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SEMI-ANNUAL EFFLUENT REPORT

July - December

1980

Public Service Company

Fort St. Vrain
Nuclear Generating Station

February 1981

8102120215

1.0 SUMMARY

This report summarizes the radiological and non-radiological effluent released from the Fort St. Vrain Nuclear Generating Station for the period July through December, 1980. In addition, Table 4.1 furnishes a general summary of the primary plant systems under radiological surveillance and Table 5.1 summarizes the solid waste removed from the site during the aforementioned time period. These data are reported pursuant to the requirements of 10 CFR 50.36(a) and the Technical Specifications of Fort St. Vrain, Appendix B, AC NR 1.1.

TABLE 1.1 RADIOACTIVE LIQUID EFFLUENT RELEASES FOR 3rd QUARTER, 1980

	UNITS	JUL	AUG	SEP	QUARTERLY TOTAL	
1. Gross Beta Radioactivity						
a) Total Release	Curies	1.79E-06	2.10E-05	3.81E-06	2.66E-05	
b) Avg. Conc. Released before Dilution	μCi/ml	4.11E-08	4.33E-07	1.21E-07	2.08E-07	*
c) Avg. Conc. Released after Dilution	μCi/ml above bkgd	1.69E-10	9.72E-10	7.57E-10	6.17E-10	*
2. Tritium						
a) Total Release	Curies	2.22E+00	3.50E+01	2.24E+00	3.95E+01	
b) Avg. Conc. Release before Dilution	μCi/ml	4.78E-02	7.38E-01	6.99E-02	3.12E-01	*
c) Avg. Conc. Release after Dilution	μCi/ml above bkgd	2.57E-04	1.71E-03	4.59E-04	8.54E-04	*
3. Dissolved Noble Gases						
a) Total Release	Curies	NSA	NSA	NSA	NSA	
b) Avg. Conc. Released before Dilution	μCi/ml	NSA	NSA	NSA	NSA	*
c) Avg. Conc. Released after Dilution	μCi/ml above bkgd	NSA	NSA	NSA	NSA	*
4. Gross Alpha Radioactivity						
a) Total Release	Curies	1.40E-07	1.81E-07	8.84E-08	4.09E-07	
5. Total Volume of Liquid Released before Dilution	Liters	4.49E+04	4.84E+04	3.15E+04	1.25E+05	
6. Total Volume of Liquid Used for Dilution	Liters	8.32E+06	1.79E+07	4.82E+06	3.10E+07	
7. Estimated Total Radioactivity Released By Nuclide Isotope Above Background						
Nuclide	MPCw	Curies				
3H	3.00E-03	2.22E+00	3.50E+01	2.24E+00	3.95E+01	

4.7E-05 = 4.7×10^{-5}
5.2E+03 = 5.2×10^{3}

NSA means no significant activity.
*Represents a "weighted" average

TABLE 1.2 (PAGE 1 OF 16)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 394

RELEASE MADE FROM T6204

RELEASE START DATE 70180. TIME 1736.

RELEASE COMPLETION DATE 70180. TIME 2148.

RELEASE DURATION : 252. MINUTES

TANK LEVELS : INITIAL 131. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 7092480. FINAL 7131550.

AVERAGE RELEASE RATE: 32.95 LPM OR 8.71 GPM

AVERAGE BLOWDOWN RATE: 5868.25 LPM OR 1550.40 GPM

TOTAL VOLUME RELEASED: 8303. LITERS OR 2194. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1478799. LITERS OR 390700. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	70180.	630.	15816.	6.22E-08	2.29E-09	6.23E-02	0.00E-01	10441.
B	70180.	630.	15817.	5.79E-08	2.30E-09	6.29E-02	0.00E-01	10442.
C	70180.	1710.	15828.	1.90E-08	2.76E-08	5.22E-07		
D	70180.	2355.	15829.	1.20E-08	4.42E-09	8.29E-06		
E	70180.	1835.	15830.	1.54E-08	5.42E-09	1.26E-06		
F	70180.	2245.	15831.	1.99E-08	5.57E-09	6.80E-06		
G	70180.	855.	15825.	1.10E-08	3.49E-09	1.30E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.16E-07	6.22E-08	2.86E-10	9.54E-01
GROSS ALPHA	1.91E-08	2.30E-09	-6.64E-12	N/A
TRITIUM	5.22E-01	6.29E-02	3.51E-04	1.17E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 395

RELEASE MADE FROM T6204

RELEASE START DATE 70580. TIME 1915.

RELEASE COMPLETION DATE 70580. TIME 2224.

RELEASE DURATION : 189. MINUTES

TANK LEVELS : INITIAL 107. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 7980480. FINAL 8009300.

AVERAGE RELEASE RATE: 35.57 LPM OR 9.40 GPM

AVERAGE BLOWDOWN RATE: 5771.62 LPM OR 1524.87 GPM

TOTAL VOLUME RELEASED: 6722. LITERS OR 1776. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1090837. LITERS OR 288200. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
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D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	70580.	805.	15853.	7.51E-08	2.35E-09	5.67E-02	0.00E-01	10461.
B	70580.	810.	15854.	7.71E-08	2.74E-09	5.69E-02	0.00E-01	10462.
C	70580.	1800.	15859.	6.40E-09	7.11E-09	5.00E-07		
D	70580.	2320.	15860.	9.36E-09	1.20E-08	5.00E-07		
E	70580.	2010.	15861.	1.68E-08	1.12E-08	1.67E-04		
F	70580.	2325.	15862.	7.28E-09	1.85E-08	6.60E-05		
G	70180.	855.	15825.	1.10E-08	3.49E-09	1.30E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.18E-07	7.71E-08	4.05E-10	1.35E 00
GROSS ALPHA	1.84E-08	2.74E-09	-4.59E-12	N/A
TRITIUM	3.82E-01	5.69E-02	3.48E-04	1.16E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 396

RELEASE MADE FROM T6204

RELEASE START DATE 71180. TIME 1937.

RELEASE COMPLETION DATE 71180. TIME 2312.

RELEASE DURATION : 215. MINUTES

TANK LEVELS : INITIAL 120. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 9284076. FINAL 9315950.

AVERAGE RELEASE RATE: 35.25 LPM OR 9.31 GPM

AVERAGE BLOWDOWN RATE: 5611.31 LPM OR 1482.51 GPM

TOTAL VOLUME RELEASED: 7578. LITERS OR 2002. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1206431. LITERS OR 318740. GALLONS

DESCRIPTIONS:
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D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	71180.	620.	15893.	4.12E-08	4.01E-09	3.00E-02	0.00E-01	10495.
B	71180.	625.	15894.	3.39E-08	4.64E-09	3.01E-02	0.00E-01	10496.
C	71180.	1920.	15898.	8.29E-09	4.65E-09	5.05E-07		
D	71280.	35.	15899.	6.20E-09	7.76E-09	5.05E-07		
E	71180.	2045.	15900.	8.31E-09	3.09E-09	2.81E-06		
F	71280.	20.	15901.	6.17E-09	2.95E-09	1.96E-06		
G	70780.	845.	15873.	1.18E-08	1.18E-08	5.00E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	3.12E-07	4.12E-08	1.84E-10	6.12E-01
GROSS ALPHA	3.52E-08	4.64E-09	-4.50E-11	N/A
TRITIUM	2.28E-01	3.01E-02	1.88E-04	6.27E 00

TABLE 1.2 (PAGE 4 OF 16)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 397

RELEASE MADE FROM T6204

RELEASE START DATE 72080. TIME 2120.

RELEASE COMPLETION DATE 72180. TIME 45.

RELEASE DURATION : 205. MINUTES

TANK LEVELS : INITIAL 99. INCHES FINAL 8. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 1218049. FINAL 1249625.

