

PEACH BOTTOM ATOMIC POWER STATION
Unit Numbers 2 and 3
Docket Numbers 50-277 and 50-278

ANNUAL EFFLUENT RELEASE REPORT

NO. 38

JANUARY 1, 1995 THROUGH DECEMBER 31, 1995

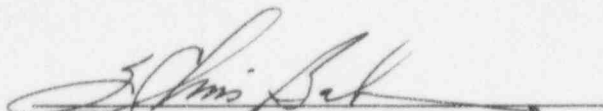
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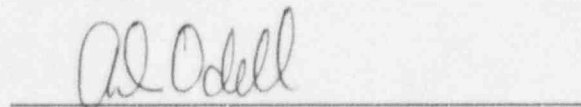
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Technical Concurrences: (for accuracy of information)


Radwaste Manger


Chemistry Manager

1. INTRODUCTION

In accordance with the Unique Reporting Requirements of Technical Specification 6.9.2h(2) applicable during the reporting period, this report summarizes the Effluent Release Data for Peach Bottom Atomic Power Station Units 2 and 3 for the period January 1, 1995 through December 31, 1995. The notations E and E- are used to denote positive and negative exponents to the base 10, respectively.

The release of radioactive materials during the reporting period was within the Technical Specification limits.

The Off-Site Dose Calculation Manual (ODCM) was revised four times during the reporting period. These revisions were:

Revision 6 (issued March 2, 1995)

1. Annotation of a previously incorporated commitment to calculate and report maximum total body and organ doses.
2. Changes to reflect the current Radiological Environmental Monitoring Program by:
 - a. Reducing the number of listed TLD sample stations from 47 to 40.
 - b. Replacing the specified air particulate and air iodine sample station 12D with station 22G1 from the LGS REMP.

Revision 7 (issued October 3, 1995)

1. Changes to reflect the installation of new hydrogen analyzers.
2. Changes to reflect the introduction of new gaseous effluent radiation monitors.

Revision 8 (approved October 23, 1995 but delayed pending implementation of Improved Technical Specifications. These changes were incorporated into Revision 9.)

Incorporation of the relocated requirements from Technical Specifications consistent with NRC Generic Letter 89-01.

Revision 9 (approved January 3, 1996 and issued January 18, 1996)

1. Changes to reflect the revised implementation schedule for the gaseous effluent radiation monitors upgrade.
2. Minor non-technical changes to correct two typographical errors on page 26 and a diagram reference on page 30.

A copy of Revision 9 of the ODCM is attached to this report.

The station Process Control Program (PCP) was revised on 12-15-94 with an effective date of 1-19-95. The incorporated changes were:

1. Option to use SEG for dewatering activities, instead of being limited to use of Vectra (previously NuPac).
2. Distinction between system utilized at PBAPS and LGS regarding the processing of condensate filter/demineralizer waste, i.e. a precoatable and precoatless system, respectively.
3. Update of procedure sources/references and personnel titles.
4. Submittal of NRC Annual Radioactive Effluent Release Report on an annual rather than a semi-annual basis.

A copy of the revised RW-C-100 Solid Radwaste System Process Control Program (PCP) is attached to this report.

A review of the Main Stack Gaseous Effluent Monitor calibration data in conjunction with published information on the performance characteristics of these monitors verified that the factor used throughout 1995 to convert monitor net counts per second to gross noble gas activity was unnecessarily conservative.

Accordingly, the 1995 Main Stack noble gas Total Curie and Air Dose values in this report were generated by adjusting the originally determined Main Stack noble gas activity values to reflect the use of a more realistic conversion factor.

