location: 23 Mi SE St. Cloud, MN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-263
Thermal Power(MWH): 1.39E+07
Commercial Operation: 06/30/71
Cooling Water Source: Mississippi River

Licensee: Northern States Power
Licensed Power(MWT): 1.67E+03
Net Electrical Power(MWH): 4.45E+06
Initial Criticality: 12/10/70

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
10	Truck	CNSI, Barnwell, SC
16	Truck	US Ecology, Beatty, NV
3	Railway	US Ecology, Richland, WA
2	Truck	US Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
AM-241		4.81E-03
BA-140		7.03E-02
C-14	7.30E-02	5.80E-02
CE-141		8.39E-02
CE-144		4.13E-04
CM-242		4.91E-04
CM-243		2.53E-04
CO-58	8.57E-01	4.90E-01
CO-60	1.79E+01	2.94E+01
CR-51	2.42E+00	4.06E-01
CS-134		1.55E-01
CS-137	3.64E+00	5.04E+00
FE-55	9.65E+00	1.18E+01
FE-59	4.48E-01	1.27E-01
H-3	3.00E-02	3.40E-02
I-129		1.15E-05
I-131		3.81E-01
LA-140	1.00E-03	2.07E-01
MN-54	3.32E+00	3.45E+00
NI-63	1.88E-01	3.05E-01
PU-238		5.87E-04
PU-239		8.60E-05
PU-241	2.40E-02	2.51E-02
SR-89	4.39E-01	3.16E-01
SR-90	1.80E-02	1.43E-02
TC-99		1.73E-05
ZN-65	6.08E+01	4.76E+01

B

AM-241	1.72E-03	1.40E-04
C-14	1.19E-01	4.18E-04
CE-141		5.33E-03
CM-242	5.31E-03	4.51E-04
CM-243	6.48E-04	7.29E-05
CO-58		1.20E+00
CO-60	2.35E+01	5.31E+01

Installation: Monticello
Unit No.: 1

Location: 23 Mi SE St. Cloud, MN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
B		
CS-137	1.80E+00	3.80E-01
FE-55	1.54E+01	2.82E+01
H-3	4.53E+01	4.13E-04
I-129		2.77E-05
MN-54	4.18E+00	1.03E+01
NI-63	3.82E-01	1.21E-01
PU-238	3.59E-03	3.21E-04
PU-239	1.62E-03	1.76E-04
PU-241	3.20E-02	2.69E-02
SR-89	6.13E-01	2.20E-02
SR-90	3.85E-01	1.84E-01
TC-99		4.35E-05
ZN-65	8.27E+00	6.59E+00
C		
C-14	4.17E-03	
CE-141	4.08E-05	
CM-242	2.67E-06	
CM-243	7.07E-07	
CO-58	1.32E-03	
CO-60	4.70E+01	
CR-51	1.04E-02	
CS-137	8.15E-04	
FE-55	4.82E+01	
FE-59	2.67E-04	
H-3	8.82E-05	
MN-54	1.67E+00	
NI-63	2.63E+00	
PU-238	1.89E-06	
PU-241	8.40E-05	
RU-103	9.66E-05	
SB-126	4.83E-01	
SR-89	4.87E-05	
SR-90	1.31E-04	
TC-99	2.48E-07	
ZN-65	1.56E-02	

Installation: Monticello
Unit No.: 1

Location: 23 Mi SE St. Cloud, MN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.33E+01 Ci 2.44E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.08E+01 Ci 3.66E-01	
C. Irradiated Components, Control Rods, etc.	m3 1.71E+01 Ci 5.91E+04	
D. Other (describe)	m3 Ci	

Installation: Nine Mile Point
Unit No.: 1

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-220
Thermal Power(MWH): 8.94E+06
Commercial Operation: 12/01/69
Cooling Water Source: Lake Ontario

Licensee: Niagara Mohawk Power
Licensed Power(MWT): 1.85E+03
Net Electrical Power(MWH): 2.93E+06
Initial Criticality: 09/05/69

Airborne Effluents

Nuclide Released	Activity (Ci)
MN-54	6.62E-05
FE-55	8.92E-04
CO-60	1.35E-03
KR-85M	7.20E+01
SR-89	6.72E-04
SR-90	6.64E-05
I-131	1.37E-03
I-133	1.50E-02
XE-133	2.69E+02
I-135	3.73E-02
XE-135	2.40E+00
CS-137	7.63E-06

Total Airborne Tritium Released

4.12E+01 Ci

Installation: Nine Mile Point
Unit No.: 1

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-220
Thermal Power(MWH): 8.94E+06
Commercial Operation: 12/01/69
Cooling Water Source: Lake Ontario

Licensee: Niagara Mohawk Power
Licensed Power(MWT): 1.85E+03
Net Electrical Power(MWH): 2.93E+06
Initial Criticality: 09/05/69

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
75	Truck	Barnwell, SC
7	Truck	Beatty, NV
1	Truck	Hanford, WA
1	Train	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
CO-58	1.81E+00	
CO-60	4.98E+01	5.80E+01
CR-51	1.06E+00	
CS-137	2.37E+01	1.78E+01
FE-55	8.86E+00	1.86E+01
MN-54	7.08E+00	2.17E+00
NI-63		1.70E+00
Other	7.60E-01	1.73E+00
PU-241	6.93E+00	

B

CO-58	3.18E+00	
CO-60	5.34E+01	
CS-137	3.51E+01	
FE-59	1.83E+00	
MN-54	5.43E+00	
Other	1.06E+00	

C

CO-60	8.58E+01	8.33E+01
FE-55	7.08E+00	1.05E+01
H-3	1.01E+00	
NI-63	5.97E+00	5.88E+00
Other	1.40E-01	3.20E+00

D

CO-58	2.94E+00	9.30E-01
CO-60	5.38E+01	6.70E+01
CS-137	3.55E+01	2.23E+01
FE-55		5.31E+00
FE-59	1.69E+00	4.45E-01
MN-54	5.05E+00	1.66E+00
NI-63		1.90E+00
Other	2.22E-01	5.97E-01

Installation: Nine Mile Point
Unit No.: 1

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.43E+02 Ci 2.07E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.69E+00 Ci 8.54E-01	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 6.23E+00 Ci 6.40E+04	Burial Volume
D. Other (describe) Commingled Trash	m3 7.96E+00 m3 1.22E+01 m3 2.42E+01 Ci 1.06E+02	non-compacted Burial Volume non-compacted

Installation: Nine Mile Point
Unit No.: 2

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-410
Thermal Power(MWH): 1.41E+07
Commercial Operation: 04/05/88
Cooling Water Source: Lake Ontario

Licensee: Niagara Mohawk Power
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 4.25E+06
Initial Criticality: 05/23/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	9.80E+00
CR-51	1.20E-03
MN-54	2.51E-04
FE-55	1.66E-04
CO-58	1.54E-04
FE-59	2.59E-05
CO-60	8.13E-04
ZN-65	2.97E-03
KR-85M	4.73E-02
KR-87	1.31E+00
KR-88	2.02E+00
SR-89	4.63E-05
SR-90	4.20E-07
MO-99	5.95E-03
I-131	1.07E-03
I-133	6.09E-03
XE-135	4.85E-01
XE-135M	1.86E+00
XE-137	6.32E+00
XE-138	9.22E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	9.81E-03
MN-54	2.72E-02
FE-55	4.88E-02
CO-58	4.42E-04
FE-59	1.26E-04
CO-60	6.28E-02
ZN-65	1.03E-01
SR-89	5.07E-03
SR-90	3.90E-04
AG-110M	1.58E-03
* Unidentified	1.78E-04

Total Airborne Tritium Released	1.46E+01 Ci
Total Liquid Tritium Released	8.95E+00 Ci
Volume of Waste Released (Prior to Dilution)	1.04E+07 liters
Volume of Dilution Water Used During Period	4.94E+10 liters

* dissolved and entrained gases

Installation: Nine Mile Point
Unit No.: 2

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-410
Thermal Power(MWH): 1.41E+07
Commercial Operation: 04/05/88
Cooling Water Source: Lake Ontario

Licensee: Niagara Mohawk Power
Licensed Power(MWT): 3.32E+03
Net Electrical Power(MWH): 4.25E+06
Initial Criticality: 05/23/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
81	Truck	Barnwell, SC
4	Truck	Beatty, NV

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

CO-58	1.05E+00	
CO-60	8.47E+00	1.10E+01
CR-51	2.38E+01	4.42E+00
FE-55	2.65E+00	3.96E+00
MN-54	2.61E+00	2.50E+00
Other	1.42E+00	1.82E+00
ZN-65	6.00E+01	7.63E+01

B

AG-110M	4.80E+00	
CO-60	1.02E+01	
CR-51	1.24E+01	
FE-55	2.40E+00	
MN-54	3.28E+00	
Other	2.32E+00	
ZN-65	6.46E+01	

C

CO-60		3.37E+01
FE-55		6.01E+01
MN-54		4.93E+00
NI-63		1.28E+00

D

AG-110	1.50E+00	
AG-110M		2.98E+00
CO-58	2.39E+00	1.23E+00
CO-60	3.91E+01	2.14E+01
CR-51	4.05E+00	8.22E+00
CS-137	2.33E+01	4.53E+00
FE-55	1.06E+00	3.20E+00
FE-59	1.28E+00	
MN-54	4.70E+00	7.03E+00
Other	9.20E-01	1.81E+00
ZN-65	2.17E+01	4.96E+01

Installation: Nine Mile Point
Unit No.: 2

Location: 8 Mi NE Oswego, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.01E+01 m3 8.23E+01 Ci 1.87E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.62E+01 Ci 1.02E+01	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 8.28E-01 Ci 1.79E+04	
D. Other (describe) Commingled Trash	m3 6.93E+01 Ci 3.89E+00	non-compacted

Installation: North Anna
Unit No.: 1&2

Location: 40 Mi NW Richmond, VA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-338
Thermal Power(MWH): 1.72E+07
Commercial Operation: 06/06/78
Cooling Water Source: Lake Anna
Unit Number: 2 Type: PWR
Docket Number: 50-339
Thermal Power(MWH): 2.03E+07
Commercial Operation: 12/14/80
Cooling Water Source: Lake Anna

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 5.36E+06
Initial Criticality: 04/05/78

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 6.32E+06
Initial Criticality: 06/12/80

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	8.21E-08
AR-41	6.99E+00
MN-54	3.54E-09
FE-55	1.84E-05
CO-58	5.39E-05
CO-60	1.14E-05
KR-85	2.60E+01
KR-85M	5.82E-01
SR-85	3.56E-06
KR-87	5.04E-01
KR-88	1.08E+00
SR-90	3.96E-12
RU-103	2.35E-08
RU-106	1.02E-08
SB-122	1.33E-07
SB-125	2.18E-08
I-131	1.35E-02
TE-131M	1.92E-08
XE-131M	9.68E+00
I-132	1.85E-06
I-133	8.39E-04
XE-133	1.16E+03
XE-133M	3.82E+00
CS-134	4.63E-06
I-134	3.30E-07
I-135	1.97E-06
XE-135	1.85E+01
XE-135M	1.63E+00
CS-137	2.60E-05
CS-138	2.27E-07
XE-138	3.89E-01
CE-143	1.63E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	9.91E-05
AR-41	1.61E-04
CR-51	1.63E-02
MN-54	1.18E-03

Installation: North Anna
Unit No.: 1&2

Location: 40 Mi NW Richmond, VA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CO-58	1.01E-01
FE-59	2.60E-03
CO-60	7.25E-02
BR-84	5.89E-05
KR-85	3.73E-02
KR-85M	3.64E-06
SR-85	1.61E-04
KR-87	5.60E-05
NB-95	1.31E-02
ZR-95	2.20E-03
RU-103	1.41E-04
RU-106	4.22E-04
RU-RH-106	1.37E-03
AG-110M	5.18E-02
SB-122	5.06E-07
SB-124	1.25E-03
SB-125	1.14E-01
I-131	4.67E-02
I-132	4.24E-04
I-133	4.52E-02
XE-133	4.39E-01
XE-133M	1.01E-05
CS-134	6.79E-03
I-134	1.20E-04
I-135	1.44E-03
XE-135	5.86E-03
XE-135M	1.31E-03
CS-136	1.47E-04
CS-137	1.87E-02
CE-143	8.52E-05

Total Airborne Tritium Released	4.94E+01 Ci
Total Liquid Tritium Released	9.29E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.69E+08 liters
Volume of Dilution Water Used During Period	2.54E+12 liters

Installation: North Anna
Unit No.: 1&2

Location: 40 Mi NW Richmond, VA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-338
Thermal Power(MWH): 1.72E+07
Commercial Operation: 06/06/78
Cooling Water Source: Lake Anna

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 5.36E+06
Initial Criticality: 04/05/78

Unit Number: 2 Type: PWR
Docket Number: 50-339
Thermal Power(MWH): 2.03E+07
Commercial Operation: 12/14/80
Cooling Water Source: Lake Anna

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 6.32E+06
Initial Criticality: 06/12/80

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	Truck	Alaron, Wampum, PA
18	Truck	Barnwell, SC
3	Truck	Quadrex, Oak Ridge, TN
22	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
C-14	1.50E+00	
CO-58	5.53E+00	6.43E+00
CO-60	3.37E+01	1.49E+01
CS-134	1.44E+00	
CS-137	3.67E+00	1.40E+00
FE-55	1.70E+01	4.97E+01
NI-59		1.24E+01
NI-63	3.58E+01	1.34E+01
B		
CE-144	1.10E+00	
CO-58	1.83E+01	7.83E+00
CO-60	1.17E+01	2.54E+01
CR-51	1.27E+00	
CS-134		5.03E+00
CS-137	2.91E+00	1.11E+01
FE-55	2.06E+01	3.59E+01
MN-54		1.01E+00
NB-95	2.46E+01	
NI-63	3.56E+00	1.03E+01
SB-125		1.59E+00
ZR-95	1.28E+01	
D		
AG-110M	1.87E+01	
C-14		1.26E+00
CO-58	5.02E+00	
CO-60	5.68E+00	7.96E+01
CS-137		6.91E+00
FE-55	4.69E+01	1.91E+00

Installation: North Anna
Unit No.: 1&2

Location: 40 Mi NW Richmond, VA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)
D
H-3 7.98E+00
NI-63 2.23E+01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.30E+02	before volume reduction
	m3 1.07E+02	burial volume
	Ci 3.69E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 8.99E+02	before offsite processing
	m3 9.74E+01	burial volume
	Ci 1.11E+01	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)		
Waste Oil & Sump&Tank Sludges	m3 3.52E+01	before incineration
	m3 6.60E+00	burial volume
	Ci 3.60E+00	

Installation: Oconee
Unit No.: 1&2&3

Location: 30 Mi W Greenville, SC

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-269
Thermal Power(MWH): 1.91E+07
Commercial Operation: 07/15/73
Cooling Water Source: Lake Keowee
Unit Number: 2 Type: PWR
Docket Number: 50-270
Thermal Power(MWH): 1.81E+07
Commercial Operation: 09/09/74
Cooling Water Source: Lake Keowee
Unit Number: 3 Type: PWR
Docket Number: 50-287
Thermal Power(MWH): 1.66E+07
Commercial Operation: 12/16/74
Cooling Water Source: Lake Keowee

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 6.28E+06
Initial Criticality: 04/19/73

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 5.94E+06
Initial Criticality: 11/11/73

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 5.45E+06
Initial Criticality: 09/05/74

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	9.82E-02
CO-58	1.29E-06
CO-60	5.99E-06
BR-84	5.36E-07
KR-85	1.07E+01
KR-85M	2.77E+01
KR-87	1.04E+01
KR-88	4.58E+01
RB-88	2.76E-01
SR-92	1.50E-04
NB-95	1.84E-07
NB-97	4.79E-05
MO-99	1.12E-07
TC-99M	1.09E-07
AG-110M	1.12E-09
SB-122	1.25E-08
SB-124	4.53E-08
SB-125	6.17E-06
SB-126	6.27E-10
I-131	1.38E-02
XE-131M	3.36E+00
I-132	1.28E-03
I-133	4.89E-03
XE-133	2.73E+03
XE-133M	2.72E+01
CS-134	2.09E-05
I-134	4.04E-04
I-135	8.79E-04
XE-135	4.31E+02
XE-135M	3.31E-01
CS-136	1.40E-07
CS-137	2.37E-04
CS-138	5.59E-01

Installation: Oconee
Unit No.: 1&2&3

Location: 30 Mi W Greenville, SC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.88E-04
AR-41	2.95E-05
CR-51	1.39E-01
MN-54	5.92E-03
FE-55	1.45E-01
CO-57	9.87E-04
CO-58	7.59E-01
FE-59	1.73E-03
CO-60	1.01E-01
KR-85M	1.52E-04
RB-88	7.79E-05
SR-89	1.44E-02
NB-95	4.33E-02
ZR-95	2.33E-02
NB-97	1.34E-04
ZR-97	3.42E-06
MO-99	1.21E-04
TC-99M	1.81E-04
RU-103	1.07E-02
RU-106	2.01E-02
AG-110M	2.95E-01
SN-113	1.01E-03
SB-122	5.90E-04
SB-124	5.21E-02
SB-125	7.41E-01
SB-126	3.35E-04
TE-129	3.52E-03
TE-129M	7.68E-03
I-131	3.03E-02
XE-131M	7.63E-03
I-132	2.82E-03
TE-132	2.70E-03
I-133	2.79E-03
XE-133	3.03E+00
XE-133M	3.03E-02
CS-134	2.42E-02
I-134	5.23E-05
XE-135	4.84E-02
XE-135M	6.89E-06
CS-136	4.19E-04
CS-137	4.95E-02
XE-137	3.73E-03
CS-138	7.00E-04
BA-140	9.36E-04
LA-140	2.67E-02
CE-141	1.35E-02
CE-144	5.68E-02
NP-239	1.92E-04

Total Airborne Tritium Released	6.45E+01 Ci
Total Liquid Tritium Released	9.98E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.84E+09 liters
Volume of Dilution Water Used During Period	1.24E+12 liters

Installation: Oconee
Unit No.: 1&2&3

Location: 30 Mi W Greenville, SC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-269
Thermal Power(MWH): 1.91E+07
Commercial Operation: 07/15/73
Cooling Water Source: Lake Keowee

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 6.28E+06
Initial Criticality: 04/19/73

Unit Number: 2 Type: PWR
Docket Number: 50-270
Thermal Power(MWH): 1.81E+07
Commercial Operation: 09/09/74
Cooling Water Source: Lake Keowee

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 5.94E+06
Initial Criticality: 11/11/73

Unit Number: 3 Type: PWR
Docket Number: 50-287
Thermal Power(MWH): 1.66E+07
Commercial Operation: 12/16/74
Cooling Water Source: Lake Keowee

Licensee: Duke Power
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 5.45E+06
Initial Criticality: 09/05/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation
4	
64	
109	

Destination
Alaron to CNSI, Barnwell, SC
Barnwell, SC
SEG to CNSI, Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
AG-110M	1.14E+00	6.02E-01
BA-140	4.12E-03	7.54E-02
C-14	8.77E-02	3.23E-03
CE-144	8.23E-03	1.26E-02
CO-57	1.32E-03	1.25E-01
CO-58	1.68E+01	1.65E+01
CO-60	3.52E+00	2.71E+00
CR-51	8.23E-03	
CS-134	2.32E+01	2.15E+01
CS-136	1.64E-02	1.89E-02
CS-137	4.16E+01	4.82E+01
FE-55	4.13E+00	1.96E+00
H-3	7.06E-02	2.19E-04
I-131	2.43E-01	3.26E-01
LA-140	4.12E-03	2.51E-02
MN-54	5.80E-01	3.06E-01
NB-95	6.18E-02	8.14E-02
NI-63	6.20E+00	5.80E+00
NP-239		3.79E-02
PU-241	1.74E-01	3.70E-01
RU-103		3.14E-02
RU-106	7.82E-02	

Installation: Oconee
 Unit No.: 1&2&3

Location: 30 Mi W Greenville, SC

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

	Jan-June	July-Dec
A		
SB-125	1.20E+00	1.36E+00
SN-113	4.12E-03	
SR-90	2.95E-01	7.49E-02
TE-125M	4.39E-02	7.49E-02
Unidentified	2.64E-02	
XE-131	4.53E-02	
ZR-95	4.12E-03	2.52E-02
D		
AG-110M	9.27E+00	8.72E+00
C-14	1.41E-01	1.08E-01
CE-144	6.13E-01	5.67E-01
CO-57	5.34E-05	1.10E-02
CO-58	4.39E+01	4.90E+01
CO-60	1.25E+01	8.97E+01
CS-134	3.97E-03	9.87E-01
CS-137	1.08E-02	1.63E+00
FE-55	9.44E+00	7.24E+00
H-3	1.50E-01	2.06E-01
I-131		4.28E-04
MN-54	2.44E+00	2.20E+00
NB-95	6.54E+00	7.18E+00
NI-63	5.06E+00	3.73E+00
PU-241	7.23E-01	4.78E-01
RU-106	6.07E+00	5.31E+00
SB-124		1.10E-02
SB-125		2.56E-01
SR-90	1.40E-01	1.00E-01
TE-125M		1.10E-02
Unidentified	4.95E-02	
ZR-95	3.02E+00	3.33E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.20E+02	
	Ci 3.61E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.16E+02	compacted
	m3 4.88E+00	non-compacted
	Ci 3.94E+01	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe) Dewatered Mechanical Filters	m3 2.09E+01	
	Ci 3.47E+01	

