

SEMI-ANNUAL REPORT

Radioactive Effluent Releases

July 1, 1980 thru December 31, 1980

8103040

497

RADIATION EFFLUENT REPORT

July 1, 1980 thru December 31, 1980

ITEM	UNITS	3RD QUARTER 1980	4TH QUARTER 1980
A. Gaseous Effluents			
1. Gross Radioactivity	curies	7.00 E02	6.40 E02
2. Maximum 1 hour Release Rate	μCi/sec	3.83 E03	2.34 E03
3. Nuclides Released			
Xe-138	curies	4.62 E01	7.62 E01
Kr-87	curies	8.93 E-01	2.48 E00
Kr-88	curies	1.22 E01	2.40 E01
Kr-85m	curies	1.59 E01	2.17 E01
Xe-135	curies	1.98 E01	2.16 E01
Xe-133	curies	5.72 E02	4.56 E02
Kr-85 (cal.)	curies	<1.04 E00	<2.59 E-01
Xe-135m (cal)	curies	<4.88 E01	2.53 E01
Ar-41	curies	1.83 E00	2.09 E-01
N-13	curies	1.54 E01	1.25 E01
4. Tritium Released	curies	1.60 E00	2.69 E-01
5. Percent of ETS (16% Limit) Note 1	%	0.1130	0.1065

RADIATION EFFLUENT REPORT

July 1, 1980 through December 31, 1980

ITEM	UNITS	3RD QUARTER 1980	4TH QUARTER 1980
B. Iodine Releases			
1. Total I-131 Released	curies	1.95 E-02	9.47 E-03
2. Total I-133 Released	curies	5.55 E-02	4.02 E-02
3. Total I-135 Released	curies	4.15 E-02	5.69 E-02
4. Percent ETS Limit (I-131) Note 2	%	13.036 %	6.085 %
C. Particulates Released			
1. Total Release	curies	9.50 E-03	1.56 E-02
2. Gross Alpha Released	curies	1.74 E-05	3.29 E-05
3. Nuclides Released			
Mn-54	curies	9.52 E-04	5.18 E-04
Co-60	curies	1.20 E-03	9.74 E-04
Ce-141	curies	2.85 E-06	1.66 E-04
Cs-137	curies	5.47 E-05	4.32 E-05
Cs-134	curies	1.56 E-05	7.46 E-06
Fe-59	curies	1.71 E-05	3.81 E-05
Cr-51	curies	4.61 E-03	8.18 E-03
Co-58	curies	2.25 E-05	5.91 E-06
Ba-140	curies	2.84 E-04	2.67 E-04
Co-57	curies	None	4.99 E-06
Sr-89	curies	1.99 E-04	2.06 E-04
Sr-90	curies	2.22 E-05	5.00 E-05
Unidentified	curies	2.34 E-03	5.40 E-03
4. Percent ETS Limit (Part.) Note 3	%	7.385 %	13.038 %
5. Percent ETS Limit (I-131 & Part.) Note 4	%	20.42 %	19.117%

NOTE 1

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

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

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

Liquid Effluents

No Releases

SOLID RADIOACTIVE WASTE

July thru September 1980

Date	Volume (ft ³)	Activity (Ci)	Type of Waste
7/12/80	105	11.84	R
7/15/80	996	.0357	T
7/17/80	52.5	15.4	R
7/17/80	52.5	15.4	R
7/23/80	1230	.043	T
7/25/80	52.5	14.6	R
7/28/80	105	11.585	R
8/6/80	52.5	9.1	R
8/8/80	90	5.075	R
8/11/80	52.5	9.1	R
8/12/80	180	.083	T
8/15/80	52.5	9.1	R
8/16/80	105	11.0	R
8/21/80	52.5	4.9	R
8/22/80	1107	.0226	T
8/27/80	105	9.8	R
9/4/80	90	9.84	R
9/5/80	52.5	4.9	R
9/10/80	90	8.67	R
9/11/80	173	1.3	T
9/12/80	52.5	8.54	R
9/15/80	90	7.8	R
9/17/80	52.5	8.54	R
9/17/80	173	2.772	T
9/20/80	52.5	6.440	6 drums R - 1 drum T
9/24/80	52.5	9.1	R
9/25/80	948	.094	T

All Shipments to Barnwell, South Carolina

R = Resin T = Trash

	Volume(ft ³)	Activity
Trash	4814.5	4.5503
Resin	1402.5	190.53
TOTALS	6217	195.08

SOLID RADIOACTIVE WASTE

October thru December 1980

Date	Volume (ft ³)	Activity (Ci)	Type of Waste
10/4/80	52.5	9.1	R
10/4/80	173	2.94	T
10/7/80	52.5	9.1	R
10/10/80	105	15.96	R
10/11/80	52.5	8.62	R
10/11/80	52.5	8.89	R
10/15/80	52.5	18.9	R
10/20/80	105	17.78	R
10/21/80	90	4.09	T
10/24/80	985.5	.0774	T
11/24/80	90	5.4	R
11/24/80	814.5	.069	T
12/1/80	90	2.357	10 drums R - 2 drums T
12/8/80	52.5	35.7	R
12/8/80	52.5	35.7	R
12/12/80	90	2.548	4 drums R - 8 drums T
12/12/80	52.5	35.7	R
12/13/80	105	12.85	R
12/17/80	648	.123	T
12/22/80	943.5	.0215	T
12/29/80	52.5	23.586	R

All Shipments to Barnwell, South Carolina

R = Resin T = Trash

	Volume (ft ³)	Activity
Trash	3729.5	8.0629
Resin	982.5	241.449
TOTALS	4712	249.5119