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95 - 12/31/95)

Table 1A Page 1 of 2

Gaseous Effluents - Summation of All Releases

	UNITS	QUARTER 1	QUARTER 2	EST. ERROR TOTAL %
A. Fission & activation gases				
1. Total release	Ci	2.66E3	2.68E3	18.8
2. Average release rate for period	μCi/sec	3.38E2	3.41E2	18.8
3. Gamma Air Dose	Millirad	1.29E-1	1.66E-1	18.8
Percent of Technical Specification	%	1.29E-0	1.66E-0	18.8
4. Beta Air Dose	Millirad	9.50E-2	1.20E-1	18.8
Percent of Technical Specification	%	4.75E-1	6.00E-1	18.8
B. Iodines				
1. Total iodine-131	Ci	7.40E-3	5.49E-3	22.9
2. Average release rate for period	μCi/sec	9.41E-4	6.98E-4	22.9
3. Critical Organ dose	Millirem	3.30E-2	2.75E-2	22.9
Percent of Technical Specification	%	2.20E-1	1.83E-1	22.9
C. Particulates				
1. Particulates with half-lives greater than 8 days (includes Alpha and Strontium 89-90)	Ci	1.34E-3	1.61E-3	22.9
2. Average release rate for period	μCi/sec	1.70E-4	2.05E-4	22.9
3. Average Gross Alpha Radioactivity	Ci	4.83E-6	2.53E-6	22.9
D. Tritium				
1. Total release	Ci	0	4.10E1	23.5
2. Average release rate for period	μCi/sec	0	5.21E-0	23.5

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Gaseous Effluents - Summation of All Releases

	UNITS	QUARTER 3	QUARTER 4	EST. ERROR TOTAL %
A. Fission & activation gases				
1. Total release	Ci	2.61E3	9.17E2	18.8
2. Average release rate for period	μCi/sec	3.32E2	1.17E2	18.8
3. Gamma Air Dose	Millirad	1.28E-1	4.51E-2	18.8
Percent of Technical Specification	%	1.28E-0	4.51E-1	18.8
4. Beta Air Dose	Millirad	9.39E-2	3.45E-2	18.8
Percent of Technical Specification	%	4.70E-1	1.72E-1	18.8
B. Iodines				
1. Total iodine-131	Ci	1.02E-2	2.11E-3	22.9
2. Average release rate for period	μCi/sec	1.30E-3	2.68E-4	22.9
3. Critical Organ dose	Millirem	5.08E-2	8.61E-3	22.9
Percent of Technical Specification	%	3.39E-1	5.74E-2	22.9
C. Particulates				
1. Particulates with half-lives greater than 8 days (includes Alpha and Strontium 89-90)	Ci	2.22E-3	1.66E-3	22.9
2. Average release rate for period	μCi/sec	2.82E-4	2.11E-4	22.9
3. Average Gross Alpha Radioactivity	Ci	1.53E-6	2.85E-6	22.9
D. Tritium				
1. Total release	Ci	4.24E1	0	23.5
2. Average release rate for period	μCi/sec	5.40E-0	0	23.5

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95 - 12/31/95)

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Gaseous Effluents for Release Point - Main Stack

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 1	Quarter 2	Quarter 1	Quarter 2
1. Fission gases					
Krypton - 85M	Ci	5.33E2	5.26E2	0	0
Krypton - 87	Ci	3.13E1	5.50E0	0	0
Krypton - 88	Ci	4.43E2	4.70E2	0	0
Xenon - 133	Ci	9.48E2	8.04E2	0	0
Xenon - 135	Ci	1.46E2	1.66E2	0	0
Xenon - 135M	Ci	3.40E1	1.07E1	0	0
Xenon - 138	Ci	5.58E1	8.40E1	0	0
Unidentified	Ci	0	0	0	0
Total for Period	Ci	2.19E3	2.07E3	0	0
2. Iodines					
Iodine - 131	Ci	3.47E-3	1.73E-3	0	0
Iodine - 133	Ci	3.63E-3	5.44E-3	0	0
Iodine - 135	Ci	5.44E-3	5.29E-3	0	0
Total for Period	Ci	1.25E-2	1.25E-2	0	0
3. Particulates					
Strontium - 89	Ci	6.77E-4	6.84E-4	0	0
Strontium - 90	Ci	1.55E-6	5.75E-7	0	0
Strontium - 91	Ci	3.37E-4	1.10E-4	0	0
Cesium - 137	Ci	1.76E-6	0	0	0
Cesium - 138	Ci	2.56E-2	2.55E-2	0	0
Barium - 139	Ci	3.94E-3	2.59E-3	0	0
Barium - 140	Ci	2.06E-4	1.56E-4	0	0
Lanthanum - 140	Ci	1.57E-4	1.32E-4	0	0