Installation: Oyster Creek
Unit No.: 1

Location: 9 Mi S Toms River, NJ

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-219
Thermal Power(MWH): 1.41E+07
Commercial Operation: 12/01/69
Cooling Water Source: Barnegat Bay

Licensee: GPU Nuclear Corporation
Licensed Power(MWT): 1.93E+03
Net Electrical Power(MWH): 4.53E+06
Initial Criticality: 05/03/69

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	5.70E-03
MN-54	2.67E-04
CO-57	6.58E-07
CO-58	1.40E-04
CO-60	7.07E-04
KR-85M	4.38E+01
KR-87	4.57E+01
KR-88	6.07E+01
SR-89	2.75E-03
SR-90	1.90E-05
RU-103	2.90E-06
RU-106	8.58E-05
I-131	3.98E-02
I-132	6.25E-02
I-133	7.92E-02
XE-133	1.17E+02
I-134	8.84E-02
I-135	9.41E-02
XE-135	1.43E+02
XE-135M	7.77E-02
CS-137	1.21E-05
XE-138	1.20E-02
BA-140	7.55E-03
CE-141	5.67E-05

Total Airborne Tritium Released

1.09E+01 Ci

Installation: Oyster Creek
Unit No.: 1

Location: 9 Mi S Toms River, NJ

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-219
Thermal Power(MWH): 1.41E+07
Commercial Operation: 12/01/69
Cooling Water Source: Barnegat Bay

Licensee: GPU Nuclear Corporation
Licensed Power(MWT): 1.93E+03
Net Electrical Power(MWH): 4.53E+06
Initial Criticality: 05/03/69

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
63	Truck	Barnwell, SC
10	Truck	Oak Ridge, TN
4	Truck	Wampum, PA

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
C-14	6.00E-03	1.90E-02
CO-58		1.77E+00
CO-60	4.49E+01	3.82E+01
CR-51	1.26E+00	4.26E+00
CS-134	1.54E+00	1.76E+00
CS-137	9.75E+00	1.32E+01
FE-55	3.82E+01	3.08E+01
H-3	3.00E-03	3.00E-03
MN-54	2.39E+00	7.17E+00
NI-59	1.50E-02	1.60E-02
NI-63	3.75E-01	3.12E-01
PU-241	3.90E-02	6.60E-02
SR-90	1.08E-01	5.42E-01
B		
C-14	2.00E-03	2.00E-03
CO-60	3.44E+01	3.44E+01
CR-51	1.32E+00	1.32E+00
CS-134	1.85E+00	1.85E+00
CS-137	9.13E+00	9.12E+00
FE-55	5.05E+01	5.07E+01
H-3	4.00E-03	1.05E-01
MN-54	2.49E+00	2.50E+00
NI-59	9.00E-03	
NI-63	1.10E-01	
PU-241	2.80E-02	
SR-90	1.90E-02	
C		
AM-241		1.87E-09
AM-243		5.85E-11
C-14		8.13E-03
CM-242		1.66E-07
CM-243/244		1.91E-08
CO-58		1.70E-03
CO-60		4.36E+01
CR-51		4.69E-02
CS-137		3.32E-05

Installation: Oyster Creek
 Unit No.: 1

Location: 9 Mi S Toms River, NJ

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

C		
FE-55		4.86E+01
FE-59		2.90E-04
H-3		9.29E-05
MN-54		2.64E+00
NB-94		8.51E-05
NI-59		3.22E-02
NI-63		4.98E+00
NP-237		4.98E-10
PU-238		3.24E-06
PU-239/240		7.10E-09
PU-241		3.41E-05
PU-242		5.73E-12
TC-99		4.69E-05
D		
CO-58		4.00E-01
CO-60		4.46E+01
CS-134		6.00E-01
CS-137		1.57E+00
FE-55		4.69E+01
MN-54		4.10E+00
NI-63		1.62E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.75E+02 Ci 1.18E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 6.12E+01 m3 4.59E+02 Ci 8.30E+00	Burial Volume uncompacted
C. Irradiated Components, Control Rods, etc.	m3 2.28E+01 Ci 2.40E+04	
D. Other (describe) Filters	m3 1.02E+01 m3 7.81E+01 Ci 2.95E+02	uncompacted

Installation: Palisades
Unit No.: 1

Location: 5 Mi S South Haven, MI

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-255
Thermal Power(MWH): 1.56E+07
Commercial Operation: 12/31/71
Cooling Water Source: Lake Michigan

Licensee: Consumers Power
Licensed Power(MWT): 2.53E+03
Net Electrical Power(MWH): 4.87E+06
Initial Criticality: 05/24/71

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	6.30E-05
CR-51	2.58E-06
CO-58	1.12E-05
CO-60	1.03E-05
KR-85	1.84E+00
KR-85M	1.57E-05
SR-89	3.27E-06
SR-90	2.24E-06
I-131	7.24E-04
XE-131M	1.15E+00
I-133	6.37E-05
XE-133	7.11E+01
XE-133M	4.62E-01
XE-135	9.25E-02
CS-137	3.90E-06
Unidentified	1.95E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
CO-58	1.04E-03
CO-60	8.01E-04
SR-89	5.24E-06
SR-90	4.60E-06
CS-134	1.81E-05
CE-137	4.99E-04
CS-137	6.95E-04
Unidentified	8.15E-04

Total Airborne Tritium Released	6.25E+00 Ci
Total Liquid Tritium Released	8.09E+01 Ci
Volume of Waste Released (Prior to Dilution)	1.22E+06 liters
Volume of Dilution Water Used During Period	1.22E+11 liters

Installation: Palo Verde
Unit No.: 1

Location: 36 Mi W Phoenix, AZ

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-528
Thermal Power (MWH): 2.19E+07
Commercial Operation: 01/28/86
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power (MWT): 3.80E+03
Net Electrical Power (MWH): 7.12E+06
Initial Criticality: 05/25/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.15E+00
CR-51	6.42E-05
MN-54	1.02E-05
CO-58	1.35E-04
CO-60	4.20E-05
SE-75	9.20E-05
BR-82	1.43E-04
KR-85	5.48E+01
KR-85M	1.39E+00
KR-87	3.59E-01
KR-88	7.42E-01
RB-88	2.40E-02
SR-89	4.00E-06
SR-90	1.27E-06
NB-95	9.75E-05
ZR-95	5.77E-05
RU-103	4.40E-04
RU-106	1.29E-04
AG-110M	8.24E-06
TE-123M	5.37E-05
SB-124	2.75E-05
I-131	1.08E-02
XE-131M	3.33E+01
I-132	3.23E-03
I-133	6.57E-04
XE-133	2.07E+03
XE-133M	8.57E+00
CS-134	1.99E-05
I-134	3.37E-07
I-135	1.17E-04
XE-135	5.19E+01
XE-135M	1.28E+00
CS-137	1.68E-05
CS-138	3.02E-03
CE-141	5.35E-06
CE-144	1.71E-05

Total Airborne Tritium Released

3.43E+02 Ci

Installation: Palo Verde
Unit No.: 2

Location: 36 Mi W Phoenix, AZ

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-529
Thermal Power(MWH): 3.11E+07
Commercial Operation: 09/19/86
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 1.01E+07
Initial Criticality: 04/18/86

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.45E+00
BR-82	6.03E-05
KR-85	1.67E-01
RB-88	4.96E-06
SR-89	6.69E-06
SR-90	2.08E-07
TE-123M	2.85E-06
I-131	7.96E-06
XE-131M	1.74E-01
I-133	2.10E-07
XE-133	1.94E+02
XE-133M	6.59E-02
XE-135	5.53E+00

Total Airborne Tritium Released

3.55E+02 Ci

Installation: Palo Verde
Unit No.: 3

Location: 36 Mi W Phoenix, AZ

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-530
Thermal Power(MWH): 2.55E+07
Commercial Operation: 01/08/88
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 8.39E+06
Initial Criticality: 10/25/87

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	9.48E-01
CR-51	7.00E-05
MN-54	1.31E-05
CO-58	1.61E-04
CO-60	5.24E-05
SE-75	4.35E-06
BR-82	7.06E-04
KR-85	8.31E-01
KR-85M	2.87E-03
RB-88	8.01E-04
SR-89	1.48E-07
SR-90	9.21E-08
NB-95	1.98E-05
ZR-95	9.24E-06
RU-103	6.14E-05
SB-124	1.64E-05
I-131	1.51E-03
XE-131M	3.77E-02
I-132	2.40E-05
I-133	5.40E-04
XE-133	3.82E+01
XE-133M	3.82E-01
I-135	3.67E-04
XE-135	3.10E+00
CS-138	1.40E-06

Total Airborne Tritium Released

2.86E+02 Ci

Installation: Palo Verde
Unit No.: 1&2&3

Location: 36 Mi W Phoenix, AZ

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-528
Thermal Power(MWH): 2.19E+07
Commercial Operation: 01/28/86
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 7.12E+06
Initial Criticality: 05/25/85

Unit Number: 2 Type: PWR
Docket Number: 50-529
Thermal Power(MWH): 3.11E+07
Commercial Operation: 09/19/86
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 1.01E+07
Initial Criticality: 04/18/86

Unit Number: 3 Type: PWR
Docket Number: 50-530
Thermal Power(MWH): 2.55E+07
Commercial Operation: 01/08/88
Cooling Water Source: Sewage Treatment

Licensee: Arizona Public Service Co.
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 8.39E+06
Initial Criticality: 10/25/87

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
10	Truck	Barnwell, SC
65	Truck	Beatty, NV
79	Truck	Hanford, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A	Jan-June	Jul-Dec
AG-110M	2.73E-01	
BE-7		9.69E-02
C-14	1.21E+00	1.26E+00
CE-144	1.47E-01	
CO-58	4.46E+00	2.36E+00
CO-60	1.11E+01	1.07E+01
CR-51	1.69E+00	
CS-134	1.32E+01	1.37E+01
CS-137	2.76E+01	3.96E+01
FE-55	2.50E+01	2.29E+01
FE-59	1.57E-01	2.25E-01
H-3	5.34E-01	3.01E-01
MN-54	1.33E+00	7.26E-01
NB-95	1.11E+00	
NI-63	7.81E+00	5.24E+00
PU-241	1.48E-01	4.96E-02
RU-106	4.52E-01	1.32E-02
SB-124	2.66E+00	9.00E-01
SB-125	2.22E-01	3.99E-01
SF-90	2.99E-01	2.10E-01
TC-99	3.44E-02	2.70E-05
ZR-95	5.56E-01	

Installation: Palo Verde
 Unit No.: 1&2&3

Location: 36 Mi W Phoenix, AZ

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

B

AG-110M	6.75E-01	1.50E-01
C-14	5.00E-01	2.70E-01
CO-58	6.96E+00	7.65E+00
CO-60	2.45E+01	1.67E+01
CR-51		4.30E-01
CS-134	7.51E+00	8.65E+00
CS-137	1.89E+01	2.05E+01
FE-55	2.87E+01	2.89E+01
FE-59		5.00E-01
H-3	3.48E-01	7.20E-01
MN-54	8.02E-01	4.10E-01
NB-95	7.17E-01	1.20E+00
NI-63	5.81E+00	6.51E+00
RU-103		2.40E-01
SB-124	4.00E+00	6.43E+00
SB-125	4.18E-01	5.90E-01
SR-90	7.00E-03	

D

AG-110M		2.09E+00
C-14		3.02E+00
CE-144		2.36E+00
CO-57		1.97E+00
CO-58		2.84E+00
CO-60		2.38E+01
CS-134		1.96E+00
CS-137		4.15E+00
FE-55		3.44E+01
H-3		4.08E+00
NI-63		1.08E+01
RU-106		5.20E+00
SB-125		1.55E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.07E+02 Ci 1.17E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.00E+02 Ci 3.76E+02	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)		
Act. carbon, absorbed liquid	m3 1.72E+01 Ci 6.91E-02	

Installation: Peach Bottom
Unit No.: 2&3

Location: 17.9 Mi S Lancaster, PA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 2 Type: BWR
Docket Number: 50-277
Thermal Power(MWH): 1.78E+07
Commercial Operation: 07/05/74
Cooling Water Source: Susquehanna River
Unit Number: 3 Type: BWR
Docket Number: 50-278
Thermal Power(MWH): 2.25E+07
Commercial Operation: 12/23/74
Cooling Water Source: Susquehanna River

Licensee: PECO Energy Co.
Licensed Power(MWT): 3.44E+03
Net Electrical Power(MWH): 5.67E+06
Initial Criticality: 09/16/73

Licensee: PECO Energy Co.
Licensed Power(MWT): 3.44E+03
Net Electrical Power(MWH): 7.18E+06
Initial Criticality: 08/07/74

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-58	1.06E-06
CO-60	2.75E-06
ZN-65	5.96E-05
KR-85M	3.32E+02
KR-87	1.37E+02
KR-88	2.20E+02
SR-89	2.11E-03
SR-90	2.17E-05
SR-91	2.08E-03
Y-91M	2.21E-02
ZR-97	1.74E-05
MO-99	1.97E-05
TC-99M	2.32E-05
CD-109	2.18E-04
I-131	2.81E-02
XE-131M	2.44E+01
TE-132	1.33E-06
I-133	7.32E-02
XE-133	4.88E+03
XE-133M	5.38E+01
I-135	4.12E-02
XE-135	1.80E+03
XE-135M	3.90E+02
CS-137	7.82E-05
CS-138	1.09E-01
XE-138	1.42E+02
BA-139	2.28E-02
BA-140	1.32E-03
LA-140	8.33E-04
Unidentified	4.57E+02

Liquid Effluents

Nuclide Released	Activity (Ci)
P-32	6.15E-03
CR-51	4.51E-03
MN-54	2.27E-04
FE-55	5.19E-03
CO-58	5.32E-05
CO-60	2.54E-03

Installation: Peach Bottom
Unit No.: 2&3

Location: 17.9 Mi S Lancaster, PA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
ZN-65	3.14E-03
SR-89	4.23E-04
SR-90	2.89E-03
SR-91	1.58E-07
SR-92	5.31E-05
NB-95	4.95E-05
AG-110M	7.11E-04
I-131	2.08E-05
I-133	6.28E-06
XE-133	3.78E-02
XE-133M	1.74E-04
CS-134	3.93E-05
I-135	1.05E-06
XE-135	2.16E-02
XE-135M	8.17E-05
CS-137	1.65E-04

Total Airborne Tritium Released	3.97E+01 Ci
Total Liquid Tritium Released	1.77E+01 Ci
Volume of Waste Released (Prior to Dilution)	8.61E+06 liters
Volume of Dilution Water Used During Period	8.48E+10 liters

Installation: Peach Bottom
Unit No.: 2&3

Location: 17.9 Mi S Lancaster, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 2 Type: BWR
Docket Number: 50-277
Thermal Power(MWH): 1.78E+07
Commercial Operation: 07/05/74
Cooling Water Source: Susquehanna River

Licensee: PECO Energy Co.
Licensed Power(MWT): 3.44E+03
Net Electrical Power(MWH): 5.67E+06
Initial Criticality: 09/16/73

Unit Number: 3 Type: BWR
Docket Number: 50-278
Thermal Power(MWH): 2.25E+07
Commercial Operation: 12/23/74
Cooling Water Source: Susquehanna River

Licensee: PECO Energy Co.
Licensed Power(MWT): 3.44E+03
Net Electrical Power(MWH): 7.18E+06
Initial Criticality: 08/07/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
63		
95		Quadrex to burial
80		SEG to burial

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.22E+04 Ci 2.19E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.25E+03 Ci 8.53E+00	
C. Irradiated Components, Control Rods, etc.	m3 5.74E+01 Ci 2.23E+04	
D. Other (describe) Solidified liquid	m3 1.49E+02 Ci 6.16E-05	

Installation: Perry
Unit No.: 1

Location: 7 Mi NE Painesville, OH

Effluent and Waste Disposal Annual Report for 1992

Type: BWR

Licensee: Cleveland Electric
Illuminating Company
Licensed Power (MWT): 3.58E+03
Net Electrical Power (MWH): 7.17E+06
Initial Criticality: 06/06/86

Docket Number: 50-440
Thermal Power (MWH): 2.19E+07
Commercial Operation: 11/18/87
Cooling Water Source: Lake Erie

Airborne Effluents

Nuclide Released	Activity (Ci)
KR-85M	8.17E+00
KR-87	5.04E-01
KR-88	2.35E+00
SR-89	3.96E-04
SR-90	2.21E-06
SR-91	4.99E-03
Y-91M	4.76E-03
I-131	1.52E-01
XE-131M	4.51E-02
I-132	2.45E-02
I-133	1.60E-01
XE-133	1.28E+02
XE-133M	2.21E+00
I-135	2.20E-02
XE-135	1.03E+02
XE-135M	5.64E+01
XE-137	7.95E-01
CS-138	1.22E-01
XE-138	2.58E+01
BA-139	1.15E-01
LA-140	2.63E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	1.71E-02
MN-54	2.25E-03
FE-55	4.49E-03
CO-58	8.04E-04
FE-59	7.89E-04
CO-60	1.78E-02
ZN-65	1.03E-02
SR-89	1.51E-03
NB-95	9.09E-06
TC-99M	6.73E-04
AG-110M	1.36E-04
SB-124	3.83E-05
SB-125	4.04E-05
I-131	7.38E-04
I-133	5.49E-05
XE-133	5.34E-02
XE-133M	3.66E-04
CS-134	2.77E-04
XE-135	1.66E-02

Installation: Perry
Unit No.: 1

Location: 7 Mi NE Painesville, OH

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)	
CS-137	4.72E-04	
CS-138	4.63E-04	
LA-140	1.66E-03	
CE-141	3.09E-05	
NP-239	1.19E-04	
Total Airborne Tritium Released		5.69E-02 Ci
Total Liquid Tritium Released		9.27E+00 Ci
Volume of Waste Released (Prior to Dilution)		1.10E+10 liters
Volume of Dilution Water Used During Period		6.02E+10 liters

Installation: Perry
Unit No.: 1

Location: 7 Mi NE Painesville, OH

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR

Licensee: Cleveland Electric
Illuminating Company
Licensed Power(MWT): 3.58E+03
Net Electrical Power(MWH): 7.17E+06
Initial Criticality: 06/06/86

Docket Number: 50-440
Thermal Power(MWH): 2.19E+07
Commercial Operation: 11/18/87
Cooling Water Source: Lake Erie

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
19	Truck	Barnwell, SC
28	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

C-14	1.65E-02	4.37E-02
CO-58	1.72E+00	1.78E+00
CO-60	2.13E+01	1.60E+01
CR-51	4.32E-01	9.47E+00
CS-134		1.93E+00
CS-137	3.96E+00	2.06E+00
FE-55	3.59E+01	2.90E+01
H-3	1.19E-01	2.70E-01
I-129		2.52E-09
MN-54	4.39E+00	4.48E+00
NI-63	2.36E-01	1.70E-01
PU-241	2.89E-02	4.54E-02
SR-90	1.75E-02	4.94E-02
TC-99	1.76E-05	1.95E-07
ZN-65	3.22E+01	3.48E+01

B

C-14	1.97E-05	3.61E-06
CO-60	6.69E-01	1.22E-01
FE-55	6.58E+00	1.20E+00
H-3	1.35E-05	2.47E-06
MN-54	4.69E-01	8.53E-02
TC-99	1.41E-06	2.57E-07

Installation: Perry
Unit No.: 1

Location: 7 Mi NE Painesville, OH

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.76E+02 Ci 2.32E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 9.06E+02 Ci 9.13E+00	Non-compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Pilgrim
Unit No.: 1

Location: 25 Mi SE Boston, MA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-293
Thermal Power(MWH): 1.43E+07
Commercial Operation: 12/01/72
Cooling Water Source: Cape Cod Bay

Licensee: Boston Edison
Licensed Power(MWT): 2.00E+03
Net Electrical Power(MWH): 4.74E+06
Initial Criticality: 06/16/72

Airborne Effluents

Nuclide Released	Activity (Ci)
N-13	3.76E+00
CR-51	5.56E-05
MN-54	9.84E-08
CO-60	3.73E-05
KR-85M	5.15E+01
KR-87	6.05E+01
KR-88	6.00E+01
SR-89	5.37E-03
SR-90	2.80E-05
AG-110M	1.03E-07
I-131	3.22E-02
I-133	1.79E-01
XE-133	1.01E+02
XE-135	2.71E+02
XE-135M	1.33E+02
CS-137	8.13E-06
XE-138	4.94E+02
BA/LA-140	8.39E-03
CE-141	4.54E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	5.64E-05
MN-54	2.31E-04
FE-55	3.23E-04
CO-58	9.11E-05
CO-60	1.81E-03
ZN-65	2.01E-06
SR-89	2.11E-04
SR-90	2.34E-05
ZR/NB-95	6.48E-07
RU-103	1.29E-06
AG-110M	4.26E-06
I-131	8.55E-06
CS-134	4.70E-09
CS-137	5.35E-04
BA/LA-140	6.11E-05
CE-141	1.10E-06
CE-PR-144	2.01E-06

Total Airborne Tritium Released	2.30E+01 Ci
Total Liquid Tritium Released	1.46E-02 Ci
Volume of Waste Released (Prior to Dilution)	1.99E+05 liters
Volume of Dilution Water Used During Period	2.64E+09 liters

