

SEMI-ANNUAL REPORT

Radioactive Effluent Releases

January 1, 1981 thru June 30, 1981

RADIATION EFFLUENT REPORT

January 1, 1981 thru June 30, 1981

ITEM	UNITS	1ST QUARTER 1981	2ND QUARTER 1981
A. Gaseous Effluents			
1. Gross Radioactivity	curies	2.46 E02	7.00 E01
2. Maximum 1 hour Release Rate	μCi/sec	5.92 E02	2.18 E02
* 3. Nuclides Released Xe-138	curies	2.46 E01	2.45 E01
Kr-87	curies	1.31 E00	2.47 E00
Kr-88	curies	1.97 E01	5.81 E00
Kr-85m	curies	2.00 E01	8.23 E00
Xe-135	curies	1.39 E01	1.28 E01
Xe-133	curies	1.50 E02	1.32 E00
Kr-85 (Cal)	curies	<3.96 E-01	<7.85 E-03
Xe-135m(Cal)	curies	<8.83 E01	<1.23 E01
Ar-41	curies	5.24 E-01	0
N-13	curies	2.45 E00	9.96 E-01
4. Tritium Released	curies	8.63 E-01	4.38 E-01
5. Percent of ETS (16% Limit) Note 1	%	0.0615 %	0.0193 %

RADIATION EFFLUENT REPORT

January 1, 1981 thru June 30, 1981

ITEM	UNITS	1ST QUARTER 1981	2ND QUARTER 1981
B. Iodine Releases			
1. Total I-131 Released	curies	3.94 E-03	1.25 E-03
2. Total I-133 Released	curies	3.58 E-02	3.06 E-02
3. Total I-135 Released	curies	3.58 E-02	3.72 E-02
4. Percent ETS Limit (I-131) Note 2	%	2.747 %	0.8685 %
*C. Particulate Releases			
1. Total Release	curies	7.87 E-03	2.14 E-03
2. Gross Alpha Released	curies	2.04 E-04	5.05 E-05
3. Nuclides Released			
Co-57	curies	2.06 E-06	1.94 E-06
Cs-137	curies	2.04 E-06	7.51 E-06
Cs-134	curies	1.15 E-06	7.91 E-06
Ce-141	curies	8.43 E-06	None
Fe-59	curies	9.72 E-06	3.43 E-06
Co-60	curies	3.40 E-04	8.20 E-04
Mn-54	curies	1.38 E-04	3.91 E-04
Ba-140	curies	2.68 E-04	2.53 E-05
Cr-51	curies	6.60 E-03	3.05 E-04
Sr-89	curies	1.49 E-04	8.62 E-05
Sr-90	curies	1.48 E-05	1.10 E-05
Co-58	curies	None	1.35 E-05
Unidentified	curies	3.40 E-04	4.70 E-04
4. Percent ETS Limit (Part.) Note 3	%	6.868 %	1.775 %
5. Percent ETS Limit (I-131 & Part.) Note 4	%	9.615 %	2.644 %

Liquid Effluents

No Liquid Releases

NOTE 1

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

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

SOLID RADIOACTIVE WASTE

January thru March 1981

Date	Volume (ft ³)	Activity(Ci)	Types of Waste
1/12/81	52.5	19.7	R
1/22/81	1107	.0215	T
1/28/81	105	51.2	R
2/9/81	52.5	11.9	R
2/10/81	90	25.4	11 drums R-1 drum T
2/18/81	52.5	11.9	R
2/20/81	90	20.64	R
2/21/81	52.5	11.94	R
2/24/81	52.5	12.04	R
2/24/81	963	.045	T
2/25/81	90	27.79	R
2/25/81	52.5	12.04	R
3/6/81	52.5	9.8	R
3/16/81	105	19.6	R
*3/11/81	1480.2	.00619	T
*3/17/81	1457.4	.004571	T
*3/19/81	346	.01	T
*3/19/81	1192	.0141	T
3/21/81	52.5	9.3	R
3/24/81	648	.091	T
3/25/81	711	.1305	T
3/30/81	90	15.84	R

R = Resin T = Trash

*These shipments to Beatty, Nevada. All other shipments to Barnwell, South Carolina

	Volume(ft ³)	Activity(Ci)
Trash	7912.1	5.464
Resin	982.5	254.49
TOTAL	8894.6	259.954

SOLID RADIOACTIVE WASTE

April to June 1981

Date	Volume (ft ³)	Activity (Ci)	Types of Waste
4/1/81	52.5	7.81	R
4/3/81	90	14.58	R
4/8/81	90	10.07	10 drums R-2 drums T
4/13/81	600	.148	T
4/15/81	105	11.52	13 drums R-1 drum T
4/20/81	52.5	25.9	R
4/27/81	628.5	.0745	T
4/29/81	90	4.1855	8 drums R-4 drums T
4/29/81	52.5	11.2	R
4/30/81	52.5	9.8	R
5/4/81	90	4.04	R
5/8/81	600	.1015	T
5/12/81	135	1.94	R
5/13/81	90	2.31	R
5/18/81	52.5	9.8	R
5/21/81	105	7.16	R
5/22/81	52.5	9.4	R
5/22/81	52.5	6.8	R
5/23/81	663	.098	T
5/27/81	90	1.595	R
5/26/81	726	.1195	T
5/28/81	52.5	2.8	R
5/28/81	52.5	5.74	R
6/1/81	105	5.88	R
6/1/81	52.5	2.9	R
6/2/81	90	3.9	R
6/5/81	52.5	3.2	R
6/6/81	90	3.6	R
6/6/81	90	2.824	9 drums R-3 drums T
6/11/81	105	6.45	R
6/12/81	52.5	3.85	R
6/13/81	105	6.4	R
6/16/81	180	.674	T
6/17/81	52.5	3.18	R
6/17/81	105	6.44	R
6/17/81	90	1.006	T
6/18/81	517.5	.105	T
6/20/81	52.5	3.22	R
6/24/81	52.5	5.25	R
6/26/81	90	1.176	T
6/29/81	52.5	4.34	R

All shipments made to Barnwell, South Carolina.

R = Resin T = Trash

	Volume (ft ³)	Activity (Ci)
Trash	3570	12.651
Resin	2940	198.936
TOTAL	6510	211.587

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$$\text{Note 4} \quad \% \text{ ETS (P\&I-131)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q_V}{1.8 \times 10^{-7}}}{0.08} \times 100$$

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