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Table 1B Page 2 of 4

Gaseous Effluents For Release Point - Main Stack

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 1	Quarter 2	Quarter 1	Quarter 2
Yttrium - 91M	Ci	2.03E-4	1.16E-4	0	0
Iodine - 133	Ci	3.18E-6	0	0	0
Rubidium - 88	Ci	3.42E-3	0	0	0
Total for Period	Ci	3.45E-2	2.93E-2	0	0

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Gaseous Effluents for Release Point - Main Stack

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 3	Quarter 4	Quarter 3	Quarter 4
1. Fission gases					
Krypton - 85M	Ci	5.13E2	2.44E2	0	0
Krypton - 87	Ci	2.17E1	0	0	0
Krypton - 88	Ci	5.36E2	0	0	0
Xenon - 133	Ci	8.52E2	3.75E2	0	0
Xenon - 135	Ci	1.45E2	7.86E1	0	0
Xenon - 135M	Ci	1.96E1	0	0	0
Xenon - 138	Ci	6.18E1	0	0	0
Unidentified	Ci	0	4.42E1	0	0
Total for Period	Ci	2.15E3	7.42E2	0	0
2. Iodines					
Iodine - 131	Ci	3.19E-3	1.34E-3	0	0
Iodine - 133	Ci	2.62E-2	3.88E-3	0	0
Iodine - 135	Ci	4.36E-2	0	0	0
Total for Period	Ci	7.30E-2	5.22E-3	0	0
3. Particulates					
Strontium - 89	Ci	6.38E-4	3.03E-4	0	0
Strontium - 90	Ci	4.50E-7	5.58E-7	0	0
Strontium - 91	Ci	4.27E-5	1.69E-4	0	0
Cesium - 137	Ci	2.29E-6	0	0	0
Cesium - 138	Ci	2.32E-2	8.97E-3	0	0
Barium - 139	Ci	1.98E-3	2.90E-3	0	0
Barium - 140	Ci	5.38E-5	1.50E-4	0	0
Lanthanum - 140	Ci	5.55E-5	1.14E-4	0	0

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Gaseous Effluents For Release Point - Main Stack

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 1	Quarter 2	Quarter 1	Quarter 2
Yttrium - 91M	Ci	6.17E-5	1.17E-4	0	0
Iodine - 133	Ci	3.15E-6	0	0	0
Total for Period	Ci	2.60E-2	1.27E-2	0	0