Installation: Pilgrim
Unit No.: 1

Location: 25 Mi SE Boston, MA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR Licensee: Boston Edison
Docket Number: 50-293 Licensed Power(MWT): 2.00E+03
Thermal Power(MWH): 1.43E+07 Net Electrical Power(MWH): 4.74E+06
Commercial Operation: 12/01/72 Initial Criticality: 06/16/72
Cooling Water Source: Cape Cod Bay

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
3	Tractor-Trailer	Alaron, Wampum, PA/CNSI, SC
21	Tractor-Trailer	CNSI, Barnwell, SC
4	Tractor-Trailer	Quadrex, Oak Ridge, TN/CNSI, SC
6	Tractor-Trailer	SEG, Oak Ridge, TN/CNSI, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
AM-241	2.00E-03	
BA-140	4.57E+00	7.10E-01
C-14	2.08E-01	5.30E-02
CE-141	6.35E-01	1.20E-02
CE-144	4.93E+00	5.88E-01
CO-58	1.14E+00	4.87E+00
CO-60	3.80E+01	4.58E+01
CR-51	3.28E+00	3.78E+00
CS-134	6.04E-01	3.20E-02
CS-137	2.37E+01	2.06E+00
FE-55	1.46E+01	2.68E+01
FE-59	7.00E-01	1.61E+00
H-3	3.10E-02	2.00E-03
I-131	2.74E-01	1.00E-01
LA-140	3.39E-01	2.81E-01
MN-54	5.75E+00	1.17E+01
MO-99		1.80E-02
NI-63	8.95E-01	7.03E-01
PU-241	1.05E-01	2.70E-02
SR-89	1.37E-01	4.50E-02
SR-90	1.02E-01	3.50E-02
ZN-65		7.68E-01

B

AM-241	1.00E-02	1.00E-02
CE-144	4.70E-01	4.70E-01
CM-242	1.00E-02	1.00E-02
CM-243/244	1.00E-02	1.00E-02
CO-58	8.51E-01	8.51E-01
CO-60	1.75E+01	1.75E+01
CR-51	8.91E-01	8.91E-01
CS-134	1.20E-01	1.20E-01
CS-137	1.76E+00	1.76E+00

Installation: Pilgrim
 Unit No.: 1

Location: 25 Mi SE Boston, MA

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

	Jan-June	July-Dec
B		
FE-55	7.04E+01	7.04E+01
FE-59	1.14E+00	1.14E+00
MN-54	4.69E+00	4.69E+00
NE-95	2.80E-01	2.80E-01
NI-59	1.00E-02	1.00E-02
NI-63	1.31E+00	1.31E+00
PU-238	1.00E-02	1.00E-02
PU-239/240	1.00E-02	1.00E-02
PU-241	1.30E-01	1.30E-01
RU-103	8.01E-02	8.01E-02
SR-89	2.50E-01	2.50E-01
SR-90	9.01E-02	9.01E-02

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.19E+02 Ci 5.39E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.88E+01 Ci 6.23E+00	Burial Volume-after reduction
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Point Beach
Unit No.: 1&2

Location: 15 Mi N Manitowoc, WI

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR

Licensee: Wisconsin Electric Power
Company

Docket Number: 50-266

Licensed Power (MWT): 1.52E+03

Thermal Power (MWH): 1.11E+07

Net Electrical Power (MWH): 3.60E+06

Commercial Operation: 12/21/70

Initial Criticality: 11/02/70

Cooling Water Source: Lake Michigan

Unit Number: 2 Type: PWR

Licensee: Wisconsin Electric Power
Company

Docket Number: 50-301

Licensed Power (MWT): 1.52E+03

Thermal Power (MWH): 1.12E+07

Net Electrical Power (MWH): 3.67E+06

Commercial Operation: 10/01/72

Initial Criticality: 05/30/72

Cooling Water Source: Lake Michigan

Airborne Effluents

Nuclide Released	Activity (Ci)
F-18	3.83E-04
AR-41	1.21E+00
CR-51	6.25E-09
CO-57	1.40E-10
CO-58	6.32E-06
CO-60	4.05E-05
ZN-65	1.73E-09
BR-82	5.86E-10
KR-85	1.08E+00
KR-85M	8.18E-02
KR-87	1.43E-01
KR-88	2.50E-01
RB-88	4.74E-03
SR-89	3.70E-06
SR-90	3.20E-07
NB-95	1.49E-10
ZR-97	6.99E-09
MO-99	3.29E-04
I-130	3.05E-05
I-131	1.82E-03
XE-131M	3.56E-01
I-132	3.99E-04
TE-132	8.62E-07
I-133	1.49E-03
XE-133	4.58E+01
XE-133M	1.23E-01
CS-134	2.28E-03
I-134	3.93E-06
I-135	4.86E-04
XE-135	6.41E-01
XE-135M	2.73E-01
CS-136	2.21E-06
CS-137	2.60E-03
CS-138	6.67E-04
XE-138	6.02E-01
CE-144	7.34E-09
AU-198	2.24E-05

Installation: Point Beach
Unit No.: 1&2

Location: 15 Mi N Manitowoc, WI

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents

Nuclide Released	Activity (Ci)
F-18	5.19E-02
CR-51	8.27E-05
MN-54	8.46E-04
MN-56	5.20E-04
CO-57	7.86E-06
CO-58	3.19E-03
CO-60	4.76E-03
ZN-65	6.74E-06
ZN-69M	9.74E-05
SR-89	5.00E-05
SR-90	3.10E-04
SR-92	8.88E-05
NE-95	1.78E-04
ZR-95	9.30E-05
NE-97	5.27E-05
AG-110M	1.11E-04
SE-125	7.52E-02
I-131	1.71E-02
I-132	1.84E-02
TE-132	6.92E-06
I-133	5.77E-02
CS-134	7.64E-02
I-134	8.52E-03
I-135	1.91E-02
CS-136	5.15E-04
CS-137	9.32E-02
LA-140	2.69E-06
BA-141	4.95E-04
CE-141	2.70E-04
HG-203	3.14E-06

Total Airborne Tritium Released	9.88E+01 Ci
Total Liquid Tritium Released	4.16E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.15E+08 liters
Volume of Dilution Water Used During Period	6.06E+11 liters

Installation: Point Beach
Unit No.: 1&2

Location: 15 Mi N Manitowoc, WI

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-266
Thermal Power(MWH): 1.11E+07
Commercial Operation: 12/21/70
Cooling Water Source: Lake Michigan

Licensee: Wisconsin Electric Power
Company
Licensed Power(MWT): 1.52E+03
Net Electrical Power(MWH): 3.60E+06
Initial Criticality: 11/02/70

Unit Number: 2 Type: PWR
Docket Number: 50-301
Thermal Power(MWH): 1.12E+07
Commercial Operation: 10/01/72
Cooling Water Source: Lake Michigan

Licensee: Wisconsin Electric Power
Company
Licensed Power(MWT): 1.52E+03
Net Electrical Power(MWH): 3.67E+06
Initial Criticality: 05/30/72

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
65		Barnwell, SC
7		Beatty, NV

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 3.26E+01 Ci 3.68E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 6.07E+01 Ci 3.03E+00	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Scrap Metal	m3 1.04E+01 Ci 9.59E-02	

Installation: Prairie Island
Unit No.: 1&2

Location: 26 Mi SE Minneapolis, MN

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-282
Thermal Power(MWH): 1.11E+07
Commercial Operation: 12/16/73
Cooling Water Source: Mississippi River
Unit Number: 2 Type: PWR
Docket Number: 50-306
Thermal Power(MWH): 1.03E+07
Commercial Operation: 12/21/74
Cooling Water Source: Mississippi River

Licensee: Northern States Power
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.50E+06
Initial Criticality: 12/01/73

Licensee: Northern States Power
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.22E+06
Initial Criticality: 12/17/74

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	2.81E-10
MN-54	3.80E-08
CO-58	8.97E-06
CO-60	1.67E-06
BR-82	3.07E-06
KR-85	1.39E+00
SR-89	2.37E-05
SR-90	8.02E-07
NB-95	5.47E-06
ZR-95	3.36E-06
NB-97	2.35E-05
AG-110M	7.01E-07
I-131	1.89E-04
XE-131M	2.41E-02
I-132	5.73E-10
TE-132	3.61E-07
I-133	3.07E-06
XE-133	2.36E+01
XE-133M	1.68E-01
CS-134	1.07E-05
I-134	5.29E-10
I-135	4.87E-07
XE-135	2.00E-01
XE-135M	5.72E-04
CS-136	2.35E-07
CS-137	9.24E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	1.67E-03
NA-24	1.79E-05
SC-47	1.01E-03
CR-51	2.33E-02
MN-54	3.38E-03
FE-55	2.67E-01
CO-57	2.48E-04
CO-58	1.33E-01
FE-59	1.56E-02
CO-60	3.56E-02

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CU-64	2.38E-03
ZN-65	5.22E-05
KR-85M	3.18E-06
SR-92	3.64E-05
Y-93	5.08E-05
NB-95	4.94E-04
ZR-95	1.02E-03
NB-97	1.96E-05
ZR-97	8.63E-06
MO-99	2.95E-05
TC-99M	3.57E-05
RU-103	3.17E-06
RH-105	5.52E-05
AG-108M	2.66E-06
AG-110M	6.52E-02
SN-113	4.84E-03
SB-122	6.13E-03
SB-124	5.46E-02
SB-125	4.58E-02
SB-126	1.92E-04
I-131	3.12E-03
TE-132	7.88E-06
I-133	1.17E-05
XE-133	4.88E-02
XE-133M	1.32E-05
CS-134	3.50E-04
I-134	4.97E-06
XE-135	5.03E-04
XE-135M	1.94E-05
CS-137	7.27E-04
LA-140	4.51E-04
W-187	7.13E-05

Total Airborne Tritium Released	4.24E+01 Ci
Total Liquid Tritium Released	4.72E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.20E+08 liters
Volume of Dilution Water Used During Period	6.04E+11 liters

Installation: Prairie Island
Unit No.: 1&2

Location: 26 Mi SE Minneapolis, MN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-282
Thermal Power(MWH): 1.11E+07
Commercial Operation: 12/16/73
Cooling Water Source: Mississippi River

Licensee: Northern States Power
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.50E+06
Initial Criticality: 12/01/73

Unit Number: 2 Type: PWR
Docket Number: 50-306
Thermal Power(MWH): 1.03E+07
Commercial Operation: 12/21/74
Cooling Water Source: Mississippi River

Licensee: Northern States Power
Licensed Power(MWT): 1.65E+03
Net Electrical Power(MWH): 3.22E+06
Initial Criticality: 12/17/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
1	Truck	Oak Ridge, TN
1	Truck	Quadrex, Oak Ridge, TN
4	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A			
	AG-110M		1.22E+00
	C-14		8.75E+00
	CO-58		1.78E+00
	CO-60		7.15E+00
	CS-137		7.20E-01
	FE-55		7.18E+01
	NI-63		8.33E+00
B			
	AG-110M	7.00E-01	
	C-14		4.70E-01
	CO-58	2.50E+00	5.05E+01
	CO-60	4.14E+01	7.23E+00
	CR-51		1.26E+00
	CS-137	3.30E+00	
	FE-55	1.82E+01	2.37E+01
	MN-54	2.20E+00	2.57E+00
	NB-95	1.00E+00	1.71E+00
	NI-63	2.75E+01	9.11E+00
	SB-125	1.50E+00	
	ZR-95		3.53E+00

Installation: Prairie Island
Unit No.: 1&2

Location: 26 Mi SE Minneapolis, MN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.04E+01 Ci 2.71E+01	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.97E-01 m3 2.34E+01 m3 4.76E-01 Ci 8.05E-01	non-compacted compacted non-compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Quad-Cities
Unit No.: 1&2

Location: 20 Mi NE Moline, IL

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-254
Thermal Power(MWH): 1.35E+07
Commercial Operation: 02/18/73
Cooling Water Source: Mississippi River
Unit Number: 2 Type: BWR
Docket Number: 50-265
Thermal Power(MWH): 1.26E+07
Commercial Operation: 03/10/73
Cooling Water Source: Mississippi River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 2.51E+03
Net Electrical Power(MWH): 4.17E+06
Initial Criticality: 10/18/71

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 2.51E+03
Net Electrical Power(MWH): 3.90E+06
Initial Criticality: 04/26/72

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.31E+00
CR-51	2.20E-03
MN-54	3.78E-03
CO-58	6.56E-04
CO-60	2.03E-02
ZN-65	1.92E-04
KR-85M	2.20E+00
KR-87	1.25E+00
KR-88	2.15E+00
SR-89	8.23E-04
SR-90	3.71E-06
ZR-95	1.52E-05
MO-99	1.44E-03
AG-110M	7.89E-06
I-131	1.16E-03
I-133	5.78E-03
XE-133	9.24E+00
I-135	4.19E-04
XE-135	1.42E+00
XE-135M	5.47E+00
CS-137	1.09E-03
XE-138	2.23E+01
BA-140	4.39E-04
LA-140	8.61E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	7.66E-03
MN-54	3.02E-03
FE-55	1.51E-03
CO-58	1.71E-03
CO-60	1.63E-02
ZN-65	4.84E-04
AS-76	1.65E-04
SR-89	8.55E-04
SR-90	5.15E-05
NB-95	3.38E-05
MO-99	3.24E-05
TC-99M	3.75E-05

Installation: Quad-Cities
Unit No.: 1&2

Location: 20 Mi NE Moline, IL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
AG-110M	2.47E-05
SB-124	8.74E-05
SB-125	8.56E-05
XE-133	4.19E-04
CS-134	5.13E-05
XE-135	4.45E-04
CS-137	7.07E-03

Total Airborne Tritium Released	4.51E+01 Ci
Total Liquid Tritium Released	1.25E+01 Ci
Volume of Waste Released (Prior to Dilution)	2.74E+06 liters
Volume of Dilution Water Used During Period	1.31E+12 liters

Installation: Quad-Cities
Unit No.: 1&2

Location: 20 Mi NE Moline, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-254
Thermal Power(MWH): 1.35E+07
Commercial Operation: 02/18/73
Cooling Water Source: Mississippi River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 2.51E+03
Net Electrical Power(MWH): 4.17E+06
Initial Criticality: 10/18/71

Unit Number: 2 Type: BWR
Docket Number: 50-265
Thermal Power(MWH): 1.26E+07
Commercial Operation: 03/10/73
Cooling Water Source: Mississippi River

Licensee: Commonwealth Edison Co.
Licensed Power(MWT): 2.51E+03
Net Electrical Power(MWH): 3.90E+06
Initial Criticality: 04/26/72

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
57	CNSI	Barnwell, SC
3	Hittman	Barnwell, SC
2	Raytech	Barnwell, SC
2	Tri-State	Barnwell, SC
9	Raytech	Channahan
13	Kindrick	Quadrex
1	Hittman	SEG
3	CNSI	U.S. Ecology, WA

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 4.33E+02 Ci 2.66E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 Ci	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Rancho Seco
Unit No.: 1

Location: 25 Mi SE Sacramento, CA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-312
Thermal Power(MWH): 0.00E+00
Commercial Operation: 04/17/75
Cooling Water Source: Folsom Canal

Licensee: Sacramento Municipal Utility
Licensed Power(MWT): 2.77E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 09/16/74

Airborne Effluents

Nuclide Released	Activity (Ci)
KR-85	6.93E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
CO-60	1.78E-05
SR-90	1.53E-06
CS-134	2.99E-05
CS-137	4.34E-04

Total Airborne Tritium Released	1.84E+01 Ci
Total Liquid Tritium Released	2.42E+01 Ci
Volume of Waste Released (Prior to Dilution)	1.06E+07 liters
Volume of Dilution Water Used During Period	1.85E+10 liters

Installation: Rancho Seco
Unit No.: 1

Location: 25 Mi SE Sacramento, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-312
Thermal Power(MWH): 0.00E+00
Commercial Operation: 04/17/75
Cooling Water Source: Folsom Canal

Licensee: Sacramento Municipal Utility
Licensed Power(MWT): 2.77E+03
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 09/16/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
2	Highway	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CO-60		3.00E+00
CS-134		6.30E+00
CS-137		6.46E+01
FE-55		6.90E+00
H-3		5.50E+00
NI-63		9.30E+00
Others		1.70E+00
SR-90		2.70E+00
B		
CO-60		3.50E+00
CS-134		1.00E+01
CS-137		5.97E+01
FE-55		1.08E+01
H-3		1.10E+00
NI-63		1.20E+01
Others		1.90E+00
SR-90		1.00E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.97E+01	Non-compacted, Burial Volume
	Ci 2.93E+00	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.20E+01	Non-compacted, Volume Reduction
	m3 5.00E+00	Non-compacted & compacted - Burial Volume
	Ci 7.47E-01	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: River Bend
Unit No.: 1

Location: 24 Mi NNW Baton Rouge, LA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-458
Thermal Power(MWH): 8.77E+06
Commercial Operation: 06/16/86
Cooling Water Source: Mississippi River

Licensee: Gulf States Utilities Co
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 2.76E+06
Initial Criticality: 10/31/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	6.97E-01
CR-51	3.44E-06
MN-54	2.38E-06
CO-60	1.77E-04
KR-85M	4.72E+01
KR-87	5.95E+01
KR-88	9.73E+01
SR-89	4.36E-04
SR-90	2.89E-06
I-131	8.16E-03
I-133	7.36E-02
XE-133	6.38E+01
I-135	6.56E-03
XE-135	7.75E+01
XE-135M	2.98E+01
CS-137	5.32E-07
XE-138	9.03E+01
BA-140	5.55E-04
CE-141	2.81E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.87E-05
CR-51	1.31E-01
MN-54	1.96E-01
FE-55	1.71E-01
CO-57	6.14E-06
CO-58	2.75E-02
FE-59	1.35E-02
CO-60	9.92E-01
ZN-65	3.40E-02
AS-76	2.12E-04
SR-89	8.45E-03
SR-90	7.64E-04
SR-91	5.78E-05
Y-91M	9.83E-05
SR-92	5.45E-04
Y-92	2.40E-03
NB-95	3.31E-03
ZR-95	1.31E-03
NB-97	2.71E-03
MO-99	2.49E-03
TC-99M	1.32E-03
RU-103	2.03E-03

Installation: River Bend
Unit No.: 1

Location: 24 Mi NNW Baton Rouge, LA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
RH-105	7.47E-04
RU-105	8.66E-04
AG-110M	1.99E-03
SN-113	3.26E-04
SB-122	2.61E-04
SB-124	6.01E-03
I-131	1.95E-03
XE-131M	3.96E-04
TE-132	1.92E-04
I-133	6.89E-04
XE-133	1.16E-01
XE-133M	4.38E-03
XE-135	1.92E-01
XE-135M	1.20E-04
CS-137	6.92E-04
BA-140	2.90E-03
LA-140	4.29E-02
CE-141	5.02E-03
CE-144	9.81E-04
W-187	2.67E-04
NP-239	1.68E-03

Total Airborne Tritium Released	2.33E+00 Ci
Total Liquid Tritium Released	2.34E+01 Ci
Volume of Waste Released (Prior to Dilution)	3.50E+07 liters
Volume of Dilution Water Used During Period	4.09E+09 liters

Installation: River Bend
Unit No.: 1

Location: 24 Mi NNW Baton Rouge, LA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-458
Thermal Power(MWH): 8.77E+06
Commercial Operation: 06/16/86
Cooling Water Source: Mississippi River

Licensee: Gulf States Utilities Co
Licensed Power(MWT): 2.89E+03
Net Electrical Power(MWH): 2.76E+06
Initial Criticality: 10/31/85

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
74	Truck	Barnwell, SC
52	Truck	Beatty, NV

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

BA/LA-140	2.20E-01	4.88E-01
C-14	1.19E-01	7.70E-02
CE-144	5.30E-02	2.80E-02
CO-58	1.10E+00	1.29E+00
CO-60	6.60E+01	6.23E+01
CR-51	2.10E-02	3.98E+00
CS-134	1.67E+00	2.37E-01
CS-137	2.69E+00	4.00E-01
FE-55	1.57E+01	1.81E+01
H-3	4.00E-02	1.20E-02
I-131		2.20E-02
MN-54	6.79E+00	7.99E+00
NB-95	8.50E-02	
NI-63	4.32E-01	5.31E-01
PU-241		1.10E-02
SR-89	1.77E+00	1.18E+00
SR-90	9.24E-01	9.30E-02
ZN-65	2.25E+00	3.20E+00

B

CO-58	1.38E+00	2.13E+00
CO-60	2.57E+01	2.28E+01
CR-51	8.42E+00	1.55E+01
CS-137	2.34E+00	2.01E+00
FE-55	5.02E+01	4.60E+01
FE-59	8.10E-02	1.57E+00
MN-54	4.96E+00	5.11E+00
SR-89	3.17E+00	
SR-90	2.00E-02	
ZN-65	3.01E+00	3.23E+00

Installation: River Bend
Unit No.: 1

Location: 24 Mi NNW Baton Rouge, LA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.19E+02 Ci 3.08E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.11E+02 Ci 7.38E+00	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: H. B. Robinson
Unit No.: 2

Location: 4.5 Mi WNW Hartsville, SC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-261
Thermal Power(MWH): 1.29E+07
Commercial Operation: 03/07/71
Cooling Water Source: Robinson Impoundment

Licensee: Carolina Power & Light
Licensed Power(MWT): 2.30E+03
Net Electrical Power(MWH): 4.06E+06
Initial Criticality: 09/20/70