AVERAGE RELEASE RATE: 29.25 LPM OR 7.73 GPM

AVERAGE BLOWDOWN RATE: 5830.01 LPM OR 1540.29 GPM

TOTAL VOLUME RELEASED: 5997. LITERS OR 1584. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1195152. LITERS OR 315760. GALLONS

DESCRIPTIONS:
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E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	71880.	640.	15927.	4.53E-08	2.29E-09	2.57E-02	0.00E-01	10530.
B	71880.	645.	15928.	4.12E-08	2.29E-09	2.56E-02	0.00E-01	10531.
C	72080.	2110.	15933.	5.47E-09	1.06E-08	5.28E-07		
D	72180.	150.	15934.	6.83E-09	6.01E-09	8.27E-07		
E	72080.	2220.	15935.	5.48E-09	5.16E-09	6.00E-07		
F	72180.	155.	15936.	6.98E-09	5.13E-09	7.52E-05		
G	71580.	800.	15916.	8.36E-09	1.41E-08	1.76E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	2.72E-07	4.53E-08	1.84E-10	6.15E-01
GROSS ALPHA	1.38E-08	2.29E-09	-5.89E-11	N/A
TRITIUM	1.54E-01	2.57E-02	1.29E-04	4.28E 00

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 398

RELEASE MADE FROM T6204

RELEASE START DATE 72480. TIME 1845.

RELEASE COMPLETION DATE 72480. TIME 2250.

RELEASE DURATION : 245. MINUTES

TANK LEVELS : INITIAL 125. INCHES FINAL 6. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 2107683. FINAL 2147759.

AVERAGE RELEASE RATE: 32.01 LPM OR 8.46 GPM

AVERAGE BLOWDOWN RATE: 6191.33 LPM OR 1635.76 GPM

TOTAL VOLUME RELEASED: 7842. LITERS OR 2072. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1516877. LITERS OR 400760. GALLONS

DESCRIPTIONS:
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E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	72480.	500.	15964.	5.73E-09	2.28E-09	2.12E-02	0.00E-01	10559.
B	72480.	505.	15965.	8.03E-09	3.88E-09	2.15E-02	0.00E-01	10560.
C	72480.	1715.	15969.	7.48E-09	7.57E-09	4.92E-07		
D	72580.	2355.	15970.	7.51E-09	3.10E-09	1.50E-06		
E	72480.	2020.	15971.	7.91E-09	6.27E-09	9.00E-06		
F	72480.	2355.	15972.	8.76E-09	1.97E-08	3.25E-06		
G	72280.	900.	15952.	1.63E-08	3.77E-09	2.78E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	6.30E-08	8.03E-09	-4.27E-11	-1.42E-01
GROSS ALPHA	3.04E-08	3.88E-09	5.61E-13	N/A
TRITIUM	1.69E-01	2.15E-02	1.10E-04	3.68E 00

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 399

RELEASE MADE FROM T6204

RELEASE START DATE 73180. TIME 2046.

RELEASE COMPLETION DATE 80180. TIME 122.

RELEASE DURATION : 276. MINUTES

TANK LEVELS : INITIAL 132. INCHES FINAL 3. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 0. FINAL 48300.

AVERAGE RELEASE RATE: 30.80 LPM OR 8.14 GPM

AVERAGE BLOWDOWN RATE: 6623.75 LPM OR 1750.00 GPM

TOTAL VOLUME RELEASED: 8501. LITERS OR 2246. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1828155. LITERS OR 483000. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
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D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	73180.	652.	16018.	7.98E-09	2.71E-09	8.94E-02	0.00E-01	10590.
B	73180.	653.	16019.	1.30E-08	2.72E-09	8.89E-02	0.00E-01	10591.
C	73180.	2015.	16024.	1.13E-07	1.26E-08	5.92E-07		
D	80180.	245.	16025.	9.87E-09	1.23E-08	6.89E-07		
E	73180.	2140.	16026.	1.12E-08	2.87E-09	1.32E-06		
F	80180.	222.	16027.	7.46E-09	2.20E-08	7.01E-06		
G	72880.	1050.	15989.	1.41E-08	4.65E-09	1.00E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.11E-07	1.30E-08	-4.94E-12	-1.65E-02
GROSS ALPHA	2.31E-08	2.72E-09	-8.94E-12	N/A
TRITIUM	7.60E-01	8.94E-02	4.14E-04	1.38E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 400

RELEASE MADE FROM T6204

RELEASE START DATE 80280. TIME 1714.

RELEASE COMPLETION DATE 80280. TIME 2135.

RELEASE DURATION : 261. MINUTES

TANK LEVELS : INITIAL 133. INCHES FINAL 3. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 0. FINAL 66675.

AVERAGE RELEASE RATE: 32.82 LPM OR 8.67 GPM

AVERAGE BLOWDOWN RATE: 9669.15 LPM OR 2554.60 GPM

TOTAL VOLUME RELEASED: 8567. LITERS OR 2263. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2523649. LITERS OR 666750. GALLONS

DESCRIPTIONS:
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E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	80280.	645.	16042.	3.36E-08	2.29E-09	5.84E-02	0.00E-01	10613.
B	80280.	650.	16043.	3.88E-08	2.29E-09	5.86E-02	0.00E-01	10614.
C	80280.	1650.	16044.	1.05E-08	3.09E-09	4.31E-07		
D	80280.	2235.	16045.	9.92E-09	3.18E-09	8.74E-07		
E	80280.	1810.	16046.	2.20E-08	2.47E-08	1.43E-05		
F	80280.	2220.	16047.	1.44E-08	4.94E-09	1.27E-05		
G	72880.	1050.	15989.	1.41E-08	4.65E-09	1.00E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	3.33E-07	3.88E-08	8.38E-11	2.79E-01
GROSS ALPHA	1.96E-08	2.29E-09	-8.00E-12	N/A
TRITIUM	5.02E-01	5.86E-02	1.98E-04	6.61E 00

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 401

RELEASE MADE FROM T6204

RELEASE START DATE 80780. TIME 2025.

RELEASE COMPLETION DATE 80880. TIME 20.

RELEASE DURATION : 235. MINUTES

TANK LEVELS : INITIAL 122. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 3224401. FINAL 3265679.

AVERAGE RELEASE RATE: 32.81 LPM OR 8.67 GPM

AVEPAGE BLOWDOWN RATE: 6648.39 LPM OR 1756.51 GPM

TOTAL VOLUME RELEASED: 7710. LITERS OR 2037. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1562372. LITERS OR 412780. GALLONS

DESCRIPTIONS:
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E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	80780.	610.	16072.	6.02E-08	3.82E-09	4.19E-02	0.00E-01	10644.
B	80780.	610.	16073.	6.52E-08	2.25E-09	4.21E-02	0.00E-01	10646.
C	80780.	2012.	16076.	1.40E-08	1.24E-08	5.84E-07		
D	80880.	150.	16077.	1.57E-08	1.36E-08	5.84E-07		
E	80780.	2126.	16078.	1.27E-08	2.43E-08	1.83E-06		
F	80880.	130.	16079.	2.02E-08	1.78E-08	4.11E-05		
G	80480.	845.	16068.	1.07E-08	1.64E-08	5.84E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.03E-07	6.52E-08	2.67E-10	8.92E-01
GROSS ALPHA	1.73E-08	2.25E-09	-6.96E-11	N/A
TRITIUM	3.24E-01	4.21E-02	2.07E-04	6.89E 00

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 402

RELEASE MADE FROM T6204

RELEASE START DATE 81480. TIME 1220.

RELEASE COMPLETION DATE 81480. TIME 2110.

RELEASE DURATION : 530. MINUTES

TANK LEVELS : INITIAL 135. INCHES FINAL 10. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 0 FINAL 116600.

AVERAGE RELEASE RATE: 15.54 LPM OR 4.11 GPM

AVERAGE BLOWDOWN RATE: 8327.00 LPM OR 2200.00 GPM

TOTAL VOLUME RELEASED: 8237. LITERS OR 2176. GALLONS

TOTAL VOLUME USED FOR DILUTION: 4413310. LITERS OR 1166000. GALLONS

DESCRIPTIONS:
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E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	81380.	655.	16114.	1.30E-06	6.33E-09	1.51E 00	0.00E-01	10675.
B	81380.	700.	16115.	1.46E-06	6.73E-09	1.50E 00	0.00E-01	10676.
C	81480.	1157.	16127.	1.56E-08	9.73E-09	5.91E-07		
D	81480.	2225.	16128.	2.57E-08	2.13E-08	7.31E-07		
E	81480.	1325.	16129.	2.08E-08	2.12E-08	2.03E-06		
F	81480.	2210.	16130.	1.92E-08	2.13E-08	2.47E-04		
G	81280.	1115.	16100.	1.71E-08	2.27E-08	1.32E-04		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.20E-05	1.46E-06	2.69E-09	8.96E 00
GROSS ALPHA	5.54E-08	6.73E-09	-2.98E-11	N/A
TRITIUM	1.24E 01	1.51E 00	2.81E-03	9.36E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 403

RELEASE MADE FROM T6204

RELEASE START DATE 82080. TIME 1625.