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Table 1C Page 1 of 2

Gaseous Effluents for Release Point - Unit 2 & Unit 3 Roof Vents

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 1	Quarter 2	Quarter 1	Quarter 2
1. Fission gases					
Krypton - 85M	Ci	0	0	0	0
Krypton - 87	Ci	0	0	0	0
Krypton - 88	Ci	0	0	0	0
Xenon - 133	Ci	0	0	0	0
Xenon - 135	Ci	0	0	0	0
Xenon - 135M	Ci	0	0	0	0
Xenon - 138	Ci	0	0	0	0
Unidentified	Ci	4.67E2	6.13E2	0	0
Total for Period	Ci	4.67E2	6.13E2	0	0
2. Iodines					
Iodine - 131	Ci	3.93E-3	3.76E-3	0	0
Iodine - 133	Ci	2.59E-2	4.01E-2	0	0
Iodine - 135	Ci	0	0	0	0
Total for Period	Ci	2.98E-2	4.39E-2	0	0
3. Particulates					
Strontium - 89	Ci	4.49E-4	7.66E-4	0	0
Strontium - 90	Ci	7.52E-7	1.25E-6	0	0
Strontium - 91	Ci	0	9.76E-5	0	0
Cesium - 138	Ci	1.25E-2	2.61E-2	0	0
Barium - 139	Ci	1.13E-2	1.66E-2	0	0
Lanthanum - 140	Ci	6.28E-5	1.83E-4	0	0
Yttrium - 91M	Ci	3.72E-4	7.11E-4	0	0
Iodine - 133	Ci	9.71E-4	9.58E-4	0	0
Technetium - 99M	Ci	7.15E-5	0	0	0
Rubidium - 89	Ci	0	1.96E-3	0	0
TOTAL FOR PERIOD	Ci	2.57E-2	4.74E-2	0	0

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Table 1C Page 2 of 2

Gaseous Effluents for Release Point - Unit 2 & Unit 3 Roof Vents

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 3	Quarter 4	Quarter 3	Quarter 4
1. Fission gases					
Krypton - 85M	Ci	0	0	0	0
Krypton - 87	Ci	0	0	0	0
Krypton - 88	Ci	0	0	0	0
Xenon - 133	Ci	0	0	0	0
Xenon - 135	Ci	0	5.38E0	0	0
Xenon - 135M	Ci	0	0	0	0
Xenon - 138	Ci	0	0	0	0
Unidentified	Ci	4.62E2	1.70E2	0	0
Total for Period	Ci	4.62E2	1.75E2	0	0
2. Iodines					
Iodine - 131	Ci	6.96E-3	7.77E-4	0	0
Iodine - 133	Ci	5.19E-2	6.51E-3	0	0
Iodine - 135	Ci	3.31E-2	0	0	0
Total for Period	Ci	9.20E-2	7.29E-3	0	0
3. Particulates					
Strontium - 89	Ci	7.94E-4	7.31E-5	0	0
Strontium - 90	Ci	5.25E-6	0	0	0
Strontium - 91	Ci	1.24E-3	0	0	0
Cesium - 137	Ci	0	5.32E-5	0	0
Cesium - 138	Ci	1.65E-2	0	0	0
Barium - 139	Ci	1.90E-2	6.03E-4	0	0
Barium - 140	Ci	7.30E-4	0	0	0
Lanthanum - 140	Ci	9.88E-4	0	0	0
Cobalt - 60	Ci	0	8.88E-4	0	0
Yttrium - 91M	Ci	1.08E-3	0	0	0
Iodine - 133	Ci	1.60E-3	2.62E-5	0	0
Manganese - 54	Ci	0	1.86E-4	0	0
Manganese - 56	Ci	1.37E-4	0	0	0
Iodine - 135	Ci	3.61E-4	0	0	0
Rubidium - 89	Ci	5.90E-4	0	0	0
TOTAL FOR PERIOD	Ci	4.30E-2	1.83E-3	0	0

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95 - 12/31/95)

Table 2A Page 1 of 2
Liquid Effluents - Summation of All Releases

	Units	Quarter 1	Quarter 2	Est. Error Total %
A. Fission & activation products				
1. Total release (not including tritium, gases, alpha)	Ci	2.05E-4	2.11E-3	22.9
2. Average diluted concentration during period	μCi/ml	8.07E-11	4.16E-10	22.9
3. Total Body Dose ADULT	Millirem	5.14E-5	1.35E-5	22.9
Percent of Technical Specification	%	1.71E-3	4.50E-4	22.9
4. Maximally Exposed Organ Dose ADULT LIVER	Millirem	8.97E-5	2.03E-5	22.9
Percent of Technical Specification	%	8.97E-4	2.03E-4	22.9
B. Tritium				
1. Total release	Ci	3.29E-1	6.51E-1	15.0
2. Average diluted concentration during period	μCi/ml	1.30E-7	1.28E-7	15.0
C. Dissolved and entrained gases				
1. Total release	Ci	1.17E-3	2.20E-3	22.9
2. Average diluted concentration during period	μCi/ml	4.61E-10	4.34E-10	22.9
D. Gross alpha radioactivity				
1. Total release	Ci	0	0	22.9
2. Average diluted concentration during period	μCi/ml	0	0	22.9
E. Volume of waste released (prior to dilution)	liters	9.29E4	2.35E5	12.7
F. Volume of dilution water used during period	liters	2.54E9	5.07E9	10.9