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.98E-01
CR-51	3.37E-06
MN-54	1.39E-06
CO-57	1.56E-07
CO-58	9.35E-05
FE-59	5.42E-07
CO-60	3.75E-05
KR-85	7.00E+00
KR-85M	9.02E-05
AG-110M	1.22E-06
I-131	1.21E-06
XE-131M	3.64E-04
I-133	3.57E-06
XE-133	2.80E-01
XE-133M	1.21E-03
XE-135	4.72E-03
CS-137	5.10E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
AR-41	1.22E-05
CR-51	6.48E-03
MN-54	8.81E-04
FE-55	4.07E-02
CO-57	2.36E-04
CO-58	6.34E-02
FE-59	2.41E-04
CO-60	4.34E-02
KR-85M	5.39E-06
SR-89	1.66E-05
NB-95	1.31E-03
ZR-95	5.25E-04
NB-97	3.11E-05
ZR-97	3.38E-05
RU-106	6.01E-04
AG-110M	9.03E-03
SN-113	7.62E-05
SB-124	7.72E-03
SB-125	4.34E-02
I-131	5.65E-06
XE-131M	9.94E-05
TE-132	2.00E-05
I-133	5.13E-06
XE-133	4.68E-02

Installation: H. B. Robinson
Unit No.: 2

Location: 4.5 Mi WNW Hartsville, SC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-133M	6.39E-04
CS-134	2.08E-05
XE-135	4.42E-04
CS-137	1.44E-03
CE-144	5.09E-06

Total Airborne Tritium Released	4.26E+00 Ci
Total Liquid Tritium Released	3.94E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.33E+06 liters
Volume of Dilution Water Used During Period	8.25E+11 liters

Installation: H. B. Robinson
Unit No.: 2

Location: 4.5 Mi WNW Hartsville, SC

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWF Licensee: Carolina Power & Light
Docket Number: 50-261 Licensed Power(MWT): 2.30E+03
Thermal Power(MWH): 1.29E+07 Net Electrical Power(MWH): 4.06E+06
Commercial Operation: 03/07/71 Initial Criticality: 09/20/70
Cooling Water Source: Robinson Impoundment

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
92	Sole Use Vehicle	Barnwell, SC

Irradiated Fuel Shipments (Disposition)

Number of Shipments	Mode of Transportation	Destination
3	Sole Use Rail	CP&L, Harris Nuclear Project

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
AG-110M		2.06E-01
CO-58	2.43E+00	3.31E+01
CO-60	3.03E+01	2.11E+01
CS-137	1.61E+01	4.53E-01
FE-55	1.75E+01	3.52E+01
MN-54	5.06E+00	1.21E+00
NI-63	2.48E+01	6.28E+00
Others	3.72E+00	4.97E-01
SB-125		3.10E-01
B		
CO-58	2.56E+01	2.58E+01
CO-60	2.98E+01	2.96E+01
CR-51	4.64E+00	4.78E+00
FE-55	2.47E+01	2.45E+01
NB-95	3.26E+00	
NI-63	6.78E+00	6.75E+00
Others	1.49E+00	8.61E+00
ZR-95	3.75E+00	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.97E+01 Ci 4.44E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.28E+01 Ci 2.74E+00	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Salem
Unit No.: 1

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-272
Thermal Power(MWH): 1.67E+07
Commercial Operation: 06/30/77
Cooling Water Source: Delaware River

Licensee: PSE&G
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 5.30E+06
Initial Criticality: 12/11/76

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.41E-02
CO-58	4.88E-06
CO-60	3.58E-05
KR-85	2.11E+00
KR-85M	3.36E-02
KR-87	3.57E-03
KR-88	2.49E-02
I-131	3.38E-04
XE-131M	1.07E+00
XE-133	6.68E+02
XE-133M	9.58E-01
XE-135	2.74E+00
CS-137	4.55E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	8.74E-05
NA-24	3.99E-04
CR-51	4.30E-03
MN-54	7.24E-02
FE-55	1.10E-01
CO-57	1.26E-02
CO-58	2.33E+00
FE-59	1.20E-04
CO-60	2.52E-01
ZN-65	8.75E-04
SR-90	3.48E-04
NB-95	6.37E-03
ZR-95	2.90E-03
NB-97	3.99E-04
TC-99M	8.23E-05
RU-105	4.58E-04
AG-110M	8.38E-03
SN-113	3.91E-04
SB-122	8.54E-05
SB-124	1.37E-02
SB-125	7.27E-02
SB-126	3.54E-05
I-131	3.06E-02
XE-131M	7.67E-03
I-133	1.75E-03
XE-133	6.53E-01
XE-133M	3.00E-03
CS-134	1.64E-01

Installation: Salem
Unit No.: 1

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-135	4.13E-03
CS-136	1.20E-03
CS-137	1.86E-01
LA-140	6.26E-05
CE-141	3.69E-05

Total Airborne Tritium Released	7.65E+01 Ci
Total Liquid Tritium Released	2.45E+02 Ci
Volume of Waste Released (Prior to Dilution)	6.75E+06 liters
Volume of Dilution Water Used During Period	1.35E+12 liters

Installation: Salem
Unit No.: 2

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-311
Thermal Power(MWH): 1.50E+07
Commercial Operation: 10/13/81
Cooling Water Source: Delaware River

Licensee: PSE&G
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 4.72E+06
Initial Criticality: 08/08/80

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-58	9.78E-06
CO-60	1.77E-05
KR-85	5.10E-01
KR-85M	8.19E-03
KR-88	2.27E-03
I-131	4.35E-05
XE-131M	1.23E-01
XE-133	2.65E+02
XE-133M	1.14E-01
XE-135	2.09E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	2.20E-04
NA-24	7.33E-04
CR-51	3.63E-03
MN-54	9.15E-02
FE-55	6.19E-02
CO-57	1.42E-02
CO-58	2.57E+00
FE-59	1.61E-04
CO-60	2.61E-01
ZN-65	1.38E-03
SR-89	5.66E-04
SR-90	4.53E-04
SR-92	1.83E-05
NB-95	5.35E-03
ZR-95	2.06E-03
NB-97	9.37E-04
TC-99M	2.75E-04
RU-105	2.78E-04
AG-110M	6.16E-03
SN-113	8.51E-05
SB-122	1.12E-04
SB-124	1.20E-02
SB-125	8.29E-02
I-131	4.35E-02
XE-131M	4.77E-03
I-133	2.16E-03
XE-133	7.15E-01
XE-133M	8.90E-04
CS-134	2.32E-01
XE-135	2.18E-03
CS-136	1.82E-03

Installation: Salem
Unit No.: 2

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
CS-137	2.34E-01
CS-138	4.73E-05
BA-140	2.28E-04
LA-140	6.51E-05
CE-144	2.44E-04

Total Airborne Tritium Released	6.55E+01 Ci
Total Liquid Tritium Released	2.25E+02 Ci
Volume of Waste Released (Prior to Dilution)	7.04E+06 liters
Volume of Dilution Water Used During Period	1.28E+12 liters

Installation: Salem
Unit No.: 1&2

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-272
Thermal Power(MWH): 1.67E+07
Commercial Operation: 06/30/77
Cooling Water Source: Delaware River

Licensee: PSE&G
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 5.30E+06
Initial Criticality: 12/11/76

Unit Number: 2 Type: PWR
Docket Number: 50-311
Thermal Power(MWH): 1.50E+07
Commercial Operation: 10/13/81
Cooling Water Source: Delaware River

Licensee: PSE&G
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 4.72E+06
Initial Criticality: 08/08/80

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
23	Truck	Barnwell, SC
5	Truck	Oak Ridge, TN
1	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A			
	AG-110M		2.00E+00
	CE-144		1.10E+00
	CO-58	6.42E+01	8.90E+00
	CO-60	8.50E+00	9.30E+00
	CS-134	5.40E+00	2.21E+01
	CS-137	4.90E+00	2.13E+01
	FE-55	7.10E+00	2.55E+01
	MN-54	1.50E+00	1.60E+00
	NI-63	8.00E+00	7.60E+00
B			
	CO-58	1.98E+01	1.98E+01
	CO-60	1.20E+01	1.20E+01
	CS-134	1.40E+00	1.40E+00
	CS-137	1.90E+00	1.90E+00
	FE-55	5.22E+01	5.22E+01
	MN-54	1.70E+00	1.70E+01
	NI-63	7.90E+00	7.90E+00
D			
	CO-60		5.11E+01
	CS-134		1.07E+01
	CS-137		3.48E+01
	MN-54		3.30E+00

Installation: Salem
Unit No.: 1&2

Location: 20 Mi S Wilmington, DE

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.38E+01 Ci 8.23E+02	non-compacted
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 6.97E+01 Ci 9.09E+00	compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Water Treatment Sludge	m3 4.25E+00 Ci 1.54E-04	burial volume

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-206
Thermal Power(MWH): 3.92E+06
Commercial Operation: 01/01/68
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 1.35E+03
Net Electrical Power(MWH): 1.17E+06
Initial Criticality: 06/14/67

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	1.12E-06
CO-57	4.09E-08
CO-58	8.00E-08
KR-85	6.43E+01
KR-85M	1.48E+01
KR-87	1.07E-03
KR-88	1.50E-02
RB-88	1.01E-01
I-131	1.57E-02
XE-131M	1.63E+01
I-133	4.08E-04
XE-133	3.86E+03
XE-133M	6.70E+00
CS-134	1.67E-07
XE-135	1.57E+02
CS-137	9.53E-06
CS-138	2.70E-02
CE-143	1.21E-05
CE-144	2.26E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	6.80E-04
MN-54	2.24E-04
FE-55	3.72E-02
CO-57	1.55E-05
CO-58	8.17E-03
FE-59	6.15E-05
CO-60	1.01E-02
ZN-65	2.58E-05
KR-85	1.31E-01
SR-90	7.52E-06
NB-95	2.20E-05
NB-97	3.10E-04
RU-103	2.56E-05
RU-106	5.65E-04
AG-110M	5.53E-04
SN-113	8.10E-05
SB-124	9.56E-05
SB-125	5.86E-05
I-131	9.14E-02
XE-131M	7.91E-02
TE-132	3.09E-06
I-133	5.74E-02

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-133	2.90E+00
XE-133M	3.53E-03
CS-134	7.13E-02
XE-135	3.29E-03
CS-136	2.29E-03
CS-137	9.73E-02
BA-140	1.93E-04
LA-140	2.43E-04
CE-141	2.71E-05
CE-144	2.06E-04

Total Airborne Tritium Released	5.19E+01 Ci
Total Liquid Tritium Released	3.00E+03 Ci
Volume of Waste Released (Prior to Dilution)	5.89E+05 liters
Volume of Dilution Water Used During Period	5.80E+11 liters

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-206
Thermal Power(MWH): 3.92E+06
Commercial Operation: 01/01/68
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 1.35E+03
Net Electrical Power(MWH): 1.17E+06
Initial Criticality: 06/14/67

Estimate of Major Nuclide Composition (%) (by type of waste)	Jan-June	Jul-Dec
A		
AG-110M	6.63E-03	
AM-241	2.12E-04	2.18E-03
C-14	1.45E-01	5.89E-02
CE-144	3.68E-01	2.79E-01
CM-243/244	3.43E-04	6.45E-04
CO-57	4.91E-03	
CO-58	5.38E+00	
CO-60	1.37E+01	7.21E+01
CR-51	4.13E-04	
CS-134	2.76E+01	3.63E-01
CS-137	4.24E+01	8.93E+00
FE-55	4.69E+00	1.02E+00
FE-59	4.26E-04	
H-3	6.42E-02	2.02E-02
I-129	1.91E-05	4.26E-05
MN-54	1.22E+00	
NB-94	1.02E-02	
NI-63	4.06E+00	1.70E+01
PU-238	1.18E-02	2.74E-03
PU-239/240	2.62E-04	8.95E-04
PU-241	4.33E-02	8.59E-02
PU-242	2.61E-06	1.20E-05
RU-106	7.27E-02	
SB-125	3.80E-02	
SR-89	2.74E-02	4.37E-06
SR-90	1.64E-01	1.51E-01
TC-99	9.48E-05	4.92E-05
ZN-65	1.17E-02	
ZR-95	1.78E-03	
B		
AM-241		6.34E-03
C-14	1.90E-01	1.02E+00
CE-144		3.36E+00
CM-242		7.08E-07
CM-243/244		7.44E-03
CO-58	3.81E+00	1.50E+00
CO-60	1.30E+01	3.14E+01
CR-51		1.38E+01

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
B		
CS-134	1.31E+01	3.19E+00
CS-137	2.21E+01	8.51E+00
FE-55	3.79E+01	2.72E+01
H-3	5.00E+00	3.28E-01
I-129	1.72E-03	5.54E-04
MN-54	1.55E+00	7.32E-01
NB-95		6.68E-01
NI-63	3.49E+00	6.25E+00
PU-238		2.05E-02
PU-239/240		5.56E-03
PU-241		8.81E-01
PU-242		1.50E-03
RU-106		1.33E-01
SB-125		8.69E-02
SR-89		8.29E-02
SR-90		4.25E-01
TC-99	1.55E-04	7.72E-03
U-235/236		1.72E-04
U-238		3.42E-08
ZR-95		3.51E-01
C		
AM-241		5.18E-03
C-14		7.13E-01
CE-144		3.98E+00
CM-243/244		7.34E-03
CO-58		1.52E+00
CO-60		3.30E+01
CR-51		1.63E+01
CS-134		1.56E+00
CS-137		4.72E+00
FE-55		2.99E+01
H-3		1.06E-01
I-129		2.45E-04
MN-54		7.18E-01
NB-95		7.68E-01
NI-63		5.03E+00
PU-239/240		4.72E-03
PU-241		5.58E-01
PU-242		1.27E-05
RU-106		1.57E-01
SR-89		9.81E-02
SR-90		4.81E-01
TC-99		5.28E-04
U-235/36		2.04E-04
ZR-95		4.04E-01
D		
AG-110M	2.69E-01	5.08E-03
AM-241	5.77E-03	2.18E-03
C-14	9.66E-01	1.25E+00

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
(by type of waste)		
D		
CE-141	3.93E-01	9.25E-03
CE-144	2.23E+00	1.39E+00
CM-242	2.01E-01	1.78E-02
CM-243/244	1.18E-02	3.70E-03
CO-57		3.27E-03
CO-58	5.39E+00	1.81E+01
CO-60	1.94E+01	1.54E+01
CR-51	1.63E+01	4.48E+00
CS-134	1.34E-01	7.24E-01
CS-137	2.86E-01	1.60E+00
FE-55	4.64E+01	4.22E+01
FE-59	4.63E-01	7.02E-01
H-3	4.70E-02	1.57E-01
I-129	3.84E-04	2.15E-03
MN-54	2.21E+00	3.24E+00
NB-95	1.40E-01	2.35E+00
NI-59	1.08E-02	
NI-63	4.11E+00	4.34E+00
PU-238	1.93E-02	9.14E-03
PU-239/240	5.85E-03	3.65E-03
PU-241	6.53E-01	4.48E-01
PU-242	2.96E-05	3.50E-04
RU-103		7.23E-04
RU-106	5.65E-02	3.79E-01
SB-124		2.81E-04
SB-125	2.81E-01	1.33E+00
SN-113		9.17E-02
SR-89	5.23E-03	4.34E-02
SR-90	7.69E-03	1.09E-01
TC-99	1.36E-03	1.27E-03
U-233/234		1.60E-07
U-238		8.48E-08
ZR-95		1.60E+00

Installation: San Onofre
Unit No.: 1

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.43E+01 Ci 5.61E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.19E+01 Ci 1.19E+01	
C. Irradiated Components, Control Rods, etc.	m3 1.40E-01 Ci 1.59E+01	
D. Other (describe)		
Absorbed liq, sand rubble, bio waste	m3 9.09E+00 Ci 4.27E+01	
Filters	m3 8.16E+00 Ci 5.20E+01	

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 2 Type: PWR
Docket Number: 50-361
Thermal Power(MWH): 2.73E+07
Commercial Operation: 08/08/83
Cooling Water Source: Pacific Ocean
Unit Number: 3 Type: PWR
Docket Number: 50-362
Thermal Power(MWH): 2.13E+07
Commercial Operation: 04/01/84
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 8.80E+06
Initial Criticality: 07/26/82

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 6.83E+06
Initial Criticality: 08/29/83

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	2.35E-05
AR-41	1.02E+01
CR-51	3.02E-06
MN-54	4.94E-07
CO-57	4.29E-08
CO-58	1.14E-04
FE-59	1.71E-07
CO-60	5.13E-06
BR-82	1.26E-04
KR-85	1.11E+00
KR-85M	4.96E-01
KR-87	3.41E-01
KR-88	4.93E-01
RB-88	2.36E-02
SR-89	1.05E-07
SR-92	1.03E-08
NB-95	2.31E-06
NB-95M	1.67E-10
ZR-95	6.52E-07
MO-99	5.79E-06
TC-99M	6.14E-06
SN-113	1.90E-06
I-131	2.27E-02
XE-131M	9.77E-01
I-132	1.32E-03
TE-132	6.45E-07
I-133	8.72E-03
XE-133	1.38E+03
XE-133M	1.12E+00
CS-134	6.72E-05
I-134	4.62E-05
I-135	1.04E-03
XE-135	9.10E+00
XE-135M	3.43E-01
CS-136	1.46E-05
CS-137	2.81E-04

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992

Airborne Effluents (continued)

Nuclide Released	Activity (Ci)
CS-138	6.74E-03
XE-138	9.51E-02
BA-139	1.51E-02
CE-141	1.56E-06
CE-144	7.62E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	3.47E-06
CR-51	3.66E-03
MN-54	1.01E-03
FE-55	2.86E-02
CO-57	5.13E-05
CO-58	2.17E-02
FE-59	3.91E-04
CO-60	1.88E-02
SR-92	1.10E-04
NB-95	3.35E-03
NB-95M	5.27E-05
ZR-95	2.01E-03
NB-97	1.06E-04
MO-99	4.05E-05
TC-99M	4.13E-05
RU-103	8.50E-05
AG-110M	1.62E-03
SN-113	2.50E-04
SN-117M	3.56E-05
SB-124	1.06E-03
SB-125	1.18E-02
I-131	1.20E-03
XE-131M	8.38E-03
TE-132	7.22E-08
I-133	2.21E-06
XE-133	2.20E-01
XE-133M	2.28E-03
CS-134	1.06E-03
I-135	3.32E-05
XE-135	6.81E-04
CS-137	6.17E-03
BA-139	5.38E-05
LA-140	1.83E-05
CE-141	2.20E-05

Total Airborne Tritium Released	2.58E+01 Ci
Total Liquid Tritium Released	9.69E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.31E+07 liters
Volume of Dilution Water Used During Period	2.71E+12 liters

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 2 Type: PWR
Docket Number: 50-361
Thermal Power(MWH): 2.73E+07
Commercial Operation: 08/08/83
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 8.80E+06
Initial Criticality: 07/26/82

Unit Number: 3 Type: PWR
Docket Number: 50-362
Thermal Power(MWH): 2.13E+07
Commercial Operation: 04/01/84
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 6.83E+06
Initial Criticality: 08/29/83

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A

AM-241	5.09E-05	1.50E-04
C-14	2.47E-01	3.61E-01
CE-144	8.02E-01	2.48E-01
CM-243/244	3.63E-05	1.87E-04
CO-57		1.46E-01
CO-58	2.03E+00	4.64E+01
CO-60	4.69E+00	5.75E+00
CS-134	2.49E+01	5.41E+00
CS-137	4.20E+01	1.24E+01
FE-55	9.95E+00	1.12E+01
K-3	1.74E-02	1.76E-02
I-129	3.78E-04	5.83E-04
MN-54	2.20E+00	3.61E+00
NI-63	1.30E+01	1.35E+01
PU-238	1.21E-04	2.70E-04
PU-239/240	1.21E-04	1.46E-04
PU-241	7.31E-03	9.63E-03
PU-242		4.96E-06
SE-125		8.41E-01
SR-89		4.78E-02
SR-90	1.28E-01	5.06E-02
TC-99	3.36E-04	1.87E-04

B

AM-241	1.07E-04	4.62E-03
C-14	3.46E+00	2.27E+00
CE-144	1.61E-01	2.14E+00
CM-242	5.38E-05	
CM-243/244	9.57E-05	5.28E-03
CO-57	3.82E-01	
CO-58	1.80E+00	1.28E+00
CO-60	4.81E+00	1.89E+01
CR-51		8.77E+00
CS-134	6.65E+00	3.00E+00