RELEASE COMPLETION DATE 82180. TIME 350.

RELEASE DURATION : 685. MINUTES

TANK LEVELS : INITIAL 121. INCHES FINAL 8. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 6217375. FINAL 6382180.

AVERAGE RELEASE RATE: 10.87 LPM OR 2.87 GPM

AVERAGE BLOWDOWN RATE: 9106.38 LPM OR 2405.91 GPM

TOTAL VOLUME RELEASED: 7447. LITERS OR 1967. GALLONS

TOTAL VOLUME USED FOR DILUTION: 6237869. LITERS OR 1648050. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	81880.	650.	16150.	5.32E-07	5.78E-09	1.89E 00	0.00E-01	10693.
B	81880.	655.	16151.	5.80E-07	5.01E-09	1.87E 00	0.00E-01	10695.
C	82080.	1550.	16170.	1.13E-08	1.30E-08	4.31E-07		
D	82180.	500.	16171.	1.14E-08	1.68E-08	1.00E-06		
E	82080.	1730.	16172.	1.76E-08	1.83E-08	1.39E-06		
F	82180.	450.	16173.	6.16E-09	1.09E-08	4.54E-07		
G	81980.	1140.	16181.	9.98E-09	1.02E-08	2.24E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	4.32E-06	5.80E-07	6.80E-10	2.27E 00
GROSS ALPHA	3.73E-09	5.01E-09	-6.13E-12	N/A
TRITIUM	1.41E 01	1.89E 00	2.26E-03	7.53E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 404

RELEASE MADE FROM T6204

RELEASE START DATE 82580. TIME 2053.

RELEASE COMPLETION DATE 82680. TIME 100.

RELEASE DURATION : 247. MINUTES

TANK LEVELS : INITIAL 132. INCHES FINAL 4. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 0. FINAL 41990.

AVERAGE RELEASE RATE: 34.15 LPM OR 9.02 GPM

AVERAGE BLOWDOWN RATE: 6434.50 LPM OR 1700.00 GPM

TOTAL VOLUME RELEASED: 8435. LITERS OR 2229. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1589321. LITERS OR 419900. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	82580.	530.	16202.	2.53E-07	5.12E-09	5.83E-01	0.00E-01	10728.
B	82580.	535.	16203.	3.08E-07	3.90E-09	5.87E-01	0.00E-01	10729.
C	82580.	2030.	16210.	2.11E-08	1.14E-08	4.25E-07		
D	82680.	155.	16211.	1.31E-08	7.85E-09	4.45E-07		
E	82680.	10.	16212.	3.09E-08	1.92E-08	2.62E-06		
F	82680.	205.	16213.	2.16E-08	2.72E-08	1.04E-04		
G	82680.	830.	16223.	2.47E-08	1.37E-08	8.37E-04		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	2.60E-06	3.08E-07	1.50E-09	4.98E 00
GROSS ALPHA	3.29E-08	3.90E-09	-5.17E-11	N/A
TRITIUM	4.95E 00	5.87E-01	3.09E-03	1.03E 02

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 405

RELEASE MADE FROM T6204

RELEASE START DATE 82980. TIME 2000.

RELEASE COMPLETION DATE 83080. TIME 35.

RELEASE DURATION : 275. MINUTES

TANK LEVELS : INITIAL 124. INCHES FINAL 3. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 8499000. FINAL 8540400.

AVERAGE RELEASE RATE: 29.00 LPM OR 7.66 GPM

AVERAGE BLOWDOWN RATE: 5698.15 LPM OR 1505.45 GPM

TOTAL VOLUME RELEASED: 7974. LITERS OR 2107. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1566990. LITERS OR 414000. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	82980.	520.	16230.	1.37E-07	2.31E-09	3.41E-01	0.00E-01	10748.
B	82980.	525.	16231.	1.47E-07	2.32E-09	3.36E-01	0.00E-01	10749.
C	82980.	1900.	16236.	7.18E-09	1.34E-08	4.22E-07		
D	83080.	135.	16237.	1.27E-08	1.30E-08	1.09E-06		
E	82780.	2100.	16238.	7.58E-09	1.63E-08	5.63E-06		
F	83080.	125.	16239.	7.09E-09	7.81E-09	6.27E-07		
G	82680.	830.	16223.	2.47E-08	1.37E-08	9.37E-04		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.17E-06	1.47E-07	6.19E-10	2.06E 00
GROSS ALPHA	1.85E-08	2.32E-09	-5.75E-11	N/A
TRITIUM	2.72E 00	3.41E-01	1.72E-03	5.74E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 406

RELEASE MADE FROM T6204

RELEASE START DATE 90280. TIME 1835.

RELEASE COMPLETION DATE 90280. TIME 2240.

RELEASE DURATION : 245. MINUTES

TANK LEVELS : INITIAL 130. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 9276000. FINAL 9306092.

AVERAGE RELEASE RATE: 33.62 LPM OR 8.88 GPM

AVERAGE BLOWDOWN RATE: 4648.91 LPM OR 1228.24 GPM

TOTAL VOLUME RELEASED: 8237. LITERS OR 2176. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1138982. LITERS OR 300920. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	83080.	900.	16240.	1.64E-07	5.46E-09	8.49E-02	0.00E-01	10754.
B	83080.	905.	16241.	1.53E-07	2.33E-09	8.56E-02	0.00E-01	10756.
C	90280.	1735.	16267.	9.05E-09	4.65E-09	4.96E-07		
D	90280.	2340.	16268.	5.95E-09	7.73E-09	1.91E-06		
E	90280.	1945.	16269.	7.97E-09	7.81E-09	6.90E-06		
F	90280.	2340.	16270.	6.02E-09	9.92E-09	4.52E-04		
G	90280.	910.	16265.	6.95E-09	4.18E-09	6.34E-05		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.35E-06	1.64E-07	1.13E-09	3.76E 00
GROSS ALPHA	1.92E-08	2.33E-09	-1.33E-11	N/A
TRITIUM	7.05E-01	8.56E-02	6.14E-04	2.05E 01

TABLE 1.2 (PAGE 14 OF 16)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 407

RELEASE MADE FROM T6204

RELEASE START DATE 90580. TIME 1228.

RELEASE COMPLETION DATE 90580. TIME 1648.

RELEASE DURATION : 260. MINUTES

TANK LEVELS : INITIAL 132. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 9777301. FINAL 9810980.

AVERAGE RELEASE RATE: 32.19 LPM OR 8.50 GPM

AVERAGE BLOWDOWN RATE: 4902.89 LPM OR 1295.35 GPM

TOTAL VOLUME RELEASED: 8369. LITERS OR 2211. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1274750. LITERS OR 336790. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	90480.	500.	16282.	6.49E-08	2.32E-09	1.07E-01	0.00E-01	10776.
B	90480.	501.	16283.	6.15E-08	2.73E-09	1.07E-01	0.00E-01	10777.
C	90580.	1210.	16294.	6.78E-09	7.61E-09	1.41E-06		
D	90580.	1757.	16295.	6.78E-09	7.66E-09	8.25E-07		
E	90580.	1330.	16296.	6.94E-09	1.06E-08	1.27E-06		
F	90580.	1748.	16297.	6.82E-09	8.43E-09	1.35E-05		
G	90280.	910.	16265.	6.95E-09	4.18E-09	6.34E-05		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.43E-07	6.49E-08	3.78E-10	1.26E 00
GROSS ALPHA	2.28E-08	2.73E-09	-9.45E-12	N/A
TRITIUM	8.95E-01	1.07E-01	6.97E-04	2.32E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 408

RELEASE MADE FROM T6204

RELEASE START DATE 90780. TIME 450.