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95 - 12/31/95)

Table 2A Page 2 of 2

Liquid Effluents - Summation of All Releases

	Units	Quarter 3	Quarter 4	Est. Error Total %
A. Fission & activation products				
1. Total release (not including tritium, gases, alpha)	Ci	4.03E-3	9.48E-3	22.9
2. Average diluted concentration during period	μCi/ml	1.36E-11	1.72E-11	22.9
3. Total Body Dose ADULT	Millirem	1.28E-3	3.40E-3	22.9
Percent of Technical Specification	%	4.27E-2	1.13E-1	22.9
4. Maximally Exposed Organ Dose TEEN LIVER	Millirem	1.95E-3	5.06E-3	22.9
Percent of Technical Specification	%	1.95E-2	5.06E-2	22.9
B. Tritium				
1. Total release	Ci	3.90E-1	1.86E1	15.0
2. Average diluted concentration during period	μCi/ml	1.32E-9	3.38E-8	15.0
C. Dissolved and entrained gases				
1. Total release	Ci	5.39E-4	4.60E-3	22.9
2. Average diluted concentration during period	μCi/ml	1.82E-12	8.36E-12	22.9
D. Gross alpha radioactivity				
1. Total release	Ci	5.65E-7	1.19E-6	22.9
2. Average diluted concentration during period	μCi/ml	1.91E-15	2.16E-15	22.9
E. Volume of waste released (prior to dilution)	liters	2.25E5	3.94E6	12.7
F. Volume of dilution water used during period	liters	2.96E11	5.50E11	10.9

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95 - 12/31/95)

Table 2B Page 1 of 2
Liquid Effluents

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 1	Quarter 2	Quarter 1	Quarter 2
Strontium - 89	Ci	0	0	7.47E-8	0
Strontium - 90	Ci	9.08E-9	0	0	0
Alpha	Ci	0	0	0	0
Tritium	Ci	9.39E-4	0	3.28E-1	6.51E-1
Phosphorus - 32	Ci	0	0	0	0
Iron - 55	Ci	1.10E-6	0	0	0
Xenon - 133	Ci	0	0	1.30E-4	2.63E-4
Xenon - 135	Ci	0	0	1.04E-3	1.94E-3
Manganese - 54	Ci	2.29E-5	0	0	0
Cesium - 134	Ci	1.05E-6	0	0	0
Cesium - 137	Ci	3.65E-6	0	3.99E-6	2.16E-6
Zinc - 65	Ci	8.33E-5	0	4.13E-6	3.34E-5
Cobalt - 58	Ci	3.70E-6	0	0	2.53E-5
Cobalt - 60	Ci	7.91E-5	0	2.04E-6	1.91E-4
Chromium - 51	Ci	0	0	0	1.86E-3
TOTAL FOR PERIOD	Ci	1.13E-3	0	3.29E-1	6.56E-1

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95- 12/31/95)