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
B		
CS-137	2.07E+01	1.12E+01
FE-55	4.54E+01	4.02E+01
FE-59	3.05E-04	
H-3	5.10E-01	1.81E-01
I-129	1.42E-03	7.76E-04
MN-54	1.25E+00	7.50E-01
NB-94		7.33E-03
NB-95	2.37E-01	4.14E-01
NI-63	8.92E+00	7.75E+00
PU-238	1.98E-02	4.62E-02
PU-239/240	1.01E-03	1.15E-02
PU-241	3.53E+00	1.76E+00
PU-242	1.72E-05	6.86E-06
RU-106	2.85E-01	8.47E-02
SB-125	1.07E+00	5.28E-01
SN-113	6.27E-02	
SR-89	6.17E-02	5.28E-02
SR-90	6.52E-01	2.98E-01
TC-99	1.88E-03	1.22E-03
U-235/236		1.10E-04
ZN-65	2.35E-03	
ZR-95	3.63E-02	2.18E-01
C		
AM-241		1.44E-03
C-14		1.24E+00
CE-144		1.60E-01
CM-243/244		2.01E-03
CO-58		1.44E+01
CO-60	1.00E+02	5.41E+00
CR-51		4.03E+00
CS-134		1.66E+00
CS-137		3.91E+00
FE-55		5.90E+01
FE-59		2.52E-01
H-3		4.20E-01
I-129		7.84E-04
MN-54		1.12E+00
NB-95		1.70E+00
NI-63		3.80E+00
PU-238		1.32E-02
PU-239/240		4.03E-03
PU-242		2.20E-06
PU241		4.79E-01
RU-106		1.22E-01
SB-125		7.28E-01
SN-113		2.86E-01
SR-89		1.24E-02
SR-90		1.24E-02
TC-99		1.69E-03
ZR-95		1.22E+00

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

D

AG-110M	1.58E-01	
AM-241	4.22E-04	1.04E-03
C-14	1.54E+00	2.81E+00
CE-144	2.85E-01	6.71E-01
CM-242	6.64E-03	
CM-243/244	1.28E-03	2.91E-03
CO-57	5.92E-03	
CO-58	2.85E+01	1.62E+01
CO-60	5.63E+00	9.99E+00
CR-51	8.06E+00	1.92E+00
CS-134	1.81E-01	4.94E-01
CS-137	7.40E-01	1.26E+00
FE-55	3.75E+01	5.40E+01
FE-59	1.91E+00	5.03E-01
H-3	7.66E-02	1.20E-01
I-129	4.82E-03	1.11E-03
MN-54	1.01E+00	1.88E+00
NB-95	4.56E+00	1.84E+00
NI-63	3.87E+00	5.21E+00
PU-238	1.18E-03	4.92E-03
PU-239/240	8.80E-04	2.24E-03
PU-241	1.01E-01	2.67E-01
PU-242	4.24E-06	6.87E-06
RU-103	4.79E-01	
RU-106	3.74E-01	2.13E-01
SB-124	2.45E-01	
SB-125	7.57E-01	9.52E-01
SC-46	7.25E-04	
SN-113	1.13E+00	2.06E-01
SR-89	1.18E-02	2.13E-02
SR-90	5.73E-03	5.15E-02
TC-99	4.06E-03	8.81E-04
ZN-65	1.94E-03	
ZR-95	2.84E+00	1.39E+00

Installation: San Onofre
Unit No.: 2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.38E+02 Ci 1.28E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.45E+02 Ci 1.50E+01	
C. Irradiated Components, Control Rods, etc.	m3 6.35E-01 Ci 9.56E+00	
D. Other (describe)		
Absorbed liq, sand rubble, bio waste	m3 6.14E+00 Ci 1.02E+02	
Filters	m3 3.38E+00 Ci 1.52E+02	

Installation: San Onofre
Unit No.: 1&2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-206
Thermal Power(MWH): 3.92E+06
Commercial Operation: 01/01/68
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 1.35E+03
Net Electrical Power(MWH): 1.17E+06
Initial Criticality: 06/14/67

Unit Number: 2 Type: PWR
Docket Number: 50-361
Thermal Power(MWH): 2.73E+07
Commercial Operation: 08/08/83
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 8.80E+06
Initial Criticality: 07/26/82

Unit Number: 3 Type: PWR
Docket Number: 50-362
Thermal Power(MWH): 2.13E+07
Commercial Operation: 04/01/84
Cooling Water Source: Pacific Ocean

Licensee: Southern California Edison Co.
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 6.83E+06
Initial Criticality: 08/29/83

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
13	Truck/Cask	Beatty, NV
42	Truck/Trailer	Beatty, NV
3	Truck/Trailer	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
B		
C-14		1.32E+00
CE-144		1.84E-01
CO-58		1.58E+00
CO-60		3.44E+00
CR-51		1.82E+00
CS-134		3.23E+00
CS-137		7.81E+00
FE-55		2.44E+01
H-3		5.98E-01
I-129		3.63E-04
MN-54		6.35E-01
NI-63		4.01E+00
PU-241		9.94E-01
SB-125		3.90E-01
TC-99		3.70E-04
U-238		4.96E+01

Installation: San Onofre
Unit No.: 1&2&3

Location: 2.5 Mi S San Clemente, CA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 Ci	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.04E+01 Ci 4.16E-01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Seabrook
Unit No.: 1

Location: 13 Mi S Portsmouth, NH

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-443
Thermal Power(MWH): 2.35E+07
Commercial Operation: 08/19/90
Cooling Water Source: Atlantic Ocean

Licensee: North Atlantic
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.87E+06
Initial Criticality: 06/13/89

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.22E-01
CR-51	4.06E-04
MN-54	5.81E-05
CO-58	5.25E-04
FE-59	1.19E-05
CO-60	7.69E-05
KR-85M	2.16E-03
KR-87	4.84E-03
KR-88	3.65E-04
NB-95	2.60E-05
ZR-95	2.82E-06
I-131	3.85E-06
XE-133	3.50E-01
XE-135	2.24E-02
XE-135M	1.13E-02
XE-138	9.45E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	4.01E-05
NA-24	1.08E-04
CR-51	6.40E-04
MN-54	1.26E-03
FE-55	8.45E-02
CO-58	1.67E-02
FE-59	6.56E-04
CO-60	3.34E-03
BR-82	3.50E-05
ZR/NB-95	3.00E-05
TC-99M	1.67E-04
SB-124	4.82E-04
SB-125	1.04E-02
I-131	5.85E-04
I-133	4.72E-04
CS-137	5.59E-05

Total Airborne Tritium Released	1.57E+00 Ci
Total Liquid Tritium Released	5.01E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.17E+08 liters
Volume of Dilution Water Used During Period	7.28E+11 liters

Installation: Sequoyah
Unit No.: 1&2

Location: Daisy, TN

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-327
Thermal Power(MWH): 2.54E+07
Commercial Operation: 07/01/81
Cooling Water Source: Chickamauga Lake
Unit Number: 2 Type: PWR
Docket Number: 50-328
Thermal Power(MWH): 2.23E+07
Commercial Operation: 06/01/82
Cooling Water Source: Chickamauga Lake

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.36E+06
Initial Criticality: 07/05/80

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.27E+06
Initial Criticality: 11/05/81

Airborne Effluents

Nuclide Released	Activity (Ci)
NA-24	3.01E-05
AR-41	5.50E+00
CR-51	8.02E-06
CO-58	3.05E-05
CO-60	1.65E-05
KR-85	7.03E-01
KR-85M	4.34E-01
KR-87	5.88E-03
KR-88	1.16E-01
NE-95	1.60E-06
MO-99	1.27E-06
TC-99M	1.27E-06
I-131	5.65E-06
XE-131M	1.18E+00
I-133	2.77E-07
XE-133	1.85E+02
XE-133M	1.83E+00
XE-135	1.22E+01
XE-135M	3.52E-02
CS-137	3.00E-05

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.64E-04
AR-41	7.70E-05
CR-51	6.81E-02
MN-54	9.25E-03
FE-55	1.94E-01
MN-56	3.04E-05
CO-57	3.74E-03
CO-58	7.11E-01
FE-59	9.23E-03
CO-60	1.05E-01
CU-64	3.43E-04
NI-65	3.80E-05
ZN-65	6.39E-04
KR-88	9.28E-06
SR-89	1.16E-03
SR-90	2.86E-04

Installation: Sequoyah
Unit No.: 1&2

Location: Daisy, TN

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SR-91	2.15E-05
Y-91	2.36E-03
SR-92	1.66E-04
NB-95	2.07E-02
ZR-95	1.13E-02
NB-97	3.06E-04
ZR-97	8.65E-05
MO-99	3.31E-05
TC-99M	3.31E-05
RU-103	4.96E-04
AG-110M	1.61E-03
SB-124	1.61E-02
SB-125	2.07E-01
TE-129M	6.76E-03
I-131	4.26E-03
XE-131M	6.88E-03
I-132	9.19E-04
TE-132	6.15E-04
I-133	5.81E-04
XE-133	2.97E-01
XE-133M	3.80E-03
CS-134	3.38E-02
I-134	4.10E-05
I-135	1.13E-04
XE-135	8.09E-03
XE-135M	2.02E-04
CS-136	5.09E-04
CS-137	3.07E-02
CS-138	6.51E-05
BA-140	3.21E-05
LA-140	1.78E-03
CE-141	5.44E-05
CE-143	4.13E-06
CE-144	4.33E-03
NP-239	6.94E-05

Total Airborne Tritium Released	5.00E+01 Ci
Total Liquid Tritium Released	1.44E+03 Ci
Volume of Waste Released (Prior to Dilution)	1.38E+08 liters
Volume of Dilution Water Used During Period	4.98E+09 liters

Installation: Sequoyah
Unit No.: 1&2

Location: Daisy, TN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-327
Thermal Power(MWH): 2.54E+07
Commercial Operation: 07/01/81
Cooling Water Source: Chickamauga Lake

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.36E+06
Initial Criticality: 07/05/80

Unit Number: 2 Type: PWR
Docket Number: 50-328
Thermal Power(MWH): 2.23E+07
Commercial Operation: 06/01/82
Cooling Water Source: Chickamauga Lake

Licensee: Tennessee Valley Authority
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.27E+06
Initial Criticality: 11/05/81

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
129	Motor Freight	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	4.33E+01	2.77E+01
CO-60	8.52E+00	1.54E+01
CS-134	1.29E+01	8.83E+00
CS-137	1.07E+01	8.14E+00
FE-55	5.10E+00	9.28E+00
MN-54	3.25E+00	1.80E+00
NI-63	1.52E+01	2.77E+01
B		
BE-7		1.25E+00
CE-144	1.11E+00	
CO-58	3.12E+01	2.30E+01
CO-60	2.39E+01	2.79E+01
CR-51	6.83E+00	6.32E+00
CS-134	1.00E+00	1.29E+00
CS-137	1.41E+00	1.84E+00
FE-55	2.06E+01	2.33E+01
MN-54	1.82E+00	1.80E+00
NB-95	3.08E+00	3.14E+00
NI-63	4.06E+00	4.74E+00
ZR-95	1.67E+00	1.81E+00
D		
CO-58	1.35E+01	1.64E+01
CO-60	3.95E+01	1.57E+01
FE-55	2.47E+01	5.08E+01
MN-54		4.33E+00
NI-63	2.01E+01	8.15E+00

Installation: Sequoyah
Unit No.: 1&2

Location: Daisy, TN

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.78E+01 Ci 1.27E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 9.23E+01 Ci 3.66E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Mechanical Filters	m3 6.54E+00 Ci 4.05E+01	

Installation: Shoreham
Unit No.: 1

Location: Brookhaven, NY

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-322
Thermal Power(MWH):
Commercial Operation:
Cooling Water Source: Long Island Sound

Licensee: Long Island Power Authority
Licensed Power(MWT): 2.44E+02
Net Electrical Power(MWH):
Initial Criticality: 02/15/85

Liquid Effluents

Nuclide Released	Activity (Ci)
FE-55	6.03E-04

Volume of Waste Released (Prior to Dilution)	3.44E+06 liters
Volume of Dilution Water Used During Period	2.50E+08 liters

Installation: Shoreham
Unit No.: 1

Location: Brookhaven, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR
Docket Number: 50-322
Thermal Power(MWH):
Commercial Operation:
Cooling Water Source: Long Island Sound

Licensee: Long Island Power Authority
Licensed Power(MWT): 2.44E+02
Net Electrical Power(MWH):
Initial Criticality: 02/15/85

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
49	Truck	Barnwell, SC
11	Truck	Quadrex, Oak Ridge, TN
76	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A			
	C-14	1.38E-01	
	CE-144	2.16E-01	
	CM-243/244	5.00E-03	
	CO-60	1.92E+00	
	CS-137	1.18E-01	
	FE-55	2.25E+01	
	MN-54	1.23E-01	
	NI-63	4.30E+01	
	SR-90	2.04E-01	
	ZN-65	3.18E+01	
B			
	CO-60	1.85E+01	1.86E+01
	CS-137	3.69E-01	
	FE-55	1.38E+01	1.40E+01
	MN-54	7.36E-01	
	NI-63	6.44E+01	6.52E+01
	ZN-65	2.19E+00	2.23E+00
C			
	CO-60		3.22E+00
	FE-55		9.29E+01
	MN-54		3.78E+00
	NI-63		1.10E-01

Installation: Shoreham
Unit No.: 1

Location: Brookhaven, NY

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 6.39E+01 Ci 2.86E-01	non-compacted
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.90E+02 m3 2.92E+03 Ci 4.65E+00	non-compacted
C. Irradiated Components, Control Rods, etc.	m3 2.78E+01 m3 7.71E+01 Ci 6.76E+02	non-compacted burial volume
D. Other (describe)	m3 Ci	

Installation: South Texas
Unit No.: 1

Location: 12 Mi SSW Bay City, TX

Effluent and Waste Disposal Annual Report for 1992

Type: PWR

Docket Number: 50-498

Thermal Power(MWH): 2.24E+07

Commercial Operation: 08/24/88

Cooling Water Source: Main Cooling Reservoir

Licensee: Houston Lighting & Power

Licensed Power(MWT): 3.80E+03

Net Electrical Power(MWH): 7.27E+06

Initial Criticality: 03/08/88

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	2.66E+00
CR-51	4.40E-05
MN-54	1.83E-05
CO-58	1.59E-04
FE-59	8.56E-08
CO-60	5.35E-05
KR-85	9.28E-01
KR-85M	1.55E-01
KR-87	9.42E-02
KR-88	2.41E-01
NB-95	1.47E-06
MO-99	5.35E-07
TC-99M	5.44E-07
SB-125	8.16E-07
I-131	2.17E-03
XE-131M	2.06E+00
I-132	1.71E-04
I-133	1.48E-03
XE-133	2.70E+02
XE-133M	1.94E+00
CS-134	3.33E-05
I-135	4.97E-05
XE-135	1.07E+01
XE-135M	9.30E-02
CS-136	3.82E-06
CS-137	3.31E-05
XE-138	5.52E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	5.50E-04
CR-51	5.13E-02
MN-54	5.39E-02
FE-55	3.88E-01
CO-57	3.65E-03
CO-58	9.08E-01
FE-59	1.34E-02
CO-60	3.94E-01
ZN-65	3.01E-04
KR-85	6.85E-02
KR-85M	7.10E-05
NB-95	8.22E-03
ZR-95	3.22E-03
NB-97	5.58E-04

Installation: South Texas
Unit No.: 1

Location: 12 Mi SSW Bay City, TX

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
ZR-97	3.68E-04
MO-99	1.91E-03
TC-99M	1.94E-03
AG-110M	1.62E-02
SN-113	1.24E-04
SB-124	3.04E-02
SB-125	4.04E-02
TE-129M	3.11E-04
I-131	4.11E-02
XE-131M	1.13E-01
TE-132	5.53E-06
I-133	1.46E-03
XE-133	4.66E+00
XE-133M	2.57E-02
CS-134	6.31E-02
I-135	2.64E-05
XE-135	6.25E-03
CS-136	4.19E-04
CS-137	9.31E-02
LA-140	3.14E-04
PR-144	3.31E-04
Unidentified	7.55E-03

Total Airborne Tritium Released	5.16E+01 Ci
Total Liquid Tritium Released	6.19E+02 Ci
Volume of Waste Released (Prior to Dilution)	9.35E+07 liters
Volume of Dilution Water Used During Period	2.97E+10 liters

Installation: South Texas
Unit No.: 2

Location: 12 Mi SSW Bay City, TX

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-499
Thermal Power(MWH): 3.18E+07
Commercial Operation: 06/19/89
Cooling Water Source: Main Cooling Reservoir

Licensee: Houston Lighting & Power
Licensed Power(MWT): 3.80E+03
Net Electrical Power(MWH): 1.03E+07
Initial Criticality: 03/12/89

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.23E+00
CO-58	1.17E-07
CO-60	1.19E-06
I-131	4.50E-05
XE-131M	4.76E-04
I-133	4.88E-05
XE-133	6.21E+02
XE-135	3.81E-01

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	2.03E-05
NA-24	1.22E-05
CR-51	2.60E-02
MN-54	6.94E-02
FE-55	8.63E-01
CO-57	3.53E-03
CO-58	2.77E-01
FE-59	2.03E-02
CO-60	4.19E-01
ZN-65	1.26E-03
KR-85M	4.12E-05
NB-95	2.22E-02
ZR-95	1.02E-02
NB-97	5.00E-04
ZR-97	1.88E-05
AG-110M	3.51E-03
SN-113	2.60E-03
SB-124	5.63E-03
SB-125	1.55E-02
XE-131M	1.16E-03
XE-133	3.43E-01
XE-133M	4.93E-03
CS-134	5.06E-05
XE-135	3.46E-03
CS-137	3.13E-04
LA-140	1.64E-05
CE-144	5.08E-05
Other	1.70E-05

Total Airborne Tritium Released	5.56E+01 Ci
Total Liquid Tritium Released	7.42E+02 Ci
Volume of Waste Released (Prior to Dilution)	6.85E+07 liters
Volume of Dilution Water Used During Period	2.41E+10 liters

Installation: South Texas
Unit No.: 1&2

Location: 12 Mi SSW Bay City, TX

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR Licensee: Houston Lighting & Power
Docket Number: 50-498 Licensed Power(MWT): 3.80E+03
Thermal Power(MWH): 2.24E+07 Net Electrical Power(MWH): 7.27E+06
Commercial Operation: 08/24/88 Initial Criticality: 03/08/88
Cooling Water Source: Main Cooling Reservoir

Unit Number: 2 Type: PWR Licensee: Houston Lighting & Power
Docket Number: 50-499 Licensed Power(MWT): 3.80E+03
Thermal Power(MWH): 3.18E+07 Net Electrical Power(MWH): 1.03E+07
Commercial Operation: 06/19/89 Initial Criticality: 03/12/89
Cooling Water Source: Main Cooling Reservoir

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
10	Truck	CNSI, Barnwell, SC
13	Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	2.17E+01	3.60E+00
CO-60	2.18E+01	1.84E+01
CS-134	1.10E+00	4.00E-01
CS-137	2.60E+00	9.00E-01
FE-55	1.50E+01	4.43E+01
FE-59	1.60E+00	
MN-54	3.00E+00	1.40E+00
NB-95	7.80E+00	4.00E-01
NI-59		6.00E-01
NI-63	1.91E+01	2.92E+01
SB-125	1.40E+00	4.00E-01
ZR-95	3.20E+00	2.00E-01
B		
CO-58	1.71E+01	2.86E+01
CO-60	4.20E+00	8.10E+00
CR-51	4.20E+00	3.20E+00
FE-55	6.36E+01	4.49E+01
FE-59	1.50E+00	4.50E+00
MN-54	1.60E+00	1.90E+00
NB-95	2.10E+00	1.60E+00
NI-63	3.30E+00	5.10E+00
SB-124		4.00E-01
ZR-95	1.90E+00	8.00E-01
D		
CO-58	1.79E+01	
CO-60	2.80E+01	7.95E+01
FE-55	4.76E+01	
MN-54	3.20E+00	2.05E+01

Installation: South Texas
Unit No.: 1&2

Location: 12 Mi SSW Bay City, TX

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.68E+01 Ci 4.62E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.58E+01 Ci 2.00E+00	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Steam Generator Residue	m3 2.83E-03 Ci 2.71E+00	Burial Volume
Oily Waste Filter	m3 6.90E-02 Ci 2.00E-08	Burial Volume

Installation: St. Lucie
Unit No.: 1

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-335
Thermal Power(MWH): 2.26E+07
Commercial Operation: 12/21/76
Cooling Water Source: Atlantic Ocean

Licensee: Florida Power & Light
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 7.14E+06
Initial Criticality: 04/22/76

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	8.01E-01
CO-57	2.94E-07
CO-60	2.22E-04
KR-85	8.17E+00
KR-85M	7.18E-01
KR-87	2.73E-02
KR-88	8.37E-01
SR-89	2.90E-06
SR-90	1.88E-06
Y-90	1.88E-06
I-131	7.99E-04
XE-131M	1.35E+01
I-133	4.46E-03
XE-133	2.70E+02
XE-133M	1.46E+00
XE-135	3.43E+01
CE-141	7.27E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.13E-04
AR-41	5.72E-05
CR-51	1.25E-02
MN-54	1.80E-03
FE-55	1.48E-01
CO-57	7.70E-05
CO-58	5.91E-02
FE-59	1.09E-03
CO-60	3.34E-02
KR-85	1.68E-03
KR-85M	2.36E-04
KR-88	8.00E-05
RB-88	3.22E-04
SR-89	8.29E-04
SR-90	2.18E-05
Y-90	2.18E-05
SR-92	4.84E-04
NB-95	4.35E-03
ZR-95	2.59E-03
NB-97	3.18E-03
TC-99M	1.40E-04
RU-103	5.21E-05
AG-110	1.84E-03
AG-110M	7.26E-04

