

SEMI-ANNUAL REPORT

Radioactive Effluent Releases

July 1, 1982 through December 31, 1982

RADIATION EFFLUENT REPORT

July 1, 1982 through December 31, 1982

ITEM	UNITS	3RD QUARTER 1982	4TH QUARTER 1982
A. Gaseous Effluents			
1. Gross Radioactivity	curies	2.50 E01	3.17 E01
2. Maximum 1 hour Release Rate	μCi/sec	1.39 E02	3.85 E01
3. Nuclides Released Xe-138	curies	1.36 E01	1.56 E01
Kr-87	curies	5.10 E-02	3.20 E-02
Kr-88	curies	6.90 E-02	2.46 E-01
Kr-85m	curies	5.30 E-02	3.14 E-01
Xe-135	curies	7.60 E00	8.37 E00
Xe-133	curies	3.77 E-01	3.05 E00
Kr-85(cal.)	curies	<1.67E-02	<7.24E-03
Xe-135m	curies	2.40 E00	3.29 E00
Ar-41	curies	4.20 E-02	1.49 E-01
N-13	curies	8.96 E-01	5.96 E-01
4. Tritium Released	curies	1.21 E00	8.26 E 01
5. Percent of ETS (16% of Limit)	%	6.80 E-02	1.60 E-01

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ITEM	UNITS	3RD QUARTER 1982	4TH QUARTER 1982
B. Iodine Releases			
1. Total I-131 Released	curies	2.88 E-04	4.88 E-04
2. Total I-133 Released	curies	1.07 E-03	1.9 E-03
3. Total I-135 Released	curies	6.89 E-04	7.87 E-04
4. Percent ETS Limit (I-131) Note 2	%	1.28 E-01	3.20 E-01
C. Particulate Releases			
1. Total Released	curies	1.06 E-03	5.60 E-04
2. Gross Alpha Released	curies	5.08 E-05	4.83 E-05
3. Nuclides Released Ba-140	curies	7.85 E-05	2.59 E-05
Cs-137	curies	2.17 E-06	1.50 E-07
Mn-54	curies	7.70 E-07	None
Sr-89	curies	3.19 E-04	4.71 E-05
Sr-90	curies	4.73 E-05	5.93 E-06
Unidentified	curies	6.12 E-04	4.65 E-04
CO-60	curies	None	1.63 E-05

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4. Percent ETS Limit (Part.)Note 3	%	3.99 E-01	4.44 E-01%
5. Percent ETS Limit (I-131 α Part.)Note 4	%	5.28 E-01	7.64 E-01%

NOTE 1

$$\% \text{ ETS} = \frac{\frac{Q_S E}{0.21} + \frac{Q_V}{(1.4 \times 10^5)(\text{MPC})}}{0.16} \times 100$$

NOTE 2

$$\% \text{ ETS (I-131)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q_V}{1.8 \times 10^{-7}}}{0.08} \times 100$$

NOTE 3

$$\% \text{ ETS (PART)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q_V}{1.8 \times 10^{-7}}}{0.08} \times 100$$

NOTE 4

$$\% \text{ ETS (P\&I-131)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q_V}{1.8 \times 10^{-7}}}{0.08} \times 100$$

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ITEM	UNITS	3RD QUARTER 1982	4TH QUARTER 1982
A. Gross Radioactivity	curies	4.16 E-06	No Releases
B. Average Concentration	μCi/ml	1.10 E-08	4th Quarter
C. Maximum Concentration	μCi/ml	1.10 E-08	
D. Tritium			
1. Total Activity	curies	2.25 E-05	
2. Average Concentration	μCi/ml	5.93 E-08	
E. Alpha			
1. Total Activity	curies	<8.54 E-06	
2. Average Concentration	μCi/ml	<2.25 E-08	
F. Noble Gases			
1. Total Activity	curies	0.00 E-00	
2. Average Concentration	μCi/ml	0.00 E-00	
G. Volume			
1. Tank	Liters	3.79 E01	
2. Dilution	Liters	3.79 E05	
3. Total	Liters	3.79 E05	