Table 2B Page 2 of 2
Liquid Effluents

Nuclides Released	Units	Continuous Mode		Batch Mode	
		Quarter 3	Quarter 4	Quarter 3	Quarter 4
Strontium - 89	Ci	0	0	0	0
Strontium - 90	Ci	2.72E-6	5.74E-6	0	0
Alpha	Ci	5.65E-7	1.19E-6	0	0
Tritium	Ci	2.36E-2	4.97E-2	3.66E-1	1.85E1
Phosphorus - 32	Ci	0	0	0	0
Iron - 55	Ci	1.47E-4	3.09E-4	0	0
Xenon - 133	Ci	0	0	8.55E-5	1.23E-3
Xenon - 135	Ci	0	0	4.53E-4	3.36E-3
Manganese - 54	Ci	4.90E-4	1.03E-3	0	1.49E-6
Cesium - 134	Ci	1.62E-4	3.42E-4	3.52E-6	3.24E-6
Cesium - 137	Ci	4.64E-4	9.78E-4	2.44E-5	2.61E-5
Cesium - 138	Ci	1.29E-5	0	0	0
Zinc - 65	Ci	9.34E-4	1.97E-3	0	2.20E-6
Cobalt - 58	Ci	1.94E-5	4.08E-5	0	0
Cobalt - 60	Ci	1.76E-3	3.71E-3	1.18E-6	1.78E-4
Chromium - 51	Ci	0	0	0	7.72E-5
Iodine - 132	Ci	6.40E-7	0	0	0
Iodine - 133	Ci	7.25E-7	0	0	0
Iodine - 134	Ci	1.80E-6	0	0	0
Barium - 139	Ci	3.79E-6	0	0	0
Rubidium - 89	Ci	3.11E-6	0	0	0
Lanthanum - 140	Ci	0	0	0	8.02E-4
TOTAL FOR PERIOD	Ci	2.76E-2	5.81E-2	3.67E-1	1.85E1

EFFLUENT & WASTE DISPOSAL ANNUAL REPORT (1/01/95- 12/31/95)
PEACH BOTTOM UNITS 2 & 3
CLASSES OF SO. RADIOACTIVE WASTE SHIPMENTS

Total # of Shipments	Waste Description (source of waste)	Container/Type	Individual Volume (cubic ft.)	Total Volume (cubic ft.)	Total Curie	Principal Radionuclides
CLASS A						
21	Dewatered Resin	HIC/Type A Cask	202.1	4244.1	2.16E+02	Zn-65, Co-60, Cs-137, Mn-54, Ni-63
34	Dewatered Resin	HIC/Type A Cask	195.2	6636.8	6.55E+02	Zn-65, Co-60, Cs-137, Mn-54, Ni-63
1	Dewatered Resin	HIC/Type A Cask	178.9	178.9	4.23+00	Zn-65, Co-60, Cs-137, Mn-54, Ni-63
1	Dewatered Resin	HIC/Type A Cask	135.8	135.8	5.62E+00	Zn-65, Co-60, Cs-137, Mn-54, Ni-63
1	DAW/ Dewatered Filters	HIC/Type A Cask	202.1	202.1	2.36E+00	Co-60, Zn-65, Mn-54, Fe-55, Cs-137
7	DAW/ Asbestos / Ash / Dewatered Filters	Metal Box/STC Metal Drum/STC	46.0 12.1	2944.0 169.4	2.16E+00	Co-60, Cs-137, Fe-55, Zn-65, Ni-63
83	DAW (*)	Metal Box/STC	variable	1521.0	9.41E-01	Co-60, Cs-137, Zn-65, Cr-51, Fe-55
(**)	Dewatered Filters (*)	Metal Box/STC	variable	83.1	1.96E-01	Zn-65, Co-60, Cs-137, Cr-51, H-3
(**)	Incinerator Ash (*)	Metal Box/STC	variable	69.2	6.50E-01	Co-60, Cs-137, Zn-65, Fe-55, Ag-110m
(**)	Asbestos (*)	Metal Box/STC	variable	100.7	5.70E-03	Co-60, Zn-65, Cr-51, Cs-137, Fe-55
2	Dewatered Resin (*)	HIC/Type A Cask	195.2	390.4	4.60E+01	Zn-65, Co-60, Cs-137, Cr-51, Ni-63
CLASS B						
2	Dewatered Resin	HIC/Type A Cask	202.1	404.2	1.11E+02	Zn-65, Co-60, Cs-137, Ni-63, Cs-134
3	Dewatered Resin	HIC/Type A Cask	195.2	585.6	1.55E+02	Zn-65, Co-60, Cs-137, Mn-54, Ni-63
1	Dewatered Resin	HIC/Type B Cask	132.4	132.4	3.87E+02	Zn-65, Co-60, Ni-63, Mn-54, Fe-55
CLASS C						
None						
TOTALS	156			17797.7	1.59E+03	