RELEASE COMPLETION DATE 90780. TIME 832.

RELEASE DURATION : 222. MINUTES

TANK LEVELS : INITIAL 120. INCHES FINAL 4. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 89265. FINAL 118125.

AVERAGE RELEASE RATE: 34.43 LPM OR 9.10 GPM

AVERAGE BLOWDOWN RATE: 4920.50 LPM OR 1300.00 GPM

TOTAL VOLUME RELEASED: 7644. LITERS OR 2020. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1092351. LITERS OR 288600. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	90680.	821.	16301.	1.53E-07	8.68E-09	3.10E-02	0.00E-01	10786.
B	90680	826.	16302.	1.24E-07	3.76E-09	3.11E-02	0.00E-01	10787.
C	90780.	330.	16304.	6.69E-09	6.14E-09	4.15E-07		
D	90780.	855.	16305.	6.75E-09	7.08E-09	1.26E-06		
E	90780.	630.	16306.	6.84E-09	8.85E-09	7.02E-07		
F	90780.	850.	16307.	6.82E-09	8.36E-09	4.15E-07		
G	90980.	749.	16315.	6.31E-09	9.20E-09	6.12E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.17E-06	1.53E-07	1.02E-09	3.40E 00
GROSS ALPHA	2.87E-08	3.76E-09	-3.78E-11	N/A
TRITIUM	2.38E-01	3.11E-02	2.16E-04	7.21E 00

TABLE 1.2 (PAGE 16 OF 16)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 409

RELEASE MADE FROM T6204

RELEASE START DATE 91580. TIME 1425.

RELEASE COMPLETION DATE 91580 TIME 1800.

RELEASE DURATION : 215. MINUTES

TANK LEVELS : INITIAL 116. INCHES FINAL 6. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 1646701. FINAL 1681350.

AVERAGE RELEASE RATE: 33.72 LPM OR 8.91 GPM

AVERAGE BLOWDOWN RATE: 6099.84 LPM OR 1611.58 GPM

TOTAL VOLUME RELEASED: 7249. LITERS OR 1915. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1311465. LITERS OR 346490. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	91380.	510.	16376.	1.03E-07	2.43E-09	5.55E-02	0.00E-01	10816.
B	91380.	515.	16377.	9.91E-08	2.43E-09	5.60E-02	0.00E-01	10817.
C	91580.	1355.	16379.	9.62E-09	1.67E-08	4.40E-07		
D	91580.	1910.	16380.	2.02E-08	8.00E-09	4.40E-07		
E	91580.	1545.	16381.	1.41E-08	7.18E-09	3.18E-06		
F	91580.	1900	16382.	9.97E-09	1.42E-08	2.73E-05		
G	91680.	830.	16396.	1.14E-08	9.28E-09	4.84E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	7.47E-07	1.03E-07	5.03E-10	1.68E 00
GROSS ALPHA	1.76E-08	2.43E-09	-3.77E-11	N/A
TRITIUM	4.06E-01	5.60E-02	3.08E-04	1.03E 01

TABLE 1.3: LIQUID EFFLUENT RELEASED VIA THE TURBINE BUILDING SUMP AND THE REACTOR BUILDING SUMP (CONTINUOUS RELEASE)

3rd QUARTER 1980

TURBINE BUILDING SUMP

	MONTH	JUL	AUG	SEP	QUARTERLY TOTAL	
VOLUME	LITERS	1.53E+06	1.88E+06	3.35E+06	6.76E+06	
TRITIUM	AVERAGE µCi/ml	6.50E-05	8.06E-05	8.96E-06	5.08E-05	*
	TOTAL CURIES	9.95E-02	1.52E-01	3.00E-02	3.43E-01	
GROSS β γ	AVERAGE µCi/ml	9.57E-09	1.61E-08	1.24E-08	1.26E-08	*
	TOTAL CURIES	1.46E-05	3.03E-05	4.15E-05	8.52E-05	
GROSS α	AVERAGE µCi/ml	9.94E-09	1.60E-08	1.12E-08	1.23E-08	*
	TOTAL CURIES	1.52E-05	3.01E-05	3.75E-05	8.31E-05	

REACTOR BUILDING SUMP

	MONTH	JUL	AUG	SEP	QUARTERLY TOTAL	
VOLUME	LITERS	8.76E+05	8.47E+05	9.15E+05	2.64E+06	
TRITIUM	AVERAGE µCi/ml	1.88E-04	8.46E-03	1.81E-03	3.67E-03	*
	TOTAL CURIES	1.65E-01	7.17E+00	1.66E+00	9.68E+00	
GROSS β γ	AVERAGE µCi/ml	6.42E-09	1.08E-08	7.59E-09	8.32E-09	*
	TOTAL CURIES	5.62E-06	9.15E-06	6.94E-06	2.19E-05	
GROSS α	AVERAGE µCi/ml	2.54E-09	3.17E-09	2.56E-09	2.78E-09	*
	TOTAL CURIES	2.23E-6	2.68E-06	2.34E-06	7.33E-06	

*Represents a "weighted" average

TABLE 2.1 - RADIOACTIVE GASEOUS EFFLUENT RELEASES FOR 3rd QUARTER, 1980

	UNITS	JUL	AUG	SEPT	QUARTERLY TOTAL
1a. Total Noble Gases	Curies	1.69E-02	1.89E+00	6.94E-02	1.97E+00
1b. Total Tritium	Curies	6.96E-02	6.15E-02	7.70E-02	2.08E-01
1c. Total Halogens	Curies	NSA	NSA	1.12E-06	1.12E-06
1d. Total Particulate Gross (β,γ) Activity RT-7325	Curies	4.33E-12	3.46E-12	8.15E-12	1.59E-11
1e. Total Particulate Gross Alpha Activity RT-7325	Curies	9.04E-13	1.33E-12	1.87E-12	4.10E-12
2. Maximum Hourly Release Rate for Any One Hour Period	Ci/hr	1.23E-03	7.69E-02	3.09E-03	7.69E-02
3. Estimated Total Radioactivity Released by Nuclide (MPCa)		NSA	NSA	NSA	NSA
Particulates MPCa	Curies				
Halogens MPCa	Curies				
131I		NSA	NSA	1.12E-06	1.12E-06
Gases MPCa	Curies				
133Xe 3.00E-07		1.31E-02	1.75E+00	6.94E-02	1.83E+00
85Kr(m) 1.00E-07		7.57E-04	8.22E-03	NSA	8.98E-03
135Xe 1.00E-07		3.06E-03	2.24E-02	NSA	2.55E-02
3H 2.00E-07		6.96E-02	6.15E-02	7.70E-02	2.08E-01
88Kr 2.00E-08		NSA	1.24E-02	NSA	1.24E-02
87Kr 2.00E-08		NSA	1.26E-02	NSA	1.26E-02
131Xe(m) 4.00E-07		NSA	8.50E-02	NSA	8.50E-02

4.7E-03 = 4.7×10^{-3}
5.2E+03 = $5.2 \times 10^{+3}$

NSA means no significant activity.

GAS WASTE SUMMARY FOR RELEASE NUMBER 453

RELEASE START DATE 70680. TIME 108.
RELEASE COMPLETION DATE 70680. TIME 2146.

RELEASE DURATION 1238 MINUTES OR 20.63 HOURS

TANK PRESSURES INITIAL 400 PSIG FINAL 50 PSIG

TANK TEMPERATURE 82 DEG-F

AVERAGE RELEASE RATE 12.27 CFM

TOTAL VOLUME OF GAS RELEASED 4.30E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY C

RC-NUMBERS GRAB 15856. TRITIUM 15858.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
133XE	1.41E-05	3.00E-07	4.70E 01	6.06E-03
85KRM	1.76E-06	1.00E-07	1.76E 01	7.57E-04
135XE	4.81E-06	1.00E-07	4.81E 01	2.07E-03
3H	3.83E-05	2.00E-07	1.91E 02	1.65E-02

TOTAL CURIES OF NOBLE GAS RELEASED 8.89E-03

AVERAGE RELEASE RATE 1.23E-03 CI/HR OR 3.41E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 5.87E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	14.0	6.8	7.2	5.6	5.6	4.6	4.9	6.6
PERCENT	2.1	6.3	10.6	13.4	2.8	1.5	1.2	2.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.8	8.3	7.7	6.0	4.4	9.8	8.4	10.2
PERCENT	1.2	1.8	6.1	6.2	5.7	12.2	17.0	4.4

PERCENT CALM 4.8

GAS WASTE SUMMARY FOR RELEASE NUMBER 454

RELEASE START DATE 71180. TIME 928.
RELEASE COMPLETION DATE 71280. TIME 615.