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ITEM	UNITS	3RD QUARTER 1982	4TH QUARTER 1982
H. Nuclides Released			
Co-58	curies	1.25 E-08	No Releases
Co-60	curies	1.24 E-07	4th Quarter
Mn-54	curies	2.01 E-08	
Sr-89	curies	9.63 E-10	
Sr-90	curies	3.55 E-10	
Unidentified	curies	4.00 E-06	
I. ETS	%	4.16 E-05	

Planned release - condenser tube leak repair. September 25, 1982

SOLID RADIOACTIVE WASTE

July 1, 1982 through December 31, 1982

<u>DATE</u>	<u>VOLUME (ft³)</u>	<u>Activity (Ci)</u>	<u>Type of Waste</u>
7- 1-82	85	14.75	Resin
7- 6-82	85	15.34	Resin
7- 8-82	85	3.82	Resin
7-12-82	85	21.45	Resin
7-16-82	85	17.78	Resin
7-19-82	592.5	.000174	592.5 AB Oil
7-19-82	697.5	.000999	592.5 AB Oil
			105.0 Charcoal
7-19-82	592.5	.552	525.0 AB Oil
			67.5 DAW
7-26-82	675.0	.390	675.0 DAW
8-17-82	85	2.346	Resin
8-18-82	85	16.54	Resin
8-19-82	622.5	.009522	255.0 DAW
			367.5 AB Oil
8-20-82	85	2.125	Resin
8-23-82	85	17.1	Resin
8-25-82	85	20.7	Resin
8-25-82	105	1.14	DAW
8-26-82	487.5	.309	DAW
8-27-82	85	4.4	Resin
9- 1-82	85	9.61	Resin
9- 8-82	85	2.671	Resin
9-15-82	85	.0098	Resin
9-17-82	85	24.14	Resin
9-20-82	85	16.2	Resin
9-22-82	85	23.4	Resin
9-24-82	85	16.9	Resin
9-27-82	85	3.1	Resin
9-30-82	85	24.86	Resin

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<u>DATE</u>	<u>VOLUME (ft³)</u>	<u>Activity (Ci)</u>	<u>Type of Waste</u>
10- 5-82	85	.364	Resin
10- 8-82	85	4.717	Resin
10-11-82	85	2.71	Resin
10-13-82	85	21.45	Resin
10-15-82	85	1.63	Resin
10-18-82	85	2.23	Resin
10-20-82	85	1.96	Resin
10-22-82	85	1.02	Resin
10-26-82	337.5	.2314	DAW
10-29-82	85	.817	Resin
11- 1-82	85	.624	Resin
11- 3-82	85	.712	Resin
11- 5-82	85	1.089	Resin
11- 8-82	85	1.486	Resin
11-10-82	85	14.62	Resin
11-12-82	85	1.864	Resin
11-15-82	85	4.94	Resin
11-18-82	85	5.157	Resin
11-19-82	85	2.694	Resin
11-22-82	85	16.6	Resin
11-24-82	85	17.8	Resin
11-29-82	85	7.75	Resin

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<u>DATE</u>	<u>VOLUME (ft³)</u>	<u>Activity (Ci)</u>	<u>Type of Waste</u>
12- 1-82	85	4.94	Resin
12- 3-82	85	8.13	Resin
12- 6-82	85	8.37	Resin
12- 8-82	85	4.97	Resin
12-10-82	85	5.34	Resin
12-13-82	85	95.0	Resin
12-15-82	85	7.24	Resin
12-15-82	1065	202.5 Oil 862.5 Trash	AB Oil DAW
12-17-82	85	84.25	Resin
12-20-82	85	5.639	Resin

All Resin Shipments sent to Barnwell, South Carolina

Total Resin Volume	4250.0 F ³
Total Resin Curies	593.3548
DAW sent to Richland	1185.0 F ³
Charcoal sent to Richland	105.0 F ³
Absorbed Oil sent to Richland	2280.0 F ³
DAW sent to Barnwell	1605.0 F ³
Total Curies of DAW and Oil	3.390095