NOTES:

- * -Indicates actual total PECO radwaste shipped from Scientific Ecology Group (SEG), after volume reduction, to the burial site.
- ** -Shipment total included with DAW from SEG as these shipments contain commingled waste streams.

ATTACHMENT A
SUPPLEMENT INFORMATION

Facility: Peach Bottom Units 2 & 3

Licenses: DPR-44
 DPR-56

1. Regulatory Limits (Technical Specification Limits)

A. Noble Gases:

- | | | | | | |
|----|-----------------|--------------------|---------------------------|---|--|
| 1. | ≤ 500
≤ 3000 | mRem/Yr
mRem/Yr | - total body
- skin | - | "instantaneous" limits
Tech. Spec. 3.8.C.1.a |
| 2. | ≤ 10
≤ 20 | mRad
mRad | - air gamma
- air beta | - | quarterly air dose limits
Tech. Spec. 3.8.C.2.a |
| 3. | ≤ 20
≤ 40 | mRad
mRad | - air gamma
- air beta | - | yearly air dose limits
Tech. Spec. 3.8.C.2.b |

B. Iodines, Tritium, Particulates with Half Life > 8 days:

- | | | | | | |
|----|--------|------------------------------|-------------|---|---|
| 1. | ≤ 1500 | mRem/Yr
(inhalation path) | - any organ | - | "instantaneous" limits
Tech. Spec. 3.8.C.1.b |
| 2. | ≤ 15 | mRem | - any organ | - | quarterly dose limits
Tech. Spec. 3.8.C.3.a |
| 3. | ≤ 30 | mRem | - any organ | - | yearly dose limits
Tech. Spec. 3.8.C.3.b |

C. Liquid Effluents

- | | | | | | |
|----|--|--------------|-----------------------------|---|--|
| 1. | Concentration ≤ 10 CFR 20,
Appendix B, Table II, Col. 2 | | | - | "instantaneous" limits
Tech. Spec. 3.8.B.1 |
| 2. | ≤ 3.0
≤ 10 | mRem
mRem | - total body
- any organ | - | quarterly dose limits
Tech. Spec. 3.8.B.2.a |
| 3. | ≤ 6.0
≤ 20 | mRem
mRem | - total body
- any organ | - | yearly dose limits
Tech. Spec. 3.8.B.2.b |

2. Maximum Permissible Concentrations:

MPCs are not used to calculate permissible release rates and concentrations for gaseous releases.

The MPCs specified in 10CFR20, Appendix B, Table II, Column 2, for identified nuclides are used to calculate permissible release rates and concentrations for liquid release per Peach Bottom Technical Specification 3.8.B.1.

ATTACHMENT A (continued)

3. Average Energy:

Not Applicable

4. Measurements and Approximations of Total Radioactivity:

A. Fission and Activation Gases:

The method used is the Canberra S95/Dual Host 3400 Counting System
- Gas Marinelli -

B. Iodine:

The method used is the Canberra S95/Dual Host 3400 Counting System
- Charcoal Cartridge -

C. Particulates:

The method used is the Canberra S95/Dual Host 3400 Counting System
- Air Particulate Sample, (47mm and 57mm filters) -

D. Liquid Effluents:

The method used is the Canberra S95/Dual Host 3400 Counting System and the Radwaste Liquid Discharge Pre-Release Method with a liter marinelli.