RELEASE DURATION 1247 MINUTES OR 20.78 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 86 DEG-F

AVERAGE RELEASE RATE 13.13 CFM

TOTAL VOLUME OF GAS RELEASED 4.64E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 97 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 15890. TRITIUM 15891.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.32E-05	2.00E-07	1.66E 02	1.54E-02
133XE	4.31E-06	3.00E-07	1.44E 01	2.00E-03

TOTAL CURIES OF NOBLE GAS RELEASED 2.00E-03

AVERAGE RELEASE RATE 8.37E-04 CI/HR OR 2.32E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 3.72E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.7	6.8	9.4	9.8	8.2	4.3	4.2	9.7
PERCENT	1.2	3.6	5.8	11.5	4.4	3.2	4.0	6.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	13.5	14.7	11.1	5.8	4.0	4.3	4.0	4.9
PERCENT	18.1	12.8	12.1	7.2	1.5	0.8	0.8	0.9

PERCENT CALM 5.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 455

RELEASE START DATE 71480. TIME 1900.
RELEASE COMPLETION DATE 71580. TIME 1235.

RELEASE DURATION 1055 MINUTES OR 17.58 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 86 DEG-F

AVERAGE RELEASE RATE 15.52 CFM

TOTAL VOLUME OF GAS RELEASED 4.64E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 94 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 15906. TRITIUM 15905.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.35E-05	2.00E-07	6.75E 01	6.26E-03
133XE	6.11E-06	3.00E-07	2.04E 01	2.83E-03

TOTAL CURIES OF NOBLE GAS RELEASED 2.83E-03

AVERAGE RELEASE RATE 5.17E-04 CI/HR OR 1.44E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.14E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.2	4.6	4.1	4.4	3.8	2.3	3.6	4.3
PERCENT	4.2	7.6	5.1	10.4	2.0	0.7	1.1	4.6

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	6.7	6.6	7.7	5.6	7.1	9.8	3.3	3.6
PERCENT	15.1	9.9	8.1	3.3	4.4	8.9	2.0	1.2

PERCENT CALM 10.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 456

RELEASE START DATE 71880. TIME 2013.
RELEASE COMPLETION DATE 71980. TIME 1605.

RELEASE DURATION 1192 MINUTES OR 19.87 HOURS

TANK PRESSURES INITIAL 425 PSIG FINAL 50 PSIG

TANK TEMPERATURE 83 DEG-F

AVERAGE RELEASE RATE 13.63 CFM

TOTAL VOLUME OF GAS RELEASED 4.60E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 95 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 15930 TRITIUM 15929.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.13E-05	2.00E-07	5.65E 01	5.20E-03

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 2.62E-04 CI/HR OR 7.27E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.21E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	4.7	5.6	5.8	4.9	4.6	5.1	3.8	3.3
PERCENT	1.4	2.0	3.6	5.0	3.3	2.4	1.8	1.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.4	5.2	5.2	6.0	8.3	5.6	4.7	3.0
PERCENT	3.9	3.3	6.1	8.7	19.4	15.6	8.8	2.0

PERCENT CALM 11.0

GAS WASTE SUMMARY FOR RELEASE NUMBER 457

RELEASE START DATE 72380. TIME 2135.
RELEASE COMPLETION DATE 72480. TIME 1800.

RELEASE DURATION 1225 MINUTES OR 20.42 HOURS

TANK PRESSURES INITIAL 435 PSIG FINAL 42 PSIG

TANK TEMPERATURE 83 DEG-F

AVERAGE RELEASE RATE 13.90 CFM

TOTAL VOLUME OF GAS RELEASED 4.82E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 106 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 15955. TRITIUM 15954.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	6.87E-06	2.00E-07	3.43E 01	3.31E-03

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 1.62E-04 CI/HR OR 4.51E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.51E-04 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	18.1	11.5	[illegible]	[illegible]	5.3	5.8	8.0	5.6
PERCENT	1.4	2.8	1.8	4.1	6.9	10.5	7.8	1.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	12.9	10.6	5.9	6.0	7.0	8.7	9.5	15.6
PERCENT	11.1	14.0	11.0	5.4	6.1	3.1	3.5	1.2

PERCENT CALM 7.3

GAS WASTE SUMMARY FOR RELEASE NUMBER 458

RELEASE START DATE 72580. TIME 1720.
RELEASE COMPLETION DATE 72680. TIME 1000.

RELEASE DURATION 1000 MINUTES OR 16.67 HOURS

TANK PRESSURES INITIAL 410 PSIG FINAL 47 PSIG

TANK TEMPERATURE 86 DEG-F

AVERAGE RELEASE RATE 15.64 CFM

TOTAL VOLUME OF GAS RELEASED 4.43E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 104 DEG-F. FLOWRATE 31000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 15979. TRITIUM 15977.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.54E-05	2.00E-07	1.77E 02	1.57E-02

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 9.40E-04 CI/HR OR 2.61E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 4.35E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.3	5.5	8.1	10.3	13.7	11.0	11.2	8.1
PERCENT	0.8	7.8	25.1	18.5	7.0	3.9	6.1	3.4

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.5	4.7	3.0	9.3	7.4	15.8	19.1	20.5
PERCENT	4.6	10.9	2.0	1.5	0.3	0.5	0.9	0.7

PERCENT CALM 5.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 459

RELEASE START DATE 72880. TIME 1710.
RELEASE COMPLETION DATE 72980. TIME 646.

RELEASE DURATION 816 MINUTES OR 13.60 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 50 PSIG

TANK TEMPERATURE 85 DEG-F

AVERAGE RELEASE RATE 20.63 CFM

TOTAL VOLUME OF GAS RELEASED 4.77E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 106 DEG-F. FLOWRATE 30000. ACFM

STABILITY CATAGORY B

RC-NUMBERS GRAB 15982. TRITIUM 15984.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	6.55E-06	2.00E-07	3.27E 01	3.12E-03

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 2.30E-04 CI/HR OR 6.38E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.06E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	2.0	0.0	0.0	0.0	0.0	2.5	12.0	11.2
PERCENT	0.4	0.0	0.0	0.0	0.0	0.4	12.9	16.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	9.9	8.8	6.4	5.3	3.7	5.4	8.2	2.3
PERCENT	3.2	14.7	23.3	15.8	4.1	3.9	2.0	0.1

PERCENT CALM 2.5

GAS WASTE SUMMARY FOR RELEASE NUMBER 460

RELEASE START DATE 73180. TIME 353.
RELEASE COMPLETION DATE 73180. TIME 2022.

RELEASE DURATION 989 MINUTES OR 16.48 HOURS

TANK PRESSURES INITIAL 405 PSIG FINAL 50 PSIG

TANK TEMPERATURE 85 DEG-F

AVERAGE RELEASE RATE 15.49 CFM

TOTAL VOLUME OF GAS RELEASED 4.34E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 109 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16013. TRITIUM 16016.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	9.57E-06	2.00E-07	4.78E 01	4.15E-03
133XE	5.12E-06	3.00E-07	1.71E 01	2.22E-03
135XE	2.29E-06	1.00E-07	2.29E 01	9.93E-04

TOTAL CURIES OF NOBLE GAS RELEASED 3.21E-03

AVERAGE RELEASE RATE 4.47E-04 CI/HR OR 1.24E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.14E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	2.8	4.3	4.5	6.4	2.7	4.4	2.5	3.4
PERCENT	1.3	5.6	4.9	2.5	0.5	0.9	0.4	0.1

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	2.2	7.0	7.8	8.3	7.3	6.4	4.2	2.1
PERCENT	0.5	2.6	22.0	23.6	18.1	8.0	1.3	0.5

PERCENT CALM 6.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 461

RELEASE START DATE 80180. TIME 2208.
RELEASE COMPLETION DATE 80280. TIME 1200.