Installation: St. Lucie
Unit No.: 1

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SN-113	4.67E-04
SB-122	5.13E-03
SB-124	2.38E-02
SB-125	4.25E-02
TE-129	5.61E-03
I-131	7.69E-03
XE-131M	3.13E-03
I-132	2.90E-04
TE-132	1.23E-04
I-133	5.82E-03
XE-133	6.82E-01
XE-133M	8.30E-03
CS-134	5.74E-02
I-135	1.62E-03
XE-135	3.18E-02
XE-135M	8.76E-04
CS-136	8.71E-04
CS-137	5.19E-02
CS-138	4.37E-04
BA-140	8.87E-05
LA-140	4.50E-03
CE-141	1.50E-05
CE-144	2.32E-04
PR-144	3.04E-02
W-187	1.92E-03

Total Airborne Tritium Released	2.99E+01 Ci
Total Liquid Tritium Released	4.00E+02 Ci
Volume of Waste Released (Prior to Dilution)	4.06E+07 liters
Volume of Dilution Water Used During Period	1.84E+12 liters

Installation: St. Lucie
Unit No.: 2

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-389
Thermal Power(MWH): 1.73E+07
Commercial Operation: 08/08/83
Cooling Water Source: Atlantic Ocean

Licensee: Florida Power & Light
Licensed Power(MWT): 2.70E+03
Net Electrical Power(MWH): 5.43E+06
Initial Criticality: 06/02/83

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.12E+00
CO-58	8.27E-07
KR-85	2.96E+00
KR-85M	1.43E+00
KR-87	4.61E-01
KR-88	1.25E+00
SR-90	2.93E-07
Y-90	2.93E-07
I-131	4.88E-03
XE-131M	2.80E+00
I-132	1.21E-02
I-133	2.35E-02
XE-133	6.01E+02
XE-133M	5.55E+00
I-134	1.14E-02
I-135	1.42E-02
XE-135	3.64E+01
XE-138	6.51E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.14E-04
AR-41	5.72E-05
CR-51	1.25E-02
MN-54	1.80E-03
FE-55	1.48E-01
CO-57	7.70E-05
CO-58	5.91E-02
FE-59	1.09E-03
CO-60	3.34E-02
KR-85	1.68E-03
KR-85M	2.36E-04
KR-88	8.00E-05
RB-88	3.22E-04
SR-89	7.86E-04
SR-90	2.18E-05
Y-90	2.18E-05
SR-92	4.84E-04
NB-95	4.35E-03
ZR-95	2.59E-03
NB-97	3.18E-03
TC-99M	1.40E-04
RU-103	5.21E-05
AG-110	2.56E-03

Installation: St. Lucie
Unit No.: 2

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SN-113	4.67E-04
SB-122	5.13E-03
SB-124	2.38E-02
SB-125	4.25E-02
TE-129	5.61E-03
I-131	7.69E-03
XE-131M	3.13E-03
I-132	2.90E-04
TE-132	1.23E-04
I-133	5.82E-03
XE-133	6.82E-01
XE-133M	8.30E-03
CS-134	5.74E-02
I-135	1.62E-03
XE-135	3.18E-02
XE-135M	8.76E-04
CS-136	8.71E-04
CS-137	5.19E-02
CS-138	4.37E-04
BA-140	8.87E-05
LA-140	4.50E-03
CE-141	1.50E-05
CE-144	2.32E-04
PR-144	3.04E-02
W-187	1.92E-03

Total Airborne Tritium Released	3.07E+01 Ci
Total Liquid Tritium Released	4.00E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.23E+07 liters
Volume of Dilution Water Used During Period	1.84E+12 liters

Installation: St. Lucie
 Unit No.: 1&2

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Unit Number: 1 Type: PWR
 Docket Number: 50-335
 Thermal Power(MWH): 2.26E+07
 Commercial Operation: 12/21/76
 Cooling Water Source: Atlantic Ocean

Licensee: Florida Power & Light
 Licensed Power(MWT): 2.70E+03
 Net Electrical Power(MWH): 7.14E+06
 Initial Criticality: 04/22/76

Unit Number: 2 Type: PWR
 Docket Number: 50-389
 Thermal Power(MWH): 1.73E+07
 Commercial Operation: 08/08/83
 Cooling Water Source: Atlantic Ocean

Licensee: Florida Power & Light
 Licensed Power(MWT): 2.70E+03
 Net Electrical Power(MWH): 5.43E+06
 Initial Criticality: 06/02/83

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Sole Use Truck	Barnwell, SC
14	Sole Use Truck	Quadrex, Oak Ridge, TN
7	Sole Use Truck	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
 (by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	4.00E+00	1.31E+01
CO-60	1.18E+01	1.17E+01
CS-134	1.79E+01	2.78E+01
CS-137	3.06E+01	3.92E+01
FE-55	1.36E+01	2.21E+00
MN-54	1.80E+00	1.02E+00
NI-63	1.74E+01	3.09E+00
SB-125	1.70E+00	1.13E+00
B		
CO-58	8.60E-01	8.68E+00
CO-60	2.99E+01	2.93E+01
CR-51		2.01E+00
CS-134	1.38E+01	5.80E+00
CS-137	3.37E+01	2.30E+01
FE-55	7.14E+00	1.41E+01
NB-95		1.66E+00
NI-63	1.11E+01	1.06E+01
SB-125		7.00E-01
ZR-95	1.23E+00	1.53E+00
D		
CD-109	1.60E-01	
CO-58	3.06E+00	3.48E+01
CO-60	4.89E+01	1.44E+01
CS-134	2.80E+00	8.93E+00
CS-137	1.06E+01	1.81E+01
FE-55	3.15E+01	1.95E+01
H-3	9.42E-03	
K-40	1.36E-02	
NI-63	3.03E+00	2.52E+00

Installation: St. Lucie
Unit No.: 1&2

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
(by type of waste)

D
SR-89 3.12E-02

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 6.96E+01 Ci 3.81E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.10E+02 Ci 6.41E+00	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Metal, Soil/Grit	m3 3.11E+01 Ci 5.15E-01	Burial Volume
Metal	m3 2.94E+00 Ci 6.50E-03	Burial Volume

Installation: Summer
Unit No.: 1

Location: 26 Mi NW Columbia, SC

Effluent and Waste Disposal Annual Report for 1992

Type: PWR

Licensee: South Carolina Electric & Gas
Co.

Docket Number: 50-395

Licensed Power(MWT): 2.77E+03

Thermal Power(MWH): 2.35E+07

Net Electrical Power(MWH): 7.52E+06

Commercial Operation: 01/01/84

Initial Criticality: 10/22/82

Cooling Water Source: Monticello Reservoir

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.64E-02
BR-82	3.80E-07
KR-85	1.25E+00
KR-85M	2.98E-01
KR-88	1.18E-03
RB-88	5.23E-06
I-131	2.14E-04
XE-131M	9.23E-01
I-133	1.94E-05
XE-133	3.13E+02
XE-133M	1.62E+00
XE-135	2.10E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
F-18	5.21E-03
NA-24	9.22E-03
CR-51	9.10E-04
MN-54	5.26E-03
FE-55	5.49E-03
CO-57	3.97E-04
CO-58	4.76E-02
FE-59	1.87E-04
CO-60	5.02E-02
ZN-65	2.59E-04
ZN-69M	2.43E-06
AS-76	3.15E-06
KR-85M	6.72E-05
SR-89	3.53E-05
SR-90	3.27E-05
ZR/NB-95	3.27E-03
MO-99	2.20E-05
TC-99M	1.99E-04
RU-103	7.95E-07
RU-106	6.00E-04
AG-110M	4.90E-04
SN-113	3.26E-05
SB-124	2.16E-04
SB-125	1.99E-02
I-131	2.18E-02
XE-131M	7.34E-03
I-132	7.03E-03
I-133	1.50E-02

Installation: Summer
Unit No.: 1

Location: 26 Mi NW Columbia, SC

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
XE-133	4.00E-01
XE-133M	1.20E-03
CS-134	4.25E-03
I-134	7.89E-04
I-135	1.52E-02
XE-135	5.28E-03
CS-136	1.05E-04
CS-137	8.65E-03
CS-138	3.00E-04
BA-139	1.27E-05
BA/LA-140	4.32E-05
CE-144	2.26E-05

Total Airborne Tritium Released	2.47E-01 Ci
Total Liquid Tritium Released	6.08E+02 Ci
Volume of Waste Released (Prior to Dilution)	9.83E+07 liters
Volume of Dilution Water Used During Period	1.53E+12 liters

Installation: Summer
 Unit No.: 1

Location: 26 Mi NW Columbia, SC

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Type: PWR

Licensee: South Carolina Electric & Gas Co.

Docket Number: 50-395

Licensed Power(MWT): 2.77E+03

Thermal Power(MWH): 2.35E+07

Net Electrical Power(MWH): 7.52E+06

Commercial Operation: 01/01/84

Initial Criticality: 10/22/82

Cooling Water Source: Monticello Reservoir

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
179	Truck	Barnwell, SC

Estimate of Major Nuclide Composition (%)
 (by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	1.03E+01	4.91E+00
CO-60	1.43E+01	1.67E+01
CS-134	1.51E+01	2.95E+00
CS-137	1.72E+01	4.50E+00
FE-55	2.20E+01	5.04E+01
MN-54	2.60E+00	6.07E+00
NI-63	1.62E+01	1.18E+01
SB-125		1.11E+00
B		
CO-58	1.57E+00	1.60E+00
CO-60	1.99E+01	1.99E+01
CS-134	8.29E+00	8.29E+00
CS-137	1.39E+01	1.39E+01
FE-55	4.12E+01	4.12E+01
H-3	1.60E+00	1.60E+00
MN-54	2.69E+00	2.70E+00
NI-63	6.90E+00	6.90E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 8.48E+01	Non-compacted Burial Volume
	Ci 2.64E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.88E+01	Compacted Burial Volume
	Ci 4.16E+00	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: Surry
Unit No.: 1&2

Location: 19 Mi NW Newport News, VA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-280
Thermal Power(MWH): 1.65E+07
Commercial Operation: 12/22/72
Cooling Water Source: James River
Unit Number: 2 Type: PWR
Docket Number: 50-281
Thermal Power(MWH): 2.05E+07
Commercial Operation: 05/01/73
Cooling Water Source: James River

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 5.22E+06
Initial Criticality: 07/01/72

Licensee: Virginia Electric & Power
Licensed Power(MWT): 2.44E+03
Net Electrical Power(MWH): 6.43E+06
Initial Criticality: 03/07/73

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	5.06E-02
CO-58	3.03E-05
CO-60	1.15E-04
SE-75	5.44E-06
KR-85	1.26E-01
KR-85M	1.02E-03
KR-87	4.18E-04
KR-86	1.80E-03
NB-95	5.48E-09
I-131	4.97E-04
XE-131M	1.17E-01
I-132	1.26E-07
I-133	2.74E-04
XE-133	1.53E+01
XE-133M	9.98E-02
CS-134	9.39E-07
XE-135	3.88E-01
XE-135M	3.69E-02
CS-137	1.55E-04
CS-138	1.29E-04
XE-138	1.40E-03

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	1.63E-05
CO-57	6.65E-07
CO-58	1.16E-04
CO-60	1.40E-02
SB-125	9.47E-05
CS-134	1.29E-03
CS-137	6.72E-02

Total Airborne Tritium Released	2.37E+01 Ci
Total Liquid Tritium Released	9.74E+02 Ci
Volume of Waste Released (Prior to Dilution)	1.50E+08 liters
Volume of Dilution Water Used During Period	2.44E+12 liters

Installation: Surry
 Unit No.: 1&2

Location: 19 Mi NW Newport News, VA

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Unit Number: 1 Type: PWR
 Docket Number: 50-280
 Thermal Power(MWH): 1.65E+07
 Commercial Operation: 12/22/72
 Cooling Water Source: James River

Licensee: Virginia Electric & Power
 Licensed Power(MWT): 2.44E+03
 Net Electrical Power(MWH): 5.22E+06
 Initial Criticality: 07/01/72

Unit Number: 2 Type: PWR
 Docket Number: 50-281
 Thermal Power(MWH): 2.05E+07
 Commercial Operation: 05/01/73
 Cooling Water Source: James River

Licensee: Virginia Electric & Power
 Licensed Power(MWT): 2.44E+03
 Net Electrical Power(MWH): 6.43E+06
 Initial Criticality: 03/07/73

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
22	Truck	Barnwell, SC
21	Truck	Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
 (by type of waste)

	Jan-June	Jul-Dec
A		
CO-58	5.36E+01	8.50E+00
CO-60	3.03E+01	4.62E+01
CR-51		1.32E+00
CS-137	2.04E+00	2.15E+00
FE-55	8.45E+00	3.09E+01
MN-54	4.58E+00	
NI-63		9.04E+00
B		
C-14		1.64E+00
CO-58	1.34E+01	
CO-60	3.10E+01	4.61E+01
CR-51	7.77E+00	
CS-137	1.05E+01	1.78E+01
FE-55	2.79E+01	3.45E+01
NI-63	7.94E+00	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.06E+02	before volume reduction
	m3 1.06E+02	burial volume
	Ci 3.96E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.23E+03	before offsite processing
	m3 1.04E+02	burial volume
	Ci 1.39E+01	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe)	m3	
	Ci	

Installation: Susquehanna
Unit No.: 1&2

Location: 7 Mi NE Berwick, PA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: BWR
Docket Number: 50-387
Thermal Power(MWH): 2.03E+07
Commercial Operation: 06/08/83
Cooling Water Source: Susquehanna River
Unit Number: 2 Type: BWR
Docket Number: 50-388
Thermal Power(MWH): 2.26E+07
Commercial Operation: 02/12/85
Cooling Water Source: Susquehanna River

Licensee: Pennsylvania Power & Light
Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 6.39E+06
Initial Criticality: 09/10/82
Licensee: Pennsylvania Power & Light
Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 7.18E+06
Initial Criticality: 05/08/84

Airborne Effluents

Nuclide Released	Activity (Ci)
MN-54	2.64E-03
CO-58	2.45E-04
FE-59	3.73E-04
CO-60	6.64E-04
ZN-65	7.72E-04
I-131	1.69E-05
XE-133	5.72E+01

Liquid Effluents

Nuclide Released	Activity (Ci)
F-18	9.33E-08
CR-51	1.10E-02
MN-54	9.89E-03
FE-55	1.75E-02
CO-58	3.00E-04
FE-59	1.79E-03
CO-60	6.78E-03
ZN-55	8.68E-04
AS-76	1.28E-04
KR-87	1.06E-08
ZR-95	1.76E-06
ZR-97	5.03E-07
MO-99	6.66E-05
AG-110M	1.30E-05
XE-133	8.23E-04
CS-134	7.87E-07
XE-135	7.95E-04
CS-137	1.73E-05
W-187	1.60E-05

Total Airborne Tritium Released	5.23E+01 Ci
Total Liquid Tritium Released	7.70E+01 Ci
Volume of Waste Released (Prior to Dilution)	1.55E+07 liters
Volume of Dilution Water Used During Period	1.38E+10 liters

Installation: Susquehanna
Unit No.: 1&2

Location: 7 Mi NE Berwick, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: BWR
Docket Number: 50-387
Thermal Power(MWH): 2.03E+07
Commercial Operation: 06/08/83
Cooling Water Source: Susquehanna River

Licensee: Pennsylvania Power & Light
Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 6.39E+06
Initial Criticality: 09/10/82

Unit Number: 2 Type: BWR
Docket Number: 50-388
Thermal Power(MWH): 2.26E+07
Commercial Operation: 02/12/85
Cooling Water Source: Susquehanna River

Licensee: Pennsylvania Power & Light
Company
Licensed Power(MWT): 3.29E+03
Net Electrical Power(MWH): 7.18E+06
Initial Criticality: 05/08/84

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
53	Truck	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

A	Jan-June	Jul-Dec
AG-110M	3.63E-02	3.24E-03
AM-241	2.64E-05	1.21E-05
C-14	1.06E-01	1.17E-02
CE-144	5.46E-03	3.48E-03
CM-242	2.52E-06	1.11E-06
CM-244	1.44E-05	2.32E-02
CO-58	1.08E+00	1.64E+00
CO-60	6.56E+00	1.59E+01
CR-51	3.71E+00	4.30E+00
CS-134	1.23E-02	4.95E-04
CS-137	2.72E-02	3.07E-03
FE-55	7.36E+01	2.76E+01
FE-59	2.00E+00	2.26E+00
H-3	6.05E-02	8.00E-03
HP-181	2.27E-02	3.27E-03
I-131	1.10E-02	4.56E-05
I-133	3.68E-05	
LA-140	5.69E-05	
MN-54	9.83E+00	2.66E+01
NB-95	5.01E-03	2.44E-03
NI-63	1.49E-01	3.00E-02
PU-238	4.64E-05	8.14E-06
PU-239	3.17E-05	5.06E-06
PU-241	1.12E-04	3.45E-02
SB-124	3.72E-02	1.00E-02
SR-89	1.13E-02	1.84E-05
SR-90	4.86E-04	1.12E+01
SR-92	4.36E-04	
TC-99		1.69E-03

Installation: Susquehanna
 Unit No.: 1&2

Location: 7 Mi NE Berwick, PA

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued)	Jan-June	July-Dec
(by type of waste)		
A		
TC-99M	7.79E-05	
XE-131M	5.91E-05	7.96E-07
ZN-65	2.72E+00	1.02E+01
B		
AM-241	1.51E-04	5.02E-05
C-14	6.74E-05	1.12E-03
CM-242	4.29E-06	9.63E-05
CM-244	1.91E-06	2.73E-05
CO-58	7.39E-02	5.70E-01
CO-60	7.19E-01	7.39E+00
CR-51	7.22E-01	4.59E+00
FE-55	7.23E+00	7.15E+01
FE-59	1.22E-01	1.52E+00
H-3	8.28E-05	1.30E-03
MN-54	9.97E-01	1.26E+01
NI-63	1.94E-02	2.11E-01
PU-238	5.94E-06	1.47E-01
PU-239	2.44E-06	1.77E-01
PU-241	4.66E-04	9.81E-03
SR-89	6.51E-03	5.10E-02
SR-90	5.13E-06	
TC-99		4.09E-03
ZN-65	1.17E-01	9.72E-01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.56E+02 Ci 9.21E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 8.40E+01 Ci 6.79E+01	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Three Mile Island
Unit No.: 1

Location: 10 Mi SE Harrisburg, PA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-289
Thermal Power(MWH): 2.22E+07
Commercial Operation: 09/02/74
Cooling Water Source: Susquehanna River

Licensee: GPU Nuclear Group
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 7.22E+06
Initial Criticality: 06/05/74

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.28E-02
MN-54	7.71E-08
CO-58	2.55E-05
KR-85	1.50E+01
KR-85M	2.10E+00
KR-87	1.91E+00
KR-88	4.07E+00
I-131	4.93E-03
XE-131M	3.15E+01
I-132	1.95E-09
I-133	6.22E-03
XE-133	4.94E+02
XE-133M	3.02E+00
CS-134	4.38E-07
XE-135	1.88E+01
XE-135M	1.43E+00
CS-137	1.44E-06
XE-138	1.06E+00

Liquid Effluents

Nuclide Released	Activity (Ci)
MN-54	5.85E-05
FE-55	2.01E-03
CO-57	7.01E-05
CO-58	1.33E-02
FE-59	2.88E-06
CO-60	4.47E-04
SR-89	1.02E-05
SR-90	8.39E-05
NB-95	3.38E-05
AG-110M	4.63E-04
SB-125	8.30E-04
I-131	2.44E-03
XE-131M	2.71E-04
XE-133	5.16E-02
XE-133M	2.70E-04
CS-134	1.80E-03
XE-135	7.68E-05
CS-137	4.44E-03
W-187	2.06E-06

Total Airborne Tritium Released	1.61E-01 Ci
Total Liquid Tritium Released	5.61E+02 Ci
Volume of Waste Released (Prior to Dilution)	2.77E+07 liters
Volume of Dilution Water Used During Period	4.80E+10 liters

Installation: Three Mile Island
Unit No.: 1

Location: 10 Mi SE Harrisburg, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-289
Thermal Power(MWH): 2.22E+07
Commercial Operation: 09/02/74
Cooling Water Source: Susquehanna River

Licensee: GPU Nuclear Group
Licensed Power(MWT): 2.57E+03
Net Electrical Power(MWH): 7.22E+06
Initial Criticality: 06/05/74

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Tractor	Alaron, Wampum, PA
10	Tractor	CNSI, Barnwell, SC
17	Tractor	SEG, Oak Ridge, TN
11	Tractor	U.S. Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

A			
	CS-134	2.46E+01	2.40E+01
	CS-137	6.49E+01	6.22E+01
	FE-55	1.64E+00	1.90E+00
	NI-63	6.55E+00	6.42E+00
B			
	AG-110M		6.77E+00
	CE-144	5.99E+00	5.57E+00
	CO-58	3.08E+01	2.90E+01
	CR-51	1.55E+01	1.44E+01
	CS-137	2.72E+01	2.60E+01
	FE-55	4.25E+00	
D			
	AG-110M	3.00E-03	
	CO-58	4.00E-02	
	H-3	9.90E+01	
	NI-63	2.30E-03	

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.82E+02 Ci 2.01E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.04E+02 Ci 2.49E+00	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Oil for incineration	m3 8.50E-01 Ci 1.40E-02	

Installation: Three Mile Island
Unit No.: 2

Location: 10 Mi SE Harrisburg, PA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR

Licensee: Metropolitan Edison&Jersey
Central Power&Light

Docket Number: 50-320

Licensed Power(MWT): 2.77E+03

Thermal Power(MWH): 0.00E+00

Net Electrical Power(MWH): 0.00E+00

Commercial Operation: 12/30/78

Initial Criticality: 03/28/78

Cooling Water Source: Susquehanna River

Airborne Effluents

Nuclide Released	Activity (Ci)
C-14	5.81E-05
SR-90	2.70E-07
CS-137	5.22E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
CO-60	1.14E-06
SR-90	2.69E-05
CS-137	9.37E-05

Total Airborne Tritium Released	9.49E+01 Ci
Total Liquid Tritium Released	3.53E-03 Ci
Volume of Waste Released (Prior to Dilution)	8.99E+05 liters
Volume of Dilution Water Used During Period	4.80E+10 liters

Installation: Three Mile Island
Unit No.: 2

Location: 10 Mi SE Harrisburg, PA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR

Licensee: Metropolitan Edison & Jersey
Central Power & Light

Docket Number: 50-320

Licensed Power (MWT): 2.77E+03

Thermal Power (MWH): 0.00E+00

Net Electrical Power (MWH): 0.00E+00

Commercial Operation: 12/30/78

Initial Criticality: 03/28/78

Cooling Water Source: Susquehanna River

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
25	Tractor	CNSI, Barnwell, SC
21	Tractor	SEG, Oak Ridge, TN
14	Tractor	U.S. Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CS-137	2.18E+01	5.38E+01
NI-63		1.58E+00
PM-147	4.77E+00	1.35E+00
PU-241	4.48E+00	
SR-90	6.39E+01	4.01E+01
B		
CS-137		7.67E+00
NI-63	2.30E+00	7.36E-01
PM-147	1.50E+00	1.48E+00
PU-241		1.39E+00
SB-125	4.12E+00	
SC-137	2.91E+01	
SR-90	5.87E+01	8.71E+01
D		
CS-134		2.79E-01
CS-137		8.21E+01
H-3		1.69E+01
SR-90		3.31E-01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.86E+02 Ci 1.03E+03	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 5.62E+02 Ci 2.40E+02	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Solidified decon waste	m3 4.23E+01 Ci 1.97E+00	

Installation: Trojan
Unit No.: 1

Location: 43 Mi NW Portland, OR

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-344
Thermal Power(MWH): 1.46E+07
Commercial Operation: 05/20/76
Cooling Water Source: Columbia River

Licensee: Portland General Electric
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 4.57E+06
Initial Criticality: 12/15/75

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	3.20E+00
KR-85	6.25E-01
KR-85M	2.60E-01
KR-87	2.06E-01
KR-88	3.55E-01
SR-89	6.95E-07
SR-90	6.60E-07
RU-106	3.28E-08
I-131	2.26E-04
XE-131M	4.17E-01
I-132	1.56E-03
I-133	9.56E-05
XE-133	1.80E+02
XE-133M	6.52E-01
XE-135	1.68E+01
XE-135M	3.81E+00
CS-137	1.75E-08
XE-138	3.91E-01
CE-144	1.55E-05
ND-147	1.23E-08
Unidentified	1.30E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
CR-51	2.27E-03
MN-54	1.29E-03
FE-55	2.03E-02
CO-57	1.16E-04
CO-58	7.84E-03
FE-59	6.44E-05
CO-60	1.93E-02
KR-85M	9.01E-03
RB-88	1.06E-05
SR-89	4.06E-03
SR-90	1.78E-04
NB-95	1.05E-03
ZR-95	4.06E-04
MO-99	1.58E-04
TC-99M	1.61E-04
RU-103	2.49E-04
RU-106	8.80E-03
AG-110M	2.71E-03
SN-113	3.55E-03
SB-124	1.30E-04

Installation: Trojan
Unit No.: 1

Location: 43 Mi NW Portland, OR

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
SB-125	1.15E-02
I-131	4.38E-04
I-132	4.08E-05
TE-132	1.28E-04
I-133	8.24E-06
XE-133	4.59E-01
XE-133M	2.68E-03
CS-134	3.24E-04
XE-135	1.74E-02
XE-135M	2.15E-05
CS-137	1.49E-03
BA-140	2.49E-04
LA-140	7.93E-04
CE-141	6.22E-06
CE-144	1.82E-03
Unidentified	1.61E-04

Total Airborne Tritium Released	2.94E+01 Ci
Total Liquid Tritium Released	1.96E+02 Ci
Volume of Waste Released (Prior to Dilution)	6.85E+07 liters
Volume of Dilution Water Used During Period	6.39E+10 liters

Installation: Trojan
Unit No.: 1

Location: 43 Mi NW Portland, OR

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-344
Thermal Power(MWH): 1.46E+07
Commercial Operation: 05/20/76
Cooling Water Source: Columbia River

Licensee: Portland General Electric
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 4.57E+06
Initial Criticality: 12/15/75

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
6	Exclusive Use Truck	SEG, Oak Ridge, TN
5	Exclusive Use Truck	U.S Ecology, Richland, WA
8	Exclusive Use Truck	U.S. Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
C-14	3.00E-01	1.00E-01
CE-144	1.00E-01	1.00E-01
CO-60	3.23E+01	3.25E+01
CS-134	3.80E+00	3.80E+00
CS-137	1.04E+01	1.05E+01
FE-55	8.60E+00	8.40E+00
H-3	4.00E-01	2.00E-01
MN-54	1.20E+00	1.20E+00
NI-63	4.16E+01	4.20E+01
PU-241	5.00E-01	6.00E-01
SR-90	6.00E-01	7.00E-01
B		
C-14	3.30E-01	1.10E+00
CE-144	1.00E-01	1.10E+00
CO-58	5.00E-01	1.02E+01
CO-60	8.10E+00	1.50E+01
CR-51		7.60E+00
CS-137	3.00E-01	1.10E+00
FE-55	5.72E+01	3.59E+01
H-3	2.06E+01	5.10E+00
MN-54	1.00E-01	1.70E+00
NB-95		1.40E+00
NI-63	7.90E+00	1.10E+01
PU-241	2.00E-01	3.40E+00
RU-103		1.70E+00
RU-106	4.00E-01	2.80E+00
SR-89	1.00E+00	
SR-90	2.00E-01	
ZR-95		8.00E-01

Installation: Trojan
Unit No.: 1

Location: 43 Mi NW Portland, OR

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 9.72E+01 Ci 7.06E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.54E+02	Before reduction (non-compacted)
	m3 2.28E+01	After vol reduction (compacted)
	Ci 3.53E+00	
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Turkey Point
Unit No.: 3

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-250
Thermal Power(MWH): 1.13E+07
Commercial Operation: 12/14/72
Cooling Water Source: Closed Cycle Canal

Licensee: Florida Power & Light
Licensed Power(MWT): 2.20E+03
Net Electrical Power(MWH): 3.42E+06
Initial Criticality: 10/20/72

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	4.50E-05
CO-58	6.25E-07
CO-60	5.79E-06
BR-82	4.86E-05
KR-85M	1.01E-04
KR-88	1.30E-04
I-131	1.04E-04
XE-131M	4.22E-01
I-133	3.43E-05
XE-133	5.90E+01
XE-133M	7.02E-02
I-135	7.30E-06
XE-135	2.00E+00
CS-137	5.42E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.11E-04
AR-41	3.29E-05
CR-51	4.09E-03
MN-54	2.66E-02
FE-55	1.23E-01
CO-58	2.26E-02
FE-59	3.40E-04
CO-60	2.65E-02
ZN-65	6.72E-06
KR-85M	5.03E-06
KR-87	3.57E-05
SR-90	2.62E-04
NB-95	4.92E-04
ZR-97	1.46E-05
MO-99	8.55E-06
RU-103	4.14E-06
AG-110	3.92E-04
AG-110M	6.38E-04
SN-113	1.69E-06
SB-124	3.45E-03
SB-125	2.37E-02
I-131	2.47E-03
XE-131M	3.95E-05
I-133	4.19E-05
XE-133	7.82E-02
XE-133M	4.28E-05
CS-134	1.09E-02

Installation: Turkey Point
Unit No.: 3

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
I-134	2.95E-06
XE-135	3.00E-05
CS-137	5.24E-02
LA-140	3.40E-04
W-187	8.14E-05

Total Airborne Tritium Released	1.98E-02 Ci
Total Liquid Tritium Released	2.21E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.08E+06 liters
Volume of Dilution Water Used During Period	9.73E+10 liters

Installation: Turkey Point
Unit No.: 4

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-251
Thermal Power(MWH): 1.53E+07
Commercial Operation: 09/07/73
Cooling Water Source: Closed Cycle Canal

Licensee: Florida Power & Light
Licensed Power(MWT): 2.20E+03
Net Electrical Power(MWH): 4.64E+06
Initial Criticality: 06/11/73

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	8.19E-02
CO-58	6.25E-07
CO-60	5.79E-06
BR-82	4.86E-05
KR-85M	1.01E-04
KR-87	1.30E-04
I-131	1.04E-04
XE-131	1.41E-01
XE-131M	3.37E-01
I-133	3.43E-05
XE-133	5.95E+01
XE-133M	5.72E-02
I-135	7.30E-06
XE-135	2.01E+00
CS-137	5.42E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	1.11E-04
AR-41	3.29E-05
CR-51	4.09E-03
MN-54	2.66E-02
FE-55	1.23E-01
CO-58	7.26E-02
FE-59	3.40E-04
CO-60	2.65E-02
ZN-65	6.72E-06
KR-85M	5.03E-06
KR-87	3.57E-05
SR-90	2.62E-04
NB-95	4.52E-04
ZR-97	1.46E-05
MO-99	8.55E-06
RU-103	4.14E-06
AG-110	1.03E-03
SN-113	1.69E-06
SB-124	3.45E-03
SB-125	2.37E-02
I-131	2.47E-03
XE-131M	3.95E-05
I-133	4.19E-05
XE-133	7.82E-02
XE-133M	4.28E-05
CS-134	1.09E-02

Installation: Turkey Point
Unit No.: 4

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
I-134	2.95E-06
XE-135	3.00E-05
CS-137	5.24E-02
LA-140	3.40E-04
W-187	8.14E-05

Total Airborne Tritium Released	1.98E-02 Ci
Total Liquid Tritium Released	2.21E+02 Ci
Volume of Waste Released (Prior to Dilution)	5.08E+06 liters
Volume of Dilution Water Used During Period	9.73E+10 liters

Installation: Turkey Point
Unit No.: 3&4

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 3 Type: PWR Licensee: Florida Power & Light
Docket Number: 50-250 Licensed Power(MWT): 2.20E+03
Thermal Power(MWH): 1.13E+07 Net Electrical Power(MWH): 3.42E+06
Commercial Operation: 12/14/72 Initial Criticality: 10/20/72
Cooling Water Source: Closed Cycle Canal

Unit Number: 4 Type: PWR Licensee: Florida Power & Light
Docket Number: 50-251 Licensed Power(MWT): 2.20E+03
Thermal Power(MWH): 1.53E+07 Net Electrical Power(MWH): 4.64E+06
Commercial Operation: 09/07/73 Initial Criticality: 06/11/73
Cooling Water Source: Closed Cycle Canal

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
3	Sole Use Truck	Barnwell, SC
6	Sole Use Truck	Hanford, WA
30	Sole Use Truck	Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
CO-58		6.00E+00
CO-60	1.90E+01	6.80E+01
CS-134	9.00E+00	2.00E+00
CS-137	5.20E+01	5.00E+00
FE-55	8.00E+00	1.10E+01
MN-54	1.00E+00	
NI-63	9.00E+00	8.00E+00
SB-125	2.00E+00	
B		
AG-110M		1.00E+00
CO-58	3.00E+00	2.00E+00
CO-60	3.30E+01	3.10E+01
CS-134		2.00E+00
CS-137	2.00E+00	2.00E+00
FE-55	4.50E+01	4.30E+01
MN-59		1.00E+00
NB-95		1.00E+00
NI-63	1.60E+01	1.60E+01
SB-125	1.00E+00	1.00E+00
D		
CO-58	2.00E+00	
CO-60	3.10E+01	
CR-51	2.00E+00	
CS-134	2.00E+00	
CS-137	9.00E+00	
FE-55	3.70E+01	
NB-95	1.00E+00	
NI-63	1.50E+01	
SB-125	1.00E+00	

Installation: Turkey Point
Unit No.: 3&4

Location: 10 Mi E Florida City, fl

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.25E+01	In the ground burial volume.
	m3 4.16E+01	
	m3 2.76E+01	Volume shipped for processing.
	Ci 2.28E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.52E+02	In the ground burial volume.
	m3 1.96E+03	Volume shipped for processing.
	Ci 1.27E+00	
C. Irradiated Components, Control Rods, etc.	m3	
	Ci	
D. Other (describe) Non-Compressible Waste	m3 4.06E+00	In the ground burial volume.
	m3 1.15E+02	Volume shipped for processing.
	Ci 2.56E-01	

Installation: Vermont Yankee
Unit No.: 1

Location: 5 Mi S Brattleboro, VT

Effluent and Waste Disposal Annual Report for 1992

Type: BWR
Docket Number: 50-271
Thermal Power(MWH): 1.18E+07
Commercial Operation: 11/30/72
Cooling Water Source: Connecticut River

Licensee: Vermont Yankee Nuclear Power
Licensed Power(MWT): 1.59E+03
Net Electrical Power(MWH): 3.73E+06
Initial Criticality: 03/24/72

Airborne Effluents

Nuclide Released	Activity (Ci)
CR-51	2.18E-04
MN-54	3.66E-05
CO-58	2.33E-06
CO-60	1.92E-04
ZN-65	4.15E-05
KR-85M	2.48E+01
KR-87	1.67E+02
KR-88	9.14E+01
RB-89	1.47E-05
SR-89	6.41E-03
SR-90	1.09E-04
NB-97	6.93E-07
I-131	4.25E-02
I-133	2.03E-01
XE-133	3.55E+02
I-135	3.70E-01
XE-135	1.49E+02
XE-135M	9.22E+02
CS-137	6.97E-05
CS-138	1.63E-04
XE-138	4.23E+03
BA-139	2.56E-06
BA/LA-140	1.42E-02
CE-141	2.49E-04

Liquid Effluents

Nuclide Released	Activity (Ci)
SR-91	1.28E-07
Y-91M	7.80E-07
SR-92	3.90E-07
TC-99M	1.26E-07
RU-106	1.58E-06
I-131	3.46E-06
XE-131M	3.62E-06
I-132	1.58E-06
I-133	6.63E-06
XE-133	4.96E-07
I-134	1.06E-06
I-135	7.27E-06
XE-135	8.06E-07
XE-135M	3.22E-06
BA-139	2.23E-06
BA/LA-140	1.17E-06
CE-141	2.39E-07

Installation: Vermont Yankee
Unit No.: 1

Location: 5 Mi S Brattleboro, VT

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	2.56E+01 Ci
Total Liquid Tritium Released	4.02E-05 Ci
Volume of Waste Released (Prior to Dilution)	3.79E+03 liters
Volume of Dilution Water Used During Period	7.00E+06 liters

Installation: Vermont Yankee
 Unit No.: 1

Location: 5 Mi S Brattleboro, VT

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Type: BWR
 Docket Number: 50-271
 Thermal Power (MWH): 1.18E+07
 Commercial Operation: 11/30/72
 Cooling Water Source: Connecticut River

Licensee: Vermont Yankee Nuclear Power
 Licensed Power (MWT): 1.59E+03
 Net Electrical Power (MWH): 3.73E+06
 Initial Criticality: 03/24/72

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
19	Truck	Barnwell, SC
3	Truck	Oak Ridge, TN
1	Truck	Wampun, PA

Estimate of Major Nuclide Composition (%)
 (by type of waste)

	Jan-June	Jul-Dec
A		
CO-60	1.17E+01	9.48E+00
CS-134	5.40E+00	3.41E+00
CS-137	1.02E+01	9.81E+00
FE-55	8.10E+00	5.16E+00
MN-54	4.30E+00	
ZN-65	5.28E+01	6.26E+01
B		
CO-60	1.81E+01	1.70E+01
CS-137	4.00E+00	
FE-55	6.06E+01	6.01E+01
MN-54	4.90E+00	5.43E+00
ZN-65	7.70E+00	8.96E+00
C		
CO-60		4.41E+01
FE-55		5.07E+01
NI-63		3.53E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 7.26E+01 Ci 5.06E+02	non-compacted burial volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.40E+02 Ci 5.17E+01	compacted
C. Irradiated Components, Control Rods, etc.	m3 3.25E+00 Ci 2.00E+04	non-compacted
D. Other (describe)	m3 Ci	

Installation: Vogtle
Unit No.: 1&2

Location: 25 Mi SSE Augusta, GA

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-424
Thermal Power(MWH): 2.88E+07
Commercial Operation: 05/31/87
Cooling Water Source: Savannah River
Unit Number: 2 Type: PWR
Docket Number: 50-425
Thermal Power(MWH): 2.40E+07
Commercial Operation: 05/20/89
Cooling Water Source: Savannah River

Licensee: Georgia Power
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 9.38E+06
Initial Criticality: 03/09/87

Licensee: Georgia Power
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 7.77E+06
Initial Criticality: 03/28/89

Airborne Effluents

Nuclide Released	Activity (Ci)
BE-7	3.76E-06
NA-24	6.59E-05
AR-41	4.89E+00
CR-51	7.97E-04
MN-54	7.42E-05
CO-57	8.44E-06
CO-58	3.31E-03
FE-59	4.87E-05
CO-60	1.61E-04
KR-85	1.85E-03
KR-85M	8.68E-02
NB-95	1.06E-04
ZR-95	2.15E-05
I-131	1.34E-03
XE-131M	1.95E+00
I-133	2.42E-04
XE-133	1.04E+02
XE-133M	1.31E+00
CS-134	1.45E-06
XE-135	1.38E+00
CS-137	2.25E-06
CE-144	1.05E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	6.75E-03
CR-51	1.10E-02
MN-54	4.02E-03
FE-55	5.68E-02
CO-57	1.68E-04
CO-58	6.28E-02
FE-59	1.25E-03
CO-60	1.38E-02
ZN-65	2.27E-05
Y-92	7.54E-05
NB-95	2.42E-03
ZR-95	9.50E-04
NB-97	1.53E-04
ZR-97	2.08E-06

Installation: Vogtle
Unit No.: 1&2

Location: 25 Mi SSE Augusta, GA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
AG-110M	2.43E-06
SN-113	4.15E-05
SB-124	6.71E-04
SB-125	2.91E-02
TE-125M	2.93E-03
I-131	3.38E-04
XE-131M	7.20E-04
TE-132	2.54E-05
I-133	1.92E-05
XE-133	4.63E-03
CS-134	3.83E-05
XE-135	1.38E-04
CS-137	1.04E-04
LA-140	9.08E-06
CE-143	9.74E-06

Total Airborne Tritium Released	2.14E+02 Ci
Total Liquid Tritium Released	1.48E+03 Ci
Volume of Waste Released (Prior to Dilution)	6.03E+06 liters
Volume of Dilution Water Used During Period	3.25E+09 liters

Installation: Vogtle
 Unit No.: 1&2

Location: 25 Mi SSE Augusta, GA

Effluent and Waste Disposal Annual Report for 1990
 Solid Effluents

Unit Number: 1 Type: PWR
 Docket Number: 50-424
 Thermal Power(MWH): 2.88E+07
 Commercial Operation: 05/31/87
 Cooling Water Source: Savannah River

Licensee: Georgia Power
 Licensed Power(MWT): 3.41E+03
 Net Electrical Power(MWH): 9.38E+06
 Initial Criticality: 03/09/87

Unit Number: 2 Type: PWR
 Docket Number: 50-425
 Thermal Power(MWH): 2.40E+07
 Commercial Operation: 05/20/89
 Cooling Water Source: Savannah River

Licensee: Georgia Power
 Licensed Power(MWT): 3.41E+03
 Net Electrical Power(MWH): 7.77E+06
 Initial Criticality: 03/28/89

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Tractor/Trailer	CNSI, Barnwell, SC
8	Tractor/Trailer/Shielded Cask	CNSI, Barnwell, SC
9	Tractor/Trailer	Quadrex, Oak Ridge, TN
11	Tractor/Trailer	SEG, Oak Ridge, TN
2	Tractor/Trailer/Shielded Cask	SEG, Oak Ridge, TN

Estimate of Major Nuclide Composition (%)
 (by type of waste)

Jan-June Jul-Dec

	Jan-June	Jul-Dec
A		
CO-58		1.78E+01
CO-60	1.42E+01	
CS-137		1.16E+01
FE-55	1.91E+01	3.03E+01
NI-63	5.35E+01	
Others	1.30E+01	4.01E+01
B		
CO-58	5.96E+01	1.02E+01
FE-55	1.65E+01	6.79E+01
NI-63	1.20E+01	5.25E+00
Others	1.17E+01	1.66E+01

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 6.09E+01 Ci 1.04E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.76E+01 Ci 2.65E+01	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Waterford
Unit No.: 3

Location: 20 Mi W New Orleans, LA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-382
Thermal Power(MWH): 2.11E+07
Commercial Operation: 09/24/85
Cooling Water Source: Mississippi River

Licensee: Louisiana Power & Light
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 7.62E+06
Initial Criticality: 03/04/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	3.74E+01
CO-58	6.12E-06
CO-60	5.31E-07
BR-82	8.21E-06
KR-85	4.63E-02
KR-85M	1.43E+01
KR-87	4.41E+00
SR-90	3.48E-08
RU-103	9.41E-07
I-131	1.76E-05
XE-131M	5.73E-03
XE-133	4.40E+02
XE-133M	3.22E-05
Xe-133	3.16E+00
CS-134	6.33E-07
XE-135	1.93E+02
CS-137	1.66E-06