5. Batch Releases:

A. Liquid:

	QTR 1	QTR 2	QTR 3	QTR 4
Number of batch releases:	9	5	6	64
Total Time for batch releases (minutes):	933	1092	1168	16059
Maximum time period for batch release (minutes):	310	280	320	330
Average time period for batch release (minutes):	103.67	218.40	194.67	250.92
Minimum time period for batch release (minutes):	62	84	60	60
Dilution volume (liters):	2.54E9	5.07E9	3.93E9	5.54E10

B. Gaseous:

Not applicable

ATTACHMENT A (Continued)

6. Abnormal Releases:

A. Liquid:

1. Event description - On 3/8/95 the temporary mispositioning of the Unit 2 'D' residual heat removal (RHR) heat exchanger differential pressure transmitter equalization valves resulted in the leakage of approximately 100 gallons of contaminated condensate stay-full or primary coolant water into the 'D' loop of the high pressure service water (HPSW) system. This contaminated water was then released to the discharge canal when the HPSW pumps were run.

It was estimated that the contaminated water released $3.57E-5$ millirem total body dose to the discharge canal on 3/8/95. This dose contribution was well below the limits specified in Technical Specifications.

Analysis of Release - The representative sample obtained was analyzed for all the parameters of a radioactive effluent release. The results were then calculated based on the actual release conditions. The dose contributions and isotope quantities from this continuous release were added to this Annual Effluent Report for the applicable reporting period.

2. Event description - On 7/28/95 it was discovered that a contaminated air conditioner condensate drain line had been routed through a clean drain to the river. The drain line was immediately re-routed to Radwaste.

It was estimated that the contaminated water released $5.15E-5$ millirem total body dose to the discharge canal from 7/25/95 to 7/28/95. This dose contribution was well below the limits specified in Technical Specifications.

Analysis of Release - The representative sample obtained was analyzed for all the parameters of a radioactive effluent release. The results were then calculated based on the actual release conditions. The dose contributions and isotope quantities from this continuous release were added to this Annual Effluent Report for the applicable reporting period.

3. Event description - On 8/18/95 routine sampling of the high pressure service water (HPSW) effluent to the discharge canal detected low level radioactive contamination. Subsequent investigation determined that a trace amount of condensate stay-full or primary coolant water was leaking past the Unit 3 'A' residual heat removal (RHR) heat exchanger floating head gasket into the 'A' loop of the HPSW system. The floating head flange was seal welded to the tube sheet and leak tested satisfactorily.

It was estimated that the contaminated water released $4.32E-3$ millirem total body dose to the discharge canal from 8/18/95 to 12/31/95. This dose contribution was well below the limits specified in Technical Specifications.

Analysis of Release - The representative sample obtained was analyzed for all the parameters of a radioactive effluent release. The results were then calculated based on the actual release conditions. The dose contributions and isotope quantities from this continuous release were added to this Annual Effluent Report for the applicable reporting period.

ATTACHMENT A (Continued)

6. Abnormal Releases: (Continued)

B. Gaseous:

None

7. Minimum Detectable Concentrations:

A. Liquid:

If a radionuclide was not detected, zero activity was reported for that isotope. A zero activity indicates that no activity was positively detected in any sample when samples were analyzed with techniques which achieved the required Lower Limits of Detection (LLD) as specified in Technical Specification Table 4.8.1 Radioactive Liquid Waste Sampling and Analysis. In all cases, these LLDs were less than the values required by Technical Specifications.

B. Gaseous:

If a radionuclide was not detected, zero activity was reported for that isotope. A zero activity indicates that no activity was positively detected in any sample when samples were analyzed with techniques which achieved the required Lower Limits of Detection (LLD) as specified in Technical Specification Table 4.8.2 Radioactive Gaseous Waste Sampling and Analysis from Main Off-Gas Stack and Reactor Building Vent Exhaust Stack. In all cases, these LLDs were less than the values required by Technical Specifications.

Impression in Covers Item # 8. 02602-1. J.S. DENNISON