RELEASE DURATION 832 MINUTES OR 13.87 HOURS

TANK PRESSURES INITIAL 390 PSIG FINAL 50 PSIG

TANK TEMPERATURE 88 DEG-F

AVERAGE RELEASE RATE 17.54 CFM

TOTAL VOLUME OF GAS RELEASED 4.13E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 108 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16033. TRITIUM 16034.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	5.60E-06	2.00E-07	2.80E 01	2.31E-03
133XE	1.27E-05	3.00E-07	4.23E 01	5.25E-03
135XE	8.45E-06	1.00E-07	8.45E 01	3.49E-03

TOTAL CURIES OF NOBLE GAS RELEASED 8.74E-03

AVERAGE RELEASE RATE 7.97E-04 CI/HR OR 2.21E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 4.27E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	16.5	16.0	8.9	4.0	3.9	4.2	6.1	6.1
PERCENT	12.2	10.9	1.4	1.1	0.7	2.5	6.4	11.8

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	9.7	8.5	8.9	9.6	7.5	5.9	6.0	5.0
PERCENT	15.0	16.5	7.4	0.7	1.1	4.0	4.1	1.3

PERCENT CALM 2.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 462

RELEASE START DATE 80580. TIME 2250.
RELEASE COMPLETION DATE 80680. TIME 1620.

RELEASE DURATION 1050 MINUTES OR 17.50 HOURS

TANK PRESSURES INITIAL 450 PSIG FINAL 50 PSIG

TANK TEMPERATURE 90 DEG-F

AVERAGE RELEASE RATE 16.29 CFM

TOTAL VOLUME OF GAS RELEASED 4.84E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 97 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16058. TRITIUM 16059.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.41E-06	2.00E-07	1.70E 01	1.65E-03
133XE	1.14E-04	3.00E-07	3.80E 02	5.52E-02

TOTAL CURIES OF NOBLE GAS RELEASED 5.52E-02

AVERAGE RELEASE RATE 3.25E-03 CI/HR OR 9.03E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.02E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	9.1	10.6	7.9	8.1	5.1	3.1	4.8	3.4
PERCENT	2.2	7.9	8.0	9.5	2.6	2.2	4.7	1.8

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	3.7	4.6	6.6	4.6	2.3	2.7	2.3	3.8
PERCENT	3.2	3.9	12.9	5.2	5.7	6.6	5.3	2.3

PERCENT CALM 15.8

GAS WASTE SUMMARY FOR RELEASE NUMBER 463

RELEASE START DATE 80880. TIME 2030.
RELEASE COMPLETION DATE 80980. TIME 1311.

RELEASE DURATION 1001 MINUTES OR 16.68 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 90 DEG-F

AVERAGE RELEASE RATE 16.23 CFM

TOTAL VOLUME OF GAS RELEASED 4.60E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 104 DEG-F. FLOWRATE 31000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16085. TRITIUM 16086.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.75E-06	2.00E-07	2.37E 01	2.19E-03
133XE	7.64E-06	3.00E-07	2.55E 01	3.52E-03
135XE	7.86E-06	1.00E-07	7.86E 01	3.62E-03
85KRM	2.30E-06	1.00E-07	2.30E 01	1.06E-03
88KR	2.84E-06	2.00E-08	1.42E 02	1.31E-03

TOTAL CURIES OF NOBLE GAS RELEASED 9.50E-03

AVERAGE RELEASE RATE 7.00E-04 CI/HR OR 1.95E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.48E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	3.5	3.4	4.1	4.1	3.8	3.1	2.6	2.6
PERCENT	1.2	3.2	2.6	2.1	4.5	5.4	4.0	2.7

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	3.5	5.7	6.7	7.3	5.4	12.2	10.8	4.3
PERCENT	6.0	11.0	10.1	7.1	6.0	16.9	4.3	1.7

PERCENT CALM 10.8

GAS WASTE SUMMARY FOR RELEASE NUMBER 464

RELEASE START DATE 81480. TIME 149.
RELEASE COMPLETION DATE 81480. TIME 1956.

RELEASE DURATION 1087 MINUTES OR 18.12 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 47 PSIG

TANK TEMPERATURE 88 DEG-F

AVERAGE RELEASE RATE 14.73 CFM

TOTAL VOLUME OF GAS RELEASED 4.53E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 106 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16113. TRITIUM 16112.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.63E-06	2.00E-07	2.31E 01	2.10E-03
133XE	2.73E-05	3.00E-07	9.10E 01	1.24E-02
85KRM	1.58E-05	1.00E-07	1.58E 02	7.16E-03
88KR	2.45E-05	2.00E-08	1.22E 03	1.11E-02
135XE	3.22E-05	1.00E-07	3.22E 02	1.46E-02
87KR	2.79E-05	2.00E-08	1.39E 03	1.26E-02

TOTAL CURIES OF NOBLE GAS RELEASED 5.79E-02

AVERAGE RELEASE RATE 3.31E-03 CI/HR OR 9.20E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.45E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	1.4	8.0	3.4	4.4	4.6	9.4	8.0
PERCENT	0.0	0.1	0.1	0.2	0.3	1.5	3.1	0.9

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	8.2	9.0	9.1	8.0	8.4	8.4	7.9	5.0
PERCENT	3.8	13.4	20.5	10.9	10.3	14.4	17.7	1.9

PERCENT CALM 0.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 465

RELEASE START DATE 81680. TIME 2105.
RELEASE COMPLETION DATE 81780. TIME 1402.

RELEASE DURATION 1017 MINUTES OR 16.95 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 45 PSIG

TANK TEMPERATURE 88 DEG-F

AVERAGE RELEASE RATE 15.83 CFM

TOTAL VOLUME OF GAS RELEASED 4.56E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 95 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16148. TRITIUM 16147.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.34E-06	2.00E-07	2.17E 01	1.98E-03
133XE	3.11E-06	3.00E-07	1.04E 01	1.42E-03

TOTAL CURIES OF NOBLE GAS RELEASED 1.42E-03

AVERAGE RELEASE RATE 2.00E-04 CI/HR OR 5.56E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.98E-04 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	8.2	7.3	8.7	5.6	3.7	5.7	5.2
PERCENT	0.0	0.9	7.2	8.9	1.6	1.4	6.6	11.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.7	5.9	7.8	2.5	0.0	0.0	0.0	0.0
PERCENT	14.4	26.7	17.9	0.1	0.0	0.0	0.0	0.0

PERCENT CALM 2.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 466

RELEASE START DATE 82180. TIME 1032.
RELEASE COMPLETION DATE 82280. TIME 324.

RELEASE DURATION 1012 MINUTES OR 16.87 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 50 PSIG

TANK TEMPERATURE 84 DEG-F

AVERAGE RELEASE RATE 15.81 CFM

TOTAL VOLUME OF GAS RELEASED 4.53E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 96 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16174. TRITIUM 16175.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	6.07E-05	2.00E-07	3.03E 02	2.75E-02
133XE	7.80E-04	3.00E-07	2.60E 03	3.53E-01
131XEM	3.15E-05	4.00E-07	7.87E 01	1.43E-02

TOTAL CURIES OF NOBLE GAS RELEASED 3.68E-01

AVERAGE RELEASE RATE 2.34E-02 CI/HR OR 6.51E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.42E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	7.5	5.8	4.6	3.6	4.3	6.3	7.2	3.1
PERCENT	5.1	12.9	7.9	4.2	3.2	10.4	8.8	1.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	3.8	4.3	4.9	3.2	3.1	3.9	4.4	5.4
PERCENT	2.9	4.1	1.8	2.7	2.3	6.3	7.0	7.4

PERCENT CALM 11.3

GAS WASTE SUMMARY FOR RELEASE NUMBER 467

RELEASE START DATE 82580. TIME 2053.
RELEASE COMPLETION DATE 82680. TIME 1515.