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	7.57E-04
AR-41	8.79E-05
CR-51	1.41E-01
MN-54	1.22E-02
FE-55	1.48E-01
CO-57	7.90E-04
CO-58	3.51E-01
FE-59	2.00E-02
CO-60	6.63E-02
ZN-65	3.69E-06
BR-82	3.76E-04
KR-85	2.04E-02
KR-85M	2.68E-04
KR-88	1.18E-04
RE-88	2.52E-03
SR-89	1.08E-04
SR-92	4.89E-04
NB-95	5.14E-02
ZR-95	3.24E-02
NB-97	8.71E-03
ZR-97	2.29E-04
MO-99	7.00E-03
TC-99M	1.04E-03
RU-103	1.13E-03

Installation: Waterford
Unit No.: 3

Location: 20 Mi W New Orleans, LA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
RU-106	1.75E-03
AG-110M	4.36E-03
SN-113	8.41E-03
SB-122	1.49E-02
SB-124	2.90E-02
SB-125	1.96E-01
SB-126	1.83E-03
SB-127	5.67E-04
I-131	1.03E-01
XE-131M	1.56E-02
I-132	1.20E-03
TE-132	7.49E-04
I-133	4.89E-02
XE-133	1.73E+00
XE-133M	1.83E-02
CS-134	1.89E-02
I-135	3.30E-03
XE-135	3.27E-02
CS-136	6.92E-05
CS-137	2.44E-02
BA-139	3.27E-05
BA-140	7.41E-04
LA-140	5.25E-03
CE-141	5.70E-05
LA-142	3.35E-04
CE-144	7.51E-04
W-187	1.76E-03
NP-239	4.36E-04

Total Airborne Tritium Released	3.11E+02 Ci
Total Liquid Tritium Released	4.95E+02 Ci
Volume of Waste Released (Prior to Dilution)	7.94E+06 liters
Volume of Dilution Water Used During Period	1.22E+12 liters

Installation: Waterford
Unit No.: 3

Location: 20 Mi W New Orleans, LA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-382
Thermal Power(MWH): 2.41E+07
Commercial Operation: 09/24/85
Cooling Water Source: Mississippi River

Licensee: Louisiana Power & Light
Licensed Power(MWT): 3.39E+03
Net Electrical Power(MWH): 7.62E+06
Initial Criticality: 03/04/85

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
10	Sole use cask	Barnwell, SC
4	Sole use flatbed	Oak Ridge, TN
13	Sole use flatbed	Wampum, PA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
BE-7		4.30E-01
C-14	8.40E-01	1.30E-01
CE-144		8.00E-02
CO-57		1.50E-01
CO-58	2.29E+00	6.28E+01
CO-60	7.15E+00	3.99E+00
CR-51		4.50E-01
CS-134	9.30E-01	2.64E+00
CS-137	2.04E+00	4.55E+00
FE-55	7.56E+01	9.97E+00
FE-59		1.30E-01
MN-54	4.00E-01	2.40E+00
NB-95		1.60E-01
NI-63		1.04E+01
PU-241	1.07E+01	2.00E-02
RU-106		8.00E-02
SB-125		1.22E+00
SN-113		1.50E-01
SR-89		3.00E-02
SR-90		3.00E-02
ZR-95		2.50E-01

B

C-14	1.10E-01	1.00E-02
CO-57		1.01E+00
CO-58	3.20E+01	4.12E+01
CO-60	8.62E+00	2.85E+01
CS-134	9.08E+00	6.02E+00
CS-137	1.68E+01	1.22E+01
FE-55	7.57E+00	1.71E+00
H-3	9.50E-01	1.00E-02
MN-54	3.03E+00	5.51E+00
NI-63	2.18E+01	3.81E+00

C

CO-58	7.40E-01
CO-60	7.73E+01
FE-55	1.42E+01

Installation: Waterford
 Unit No.: 3

Location: 20 Mi W New Orleans, LA

Effluent and Waste Disposal Annual Report for 1992
 Solid Effluents

Estimate of Major Nuclide Composition (%) (continued) Jan-June July-Dec
 (by type of waste)

	Jan-June	July-Dec
C		
MN-54	1.20E+00	
NI-59	5.00E-02	
NI-63	6.47E+00	
D		
CO-58		9.66E+00
CO-60		3.27E+01
CS-134		7.93E+00
CS-137		4.15E+01
FE-55		1.98E+00
NI-63		4.38E+00
SB-125		1.91E+00

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 5.43E+01	
	Ci 9.22E+02	
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 4.32E+01	Before burial reduction
	m3 1.43E+02	Burial volume
	m3 2.47E+01	Burial volume
	m3 7.44E+02	Before burial reduction
	Ci 4.34E+00	
C. Irradiated Components, Control Rods, etc.	m3 1.62E+00	
	Ci 3.00E+03	
D. Other (describe) Waste Oil	m3	
	Ci 8.85E-02	

Installation: WNP-2
Unit No.: 2

Location: 12 Mi NW Richland, WA

Effluent and Waste Disposal Annual Report for 1992

Type: BWR

Licensee: Washington Public Power Supply
System

Docket Number: 50-397

Licensed Power(MWT): 3.32E+03

Thermal Power(MWH): 1.75E+07

Net Electrical Power(MWH): 5.69E+06

Commercial Operation: 12/13/84

Initial Criticality: 01/19/84

Cooling Water Source: Columbia River

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	3.18E+00
CO-60	1.70E-03
ZN-65	1.50E-04
BR-82	3.70E-06
KR-85M	1.00E+00
KR-88	9.20E-01
RB-89	1.70E-03
SR-89	6.08E-03
SR-90	1.81E-05
SR-91	3.29E-03
SR-92	1.40E-02
I-131	7.86E-03
I-132	1.60E-02
I-133	4.18E-02
XE-133	3.23E+01
CS-134	1.59E-04
I-134	7.83E-04
I-135	6.13E-02
XE-135	5.60E+01
XE-135M	3.45E+01
CS-137	1.60E-04
XE-137	7.20E-01
CS-138	4.13E+00
XE-138	2.22E+01
BA-139	2.18E+00
BA/LA-140	2.71E-02

Liquid Effluents

Nuclide Released	Activity (Ci)
NA-24	3.59E-04
CR-51	1.34E-02
MN-54	1.84E-03
FE-55	2.11E-02
CO-58	2.04E-03
FE-59	3.30E-04
CO-60	3.23E-02
ZN-65	1.55E-02
SR-89	1.56E-04
SR-90	2.03E-05
ZR/NB-95	3.10E-04
MO-99	3.60E-05
TC-99M	3.20E-05
AG-110M	2.60E-04

Installation: WNP-2
Unit No.: 2

Location: 12 Mi NW Richland, WA

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
I-131	1.97E-04
XE-133	6.80E-04
CS-134	1.95E-03
XE-135	1.62E-03
CS-137	5.04E-03

Total Airborne Tritium Released	4.82E+01 Ci
Total Liquid Tritium Released	1.08E+01 Ci
Volume of Waste Released (Prior to Dilution)	9.22E+06 liters
Volume of Dilution Water Used During Period	3.59E+09 liters

Installation: WNP-2
Unit No.: 2

Location: 12 Mi NW Richland, WA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: BWR

Licensee: Washington Public Power Supply
System

Docket Number: 50-397

Licensed Power(MWT): 3.32E+03

Thermal Power(MWH): 1.75E+07

Net Electrical Power(MWH): 5.69E+06

Commercial Operation: 12/13/84

Initial Criticality: 01/19/84

Cooling Water Source: Columbia River

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
45	Cask	US Ecology, Richland, WA
24	Flatbed	US Ecology, Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
BA/LA-140	1.20E+00	6.00E-01
CE-144	1.50E+00	
CO-58	2.70E+00	2.80E+00
CO-60	2.85E+01	3.48E+01
CR-51	7.60E+00	3.60E+00
CS-134	4.20E+00	4.00E-01
CS-137	4.90E+00	7.00E-01
FE-55	4.00E+00	2.17E+01
I-131		4.00E-01
MN-54	2.10E+00	2.40E+00
NB-95		4.00E-01
NI-63	1.50E+00	4.00E+00
SR-89	2.40E+00	
ZN-65	3.73E+01	2.76E+01
B		
CE-144		4.00E-01
CO-60	7.26E+01	4.42E+01
CS-137		8.00E-01
FE-55	1.71E+01	4.77E+01
MN-54	1.20E+00	1.00E-01
SB-125	2.30E+00	3.00E-01
ZN-65	6.80E+00	6.40E+00
D		
CO-58	2.90E+00	
CO-60	3.30E+01	
CR-51	1.63E+01	
FE-55	7.90E+00	
H-3	1.35E+01	
MN-54	1.30E+00	
ZN-65	2.35E+01	

Installation: WNP-2
Unit No.: 2

Location: 12 Mi NW Richland, WA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 2.04E+02 Ci 1.19E+03	Spent Resin
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 2.67E+02 Ci 5.18E+01	Compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Absorbed aqueous liquid	m3 6.40E+00 Ci 2.35E-01	Aquaset Solidification

Installation: Wolf Creek
Unit No.: 1

Location: 3.5 Mi NE Burlington, KS

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-482
Thermal Power(MWH): 2.54E+07
Commercial Operation: 09/03/85
Cooling Water Source: Cooling Lake

Licensee: Wolf Creek Nuclear Oper.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.49E+06
Initial Criticality: 05/22/85

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	3.74E-01
CO-60	4.88E-07
KR-85	2.23E+02
KR-85M	2.26E-01
KR-88	5.89E-01
SR-90	4.76E-07
I-131	1.67E-05
XE-131M	9.33E-02
XE-133	7.09E+01
XE-133M	1.87E-01
XE-135	1.26E+01
CS-137	4.52E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
BE-7	3.98E-05
CR-51	3.36E-03
MN-54	4.19E-03
FE-55	1.21E-01
CO-57	7.93E-04
CO-58	3.55E-02
FE-59	2.14E-04
CO-60	6.72E-02
KR-85	1.21E-01
SR-89	1.65E-03
SR-90	6.33E-05
SR-92	5.35E-05
NB-95	1.99E-03
ZR-95	7.82E-04
TC-99M	1.16E-04
RU-103	1.38E-04
AG-110M	8.52E-04
SN-113	1.06E-04
SB-124	1.05E-03
SB-125	3.45E-02
I-131	1.71E-04
XE-131M	1.92E-03
XE-133	3.84E-02
XE-133M	4.42E-05
CS-134	6.94E-03
XE-135	6.72E-04
CS-137	7.05E-03
LA-140	1.79E-04
CE-144	2.95E-03

Installation: Wolf Creek
Unit No.: 1

Location: 3.5 Mi NE Burlington, KS

Effluent and Waste Disposal Annual Report for 1992

Total Airborne Tritium Released	1.73E+01 Ci
Total Liquid Tritium Released	4.51E+02 Ci
Volume of Waste Released (Prior to Dilution)	3.44E+08 liters
Volume of Dilution Water Used During Period	1.28E+12 liters

Installation: Wolf Creek
Unit No.: 1

Location: 3.5 Mi NE Burlington, KS

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-482
Thermal Power(MWH): 2.54E+07
Commercial Operation: 09/03/85
Cooling Water Source: Cooling Lake

Licensee: Wolf Creek Nuclear Oper.
Licensed Power(MWT): 3.41E+03
Net Electrical Power(MWH): 8.49E+06
Initial Criticality: 05/22/85

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
11	Truck	Barnwell, SC
1	Truck	Beatty, NV
6	Truck	Richland, WA

Estimate of Major Nuclide Composition (%)
(by type of waste)

A

	Jan-June	Jul-Dec
BE-7	3.26E+00	2.99E+00
C-14	7.60E-02	1.25E-01
CE-144		2.90E-02
CO-58	4.33E+00	6.67E-01
CO-60	8.86E+00	3.60E+00
CS-134	2.41E+01	4.09E+01
CS-137	2.08E+01	3.79E+01
EU-155	1.27E+00	
FE-55	2.04E+01	6.47E+00
H-3	2.30E-02	1.00E-02
MN-54	2.13E+00	1.02E+00
NI-63	1.47E+01	6.12E+00
SB-125		1.30E-02
SR-90	2.80E-02	1.03E-01
TC-99		3.00E-03

B

C-14	4.00E-03	3.00E-03
CO-58	3.68E+00	1.72E+00
CO-60	2.66E+01	2.51E+01
CR-51	2.80E-02	
CS-134	1.28E+00	1.02E+00
CS-137	1.70E+00	1.46E+00
FE-55	5.48E+01	6.01E+01
H-3	3.60E-02	2.10E-02
I-131	5.30E-01	
MN-54	1.33E+00	1.44E+00
NB-95	1.82E+00	1.60E+00
NI-63	8.26E+00	7.56E+00

Installation: Wolf Creek
Unit No.: 1

Location: 3.5 Mi NE Burlington, KS

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 1.30E+01 Ci 2.33E+02	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.94E+01 Ci 1.06E+01	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe)	m3 Ci	

Installation: Yankee Rowe
Unit No.: 1

Location: 20 Mi NW Greenfield, MA

Effluent and Waste Disposal Annual Report for 1992

Type: PWR
Docket Number: 50-029
Thermal Power (MWH): 0.00E+00
Commercial Operation: 07/01/61
Cooling Water Source: Deerfield River

Licensee: Yankee Atomic Electric
Licensed Power (MWT): 6.00E+02
Net Electrical Power (MWH): 0.00E+00
Initial Criticality: 08/19/60

Airborne Effluents

Nuclide Released	Activity (Ci)
CO-60	7.51E-06
CS-137	1.95E-07

Liquid Effluents

Nuclide Released	Activity (Ci)
C-14	3.99E-03
MN-54	5.11E-06
FE-55	8.96E-04
CO-60	5.89E-04
KR-85	3.05E-04
CS-134	1.84E-04
CS-137	5.66E-04

Total Airborne Tritium Released	2.93E+00 Ci
Total Liquid Tritium Released	6.31E+01 Ci
Volume of Waste Released (Prior to Dilution)	2.96E+06 liters
Volume of Dilution Water Used During Period	4.32E+09 liters

Installation: Yankee Rowe
Unit No.: 1

Location: 20 Mi NW Greenfield, MA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type: PWR
Docket Number: 50-029
Thermal Power(MWH): 0.00E+00
Commercial Operation: 07/01/61
Cooling Water Source: Deerfield River

Licensee: Yankee Atomic Electric
Licensed Power(MWT): 6.00E+02
Net Electrical Power(MWH): 0.00E+00
Initial Criticality: 08/19/60

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
15	Truck	Barnwell, SC

Estimate of Major Nuclide Composition (%)
(by type of waste)

	Jan-June	Jul-Dec
A		
C-14	3.23E-01	4.76E-02
CO-60	3.16E+00	1.05E+01
CS-134	1.16E+01	1.45E+01
CS-137	1.69E+01	3.75E+01
FE-55	2.97E+01	1.91E+01
H-3	3.50E+01	2.48E+00
MN-54		9.01E+00
NB-95	1.26E+00	
NI-63	2.01E+00	5.24E+00
SR-90		1.63E+00
B		
C-14	4.92E-01	4.97E-01
CO-60	4.81E+00	5.60E+00
CS-134	1.76E+01	1.48E+01
CS-137	2.57E+01	2.41E+01
FE-55	4.50E+01	4.96E+01
MN-54	1.07E+00	
NB-95	1.79E+00	
NI-63	3.07E+00	3.91E+00
C		
AG-110M		3.80E+01
CD-109		7.86E+00
CO-60		2.14E+01
FE-55		2.57E+01
MN-54		1.51E+00
NB-95		5.98E-01
NI-63		2.49E+00
SB-125		2.02E+00

Installation: Yankee Rowe
Unit No.: 1

Location: 20 Mi NW Greenfield, MA

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 9.42E+01 Ci 5.97E+01	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 1.05E+02 Ci 4.71E+00	Burial Volume
C. Irradiated Components, Control Rods, etc.	m3 3.25E+00 Ci 3.23E+04	Burial Volume
D. Other (describe)	m3 Ci	

Installation: Zion
Unit No.: 1&2

Location: 6 Mi N Waukegan, IL

Effluent and Waste Disposal Annual Report for 1992

Unit Number: 1 Type: PWR
Docket Number: 50-295
Thermal Power(MWH): 1.27E+07
Commercial Operation: 12/31/73
Cooling Water Source: Lake Michigan
Unit Number: 2 Type: PWR
Docket Number: 50-304
Thermal Power(MWH): 1.67E+07
Commercial Operation: 09/17/74
Cooling Water Source: Lake Michigan

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.25E+03
Net Electrical Power(MWH): 4.11E+06
Initial Criticality: 06/19/73

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.25E+03
Net Electrical Power(MWH): 5.37E+06
Initial Criticality: 12/24/73

Airborne Effluents

Nuclide Released	Activity (Ci)
AR-41	1.45E+01
CR-51	5.13E-04
MN-54	1.17E-05
CO-58	6.63E-04
FE-59	1.10E-07
CO-60	1.54E-03
SE-75	1.00E-08
BR-82	4.46E-05
KR-85	2.88E+00
KR-85M	3.50E-01
KR-88	1.00E+00
RB-88	7.58E-03
SR-89	4.70E-09
SR-92	8.60E-05
NB-95	6.80E-05
ZR-95	1.91E-05
RU-103	1.60E-05
SB-125	8.00E-08
I-131	4.79E-02
XE-131	2.30E-05
XE-131M	4.80E-05
I-132	1.04E-04
I-133	9.63E-04
XE-133	3.01E+02
XE-133M	6.82E-03
CS-134	3.53E-05
I-134	2.50E-05
I-135	5.98E-05
XE-135	1.31E+01
XE-135M	2.80E+00
CS-136	8.30E-07
CS-137	2.47E-04
CS-138	1.85E-05

Liquid Effluents

Nuclide Release ^d	Activity (Ci)
NA-24	3.19E-03
AR-41	1.24E-04
CR-51	1.18E-01

Installation: Zion
Unit No.: 1&2

Location: 6 Mi N Waukegan, IL

Effluent and Waste Disposal Annual Report for 1992

Liquid Effluents (continued)

Nuclide Released	Activity (Ci)
MN-54	6.90E-03
FE-55	1.92E-01
CO-57	7.20E-05
CO-58	3.14E-01
FE-59	1.92E-02
CO-60	4.05E-01
KR-85	5.81E-02
KR-85M	1.49E-04
RB-88	5.00E-04
SR-89	1.23E-03
SR-90	4.30E-05
SR-92	1.06E-02
NB-95	1.68E-02
ZR-95	9.40E-03
ZR-97	2.10E-05
MO-99	2.93E-04
TC-99M	1.11E-04
RU-103	6.10E-04
AG-110M	4.07E-02
SN-113	1.05E-03
SN-117M	3.39E-04
SB-122	8.78E-04
SB-124	1.53E-01
SB-125	3.45E-01
SB-126	1.23E-04
I-131	3.68E-02
XE-131M	4.10E-02
I-132	5.70E-03
TE-132	1.87E-03
I-133	6.28E-03
XE-133	2.36E+00
XE-133M	6.35E-02
CS-134	3.82E-02
I-134	9.00E-03
I-135	5.40E-05
XE-135	5.72E-02
CS-136	1.20E-05
CS-137	5.70E-02
CS-138	3.00E-04
EA-140	4.40E-04
LA-140	5.50E-03
BA-141	4.50E-03
CE-141	1.04E-03
CE-144	2.68E-03
TA-182	3.00E-04
W-187	3.50E-04

Total Airborne Tritium Released	5.65E+01 Ci
Total Liquid Tritium Released	5.22E+02 Ci
Volume of Waste Released (Prior to Dilution)	8.07E+09 liters
Volume of Dilution Water Used During Period	1.42E+11 liters

Installation: Zion
Unit No.: 1&2

Location: 6 Mi N Waukegan, IL

Effluent and Waste Disposal Annual Report for 1992
Solid Effluents

Unit Number: 1 Type: PWR
Docket Number: 50-295
Thermal Power(MWH): 1.27E+07
Commercial Operation: 12/31/73
Cooling Water Source: Lake Michigan

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.25E+03
Net Electrical Power(MWH): 4.11E+06
Initial Criticality: 06/19/73

Unit Number: 2 Type: PWR
Docket Number: 50-304
Thermal Power(MWH): 1.67E+07
Commercial Operation: 09/17/74
Cooling Water Source: Lake Michigan

Licensee: Commonwealth Edison
Licensed Power(MWT): 3.25E+03
Net Electrical Power(MWH): 5.37E+06
Initial Criticality: 12/24/73

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
19		Barnwell, SC
22	Truck	Barnwell, SC

Type of Waste	Unit	Description
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3 8.06E+01 m3 6.10E+01 Ci 1.31E+03	Burial Volume
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3 3.13E+01 m3 9.65E+01 Ci 2.11E+02	Compacted
C. Irradiated Components, Control Rods, etc.	m3 Ci	
D. Other (describe) Filters and Activated Hardware	m3 5.03E+00 Ci 2.04E+04	

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

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Washington, DC 20555-0001

10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

Releases of radioactive materials in airborne and liquid effluents from commercial light water reactors during 1992 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 1992 release data are summarized in tabular form. Data covering specific radionuclides are summarized.

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