RELEASE DURATION 1102 MINUTES OR 18.37 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 84 DEG-F

AVERAGE RELEASE RATE 14.91 CFM

TOTAL VOLUME OF GAS RELEASED 4.65E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 92 DEG-F. FLOWRATE 8430. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16205. TRITIUM 16206.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	5.10E-05	2.00E-07	2.55E 02	2.37E-02
133XE	2.83E-03	3.00E-07	9.43E 03	1.32E 00
131XEM	1.52E-04	4.00E-07	3.80E 02	7.07E-02
135XE	1.52E-06	1.00E-07	1.52E 01	7.07E-04

TOTAL CURIES OF NOBLE GAS RELEASED 1.39E 00

AVERAGE RELEASE RATE 7.69E-02 CI/HR OR 2.14E 01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.36E-01 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	10.8	7.0	7.7	5.0	4.9	5.5	6.1	6.1
PERCENT	0.9	7.6	3.6	3.5	3.8	4.9	5.4	2.2

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.6	7.2	8.4	2.6	3.2	5.2	7.9	11.7
PERCENT	0.5	2.2	3.1	2.3	6.5	25.9	13.4	4.7

PERCENT CALM 9.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 468

RELEASE START DATE 90280. TIME 2050.
RELEASE COMPLETION DATE 90380. TIME 1917.

RELEASE DURATION 1347 MINUTES OR 22.45 HOURS

TANK PRESSURES INITIAL 465 PSIG FINAL 50 PSIG

TANK TEMPERATURE 85 DEG-F

AVERAGE RELEASE RATE 10.30 CFM

TOTAL VOLUME OF GAS RELEASED 5.07E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 88 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16247. TRITIUM 16246.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.04E-05	2.00E-07	2.02E 02	2.05E-02
133XE	4.74E-05	3.00E-07	1.58E 02	2.40E-02

TOTAL CURIES OF NOBLE GAS RELEASED 2.40E-02

AVERAGE RELEASE RATE 1.98E-03 CI/HR OR 5.51E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.53E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	6.5	7.6	8.1	8.8	7.4	7.6	5.1	4.5
PERCENT	0.8	2.4	5.0	3.7	1.2	2.5	4.2	2.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	7.1	5.9	5.9	4.2	4.3	6.7	8.0	6.9
PERCENT	3.9	10.6	9.8	3.7	1.8	2.0	3.2	1.8

PERCENT CALM 40.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 469

RELEASE START DATE 91180. TIME 1240.
RELEASE COMPLETION DATE 91280. TIME 1020.

RELEASE DURATION 1300 MINUTES OR 21.67 HOURS

TANK PRESSURES INITIAL 450 PSIG FINAL 50 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 13.40 CFM

TOTAL VOLUME OF GAS RELEASED 4.93E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 86 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY C

RC-NUMBERS GRAB 16354. TRITIUM 16353.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.88E-05	2.00E-07	2.44E 02	2.41E-02
133XE	8.67E-05	3.00E-07	2.89E 02	4.28E-02

TOTAL CURIES OF NOBLE GAS RELEASED 4.28E-02

AVERAGE RELEASE RATE 3.09E-03 CI/HR OR 8.57E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.12E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	3.9	4.5	8.1	10.6	12.7	5.3	4.5	2.4
PERCENT	0.6	5.8	4.2	7.1	5.6	1.1	0.4	0.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.7	3.6	9.5	16.2	17.7	5.7	5.2	4.2
PERCENT	1.8	1.7	8.0	31.1	23.3	1.9	1.8	0.9

PERCENT CALM 4.1

GAS WASTE SUMMARY FOR RELEASE NUMBER 470

RELEASE START DATE 91880. TIME 1840.
RELEASE COMPLETION DATE 91980. TIME 2140.

RELEASE DURATION 1620 MINUTES OR 27.00 HOURS

TANK PRESSURES INITIAL 450 PSIG FINAL 35 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 11.16 CFM

TOTAL VOLUME OF GAS RELEASED 5.12E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 87 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16415. TRITIUM 16416.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.62E-05	2.00E-07	1.81E 02	1.85E-02
133XE	2.24E-06	3.00E-07	7.47E 00	1.15E-03

TOTAL CURIES OF NOBLE GAS RELEASED 1.15E-03

AVERAGE RELEASE RATE 7.29E-04 CI/HR OR 2.02E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 3.31E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	12.6	13.0	14.2	10.5	5.5	4.7	8.5	8.2
PERCENT	5.3	12.9	13.7	6.9	2.3	1.9	4.0	1.9

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	8.5	7.6	7.2	17.8	18.1	10.0	13.1	12.2
PERCENT	6.9	10.3	4.1	7.2	7.2	1.7	4.1	8.3

PERCENT CALM 0.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 471

RELEASE START DATE 92780. TIME 435.
RELEASE COMPLETION DATE 92880. TIME 220

RELEASE DURATION 1305 MINUTES OR 21.75 HOURS

TANK PRESSURES INITIAL 435 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 12.90 CFM

TOTAL VOLUME OF GAS RELEASED 4.77E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 86 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY C

RC-NUMBERS GRAB 16451. TRITIUM 16450.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	2.91E-05	2.00E-07	1.45E 02	1.39E-02
133XE	3.03E-06	3.00E-07	1.01E 01	1.44E-03

TOTAL CURIES OF NOBLE GAS RELEASED 1.44E-03

AVERAGE RELEASE RATE 7.04E-04 CI/HR OR 1.96E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 3.16E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	2.0	0.0	4.3	9.0	3.0	4.5	0.0	0.0
PERCENT	4.3	0.0	13.0	4.3	8.7	8.7	0.0	0.0

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.3	0.0	0.0	6.0	4.6	4.0	4.5	3.0
PERCENT	13.0	0.0	0.0	13.0	13.0	8.7	8.7	4.3

PERCENT CALM 0.0

TABLE 4.1

RADIOCHEMISTRY SUMMARY FROM 90180. TO 93080.

SYSTEM	BETA/GAMMA	ALPHA	TRITIUM	
FARM POND (EFFLUENT)				
	1.59E-08	1.45E-08	2.51E-05	MAXIMUM
	6.21E-09	2.82E-09	4.41E-07	MINIMUM
	9.74E-09(5)	8.01E-09(5)	6.69E-06(5)	AVERAGE
COOLING TOWER BLOWDOWN				
	1.64E-08	1.48E-08	4.52E-04	MAXIMUM
	6.02E-09	4.18E-09	4.15E-07	MINIMUM
	8.70E-09(13)	9.17E-09(13)	4.47E-05(13)	AVERAGE
REACTOR BUILDING SUMP (EFFLUENT)				
	1.34E-08	4.58E-09	2.34E-02	MAXIMUM
	4.56E-09	1.39E-09	3.84E-05	MINIMUM
	7.59E-09(17)	2.56E-09(17)	1.81E-03(17)	AVERAGE
TURBINE BULIDING SUMP (EFFLUENT)				
	2.81E-08	2.05E-08	1.47E-05	MAXIMUM
	6.45E-09	2.52E-09	5.79E-06	MINIMUM
	1.24E-08(13)	1.12E-08(13)	8.96E-06(13)	AVERAGE
SYSTEM 21				
	8.15E-09	2.98E-09	8.67E-05	MAXIMUM
	5.90E-09	1.97E-09	3.20E-05	MINIMUM
	6.80E-09(3)	2.46E-09(3)	6.08E-05(3)	AVERAGE
SYSTEM 31				
	6.74E-09	2.97E-09	1.13E-04	MAXIMUM
	5.66E-09	1.40E-09	2.32E-05	MINIMUM
	6.21E-09(6)	2.27E-09(6)	5.65E-05(6)	AVERAGE
SYSTEM 41				
	1.57E-08	2.20E-08	4.51E-07	MAXIMUM
	1.57E-08	2.20E-08	4.51E-07	MINIMUM
	1.57E-08(1)	2.20E-08(1)	4.51E-07(1)	AVERAGE
SYSTEM 42				
	1.89E-08	2.30E-08	4.51E-07	MAXIMUM
	1.89E-08	2.30E-08	4.51E-07	MINIMUM
	1.89E-08(1)	2.30E-08(1)	4.51E-07(1)	AVERAGE
SYSTEM 46				
	4.44E-08	4.52E-09	8.76E-05	MAXIMUM
	5.76E-09	1.97E-09	6.59E-05	MINIMUM
	1.50E-08(8)	2.79E-09(8)	7.27E-05(8)	AVERAGE
SYSTEM 47				
	8.89E-09	2.98E-09	1.95E-04	MAXIMUM
	4.54E-09	1.97E-09	1.46E-04	MINIMUM
	6.18E-09(8)	2.34E-09(8)	1.77E-04(8)	AVERAGE

NOTES:
1. ALL ACTIVITIES EXPRESSED IN UNITS OF UCI/ML.
2. () REPRESENTS THE NUMBER OF SAMPLES REPRESENTED BY THE AVERAGE VALUE.

TABLE 1.1 RADIOACTIVE LIQUID EFFLUENT RELEASES FOR 4 QUARTER, 19 80

	UNITS	Oct.	Nov.	Dec.	QUARTERLY TOTAL	
1. Gross Beta Radioactivity						
a) Total Release	Curies	5.24E-06	1.73E-05	7.91E-06	3.05E-05	
b) Avg. Conc. Released before Dilution	uCi/ml	2.37E-07	5.48E-07	1.26E-07	2.61E-07	*
c) Avg. Conc. Released after Dilution	uCi/ml above bkgd	3.71E-10	9.26E-10	4.33E-10	5.52E-10	*
2. Tritium						
a) Total Release	Curies	1.85E+01	3.10E+01	1.67E+01	6.62E+01	
b) Avg. Conc. Release before Dilution	uCi/ml	8.43E-01	1.02E+00	2.70E-01	5.84E-01	*
c) Avg. Conc. Release after Dilution	uCi/ml above bkgd	1.26E-03	2.05E-03	1.04E-03	1.36E-03	*
3. Dissolved Noble Gases						
a) Total Release	Curies	2.44E-06	4.58E-05	NSA	4.82E-05	
b) Avg. Conc. Released before Dilution	uCi/ml	3.36E-07	1.95E-06	NSA	1.55E-06	*
c) Avg. Conc. Released after Dilution	uCi/ml above bkgd	3.25E-10	3.35E-09	NSA	2.60E-09	*
4. Gross Alpha Radioactivity						
a) Total Release	Curies	1.04E-07	1.04E-07	1.15E-06	1.36E-06	
5. Total Volume of Liquid Released before Dilution	Liters	2.28E+04	3.14E+04	6.12E+04	1.15E+05	
6. Total Volume of Liquid Used for Dilution	Liters	1.12E+07	1.48E+07	1.39E+07	3.99E+07	
7. Estimated Total Radioactivity Released By Nuclide Isotope Above Background						
Nuclide	MPCw	Curies				
3H	3.00E-03		1.85E+01	3.10E+01	1.67E+01	6.62E+01
133XE	2.00E-04		2.44E-06	4.58E-05	NSA	4.82E+05

4.7E-05 = 4.7×10^{-5}
5.2E+03 = $5.2 \times 10^{+3}$

NSA means no significant activity.

*Represents a "weighted" average.

TABLE 1.2 (PAGE 1 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 410

RELEASE MADE FROM T6204

RELEASE START DATE 100180. TIME 1049.

RELEASE COMPLETION DATE 100180. TIME 1620.

RELEASE DURATION : 331. MINUTES

TANK LEVELS : INITIAL 127. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 5197417. FINAL 5248894.

AVERAGE RELEASE RATE: 24.29 LPM OR 6.42 GPM

AVERAGE BLOWDOWN RATE: 5886.42 LPM OR 1555.20 GPM

TOTAL VOLUME RELEASED: 8040. LITERS OR 2124. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1948404. LITERS OR 514770. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	92680.	630.	16452.	6.73E-08	5.10E-09	1.38E-01	0.00E-01	10861.
B	92680.	635.	16453.	7.29E-08	5.10E-09	1.39E-01	0.00E-01	10862.
C	100180.	945.	16482.	2.42E-08	2.66E-08	4.36E-07		
D	100180.	1745.	16490.	1.17E-08	1.47E-08	4.44E-07		
E	100180.	1255.	16485.	1.21E-08	7.12E-09	1.35E-05		
F	100180.	1745.	16489.	1.64E-08	5.24E-09	4.59E-04		
G	93080.	951.	16470.	6.55E-09	1.48E-08	4.41E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.86E-07	7.29E-08	2.73E-10	9.09E-01
GROSS ALPHA	4.10E-08	5.10E-09	-4.00E-11	N/A
TRITIUM	1.12E 00	1.39E-01	5.72E-04	1.91E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 411

RELEASE MADE FROM T6204

RELEASE START DATE 101080. TIME 1438.

RELEASE COMPLETION DATE 101080. TIME 1959.

RELEASE DURATION : 261. MINUTES

TANK LEVELS : INITIAL 119. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 7284810. FINAL 7330485.

AVERAGE RELEASE RATE: 28.78 LPM OR 7.60 GPM

AVERAGE BLOWDOWN RATE: 6623.75 LPM OR 1750.00 GPM

TOTAL VOLUME RELEASED: 7513. LITERS OR 1985. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1728799 LITERS OR 456750. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	100980.	658.	16535.	7.75E-08	5.15E-09	2.69E-01	0.00E-01	10914.
B	100980.	659.	16536.	7.94E-08	5.15E-09	2.68E-01	0.00E-01	10915.
C	101080.	1435.	16541.	1.99E-08	1.86E-08	4.38E-07		
D	101180.	835.	16542.	6.46E-09	6.57E-09	1.91E-05		
E	101080.	1650.	16543.	1.81E-08	1.84E-08	5.88E-05		
F	101180.	825.	16544.	4.14E-08	2.84E-08	1.33E-05		
G	100780.	830.	16526.	8.98E-09	4.12E-09	4.28E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.97E-07	7.94E-08	3.05E-10	1.02E 00
GROSS ALPHA	3.87E-08	5.15E-09	4.44E-12	N/A
TRITIUM	2.02E 00	2.69E-01	1.16E-03	3.88E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 412

RELEASE MADE FROM T6204

RELEASE START DATE 102280 TIME 1732.

RELEASE COMPLETION DATE 102380. TIME 635.

RELEASE DURATION : 783. MINUTES

TANK LEVELS : INITIAL 116. INCHES FINAL 6. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 386505. FINAL 584137.

AVERAGE RELEASE RATE: 9.26 LPM OR 2.45 GPM

AVERAGE BLOWDOWN RATE: 9553.48 LPM OR 2524.04 GPM

TOTAL VOLUME RELEASED: 7249. LITERS OR 1915. GALLONS

TOTAL VOLUME USED FOR DILUTION: 7480371. LITERS OR 1976320. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	102080.	640.	16605.	5.32E-07	4.12E-09	2.12E 00	3.36E-07	10969.
B	102080.	645.	16606.	5.60E-07	3.41E-09	2.12E 00	3.36E-07	10970.
C	102280.	1730.	16624.	7.45E-09	6.04E-09	4.18E-07		
D	102380.	1505.	16625.	9.43E-09	6.24E-09	9.20E-07		
E	102280.	2000.	16626.	6.63E-09	9.94E-09	7.00E-07		
F	102380.	1450.	16627.	1.09E-08	1.50E-08	9.12E-04		
G	102080.	845.	16604.	7.55E-09	1.15E-08	1.59E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	4.06E-06	5.60E-07	5.35E-10	1.78E 00
GROSS ALPHA	2.47E-08	3.41E-09	-7.84E-12	N/A
TRITIUM	1.54E 01	2.12E 00	2.05E-03	6.85E 01
133XE	2.44E-06	3.36E-07	3.25E-10	1.63E-04

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 413

RELEASE MADE FROM T6204

RELEASE START DATE 110780. TIME 1815.

RELEASE COMPLETION DATE 110880. TIME 415.

RELEASE DURATION : 600. MINUTES

TANK LEVELS : INITIAL 130. INCHES FINAL 8. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 4527000. FINAL 4672582.

AVERAGE RELEASE RATE: 13.40 LPM OR 3.54 GPM

AVERAGE BLOWDOWN RATE: 9183.80 LPM OR 2426.37 GPM

TOTAL VOLUME RELEASED: 8040. LITERS OR 2124. GALLONS

TOTAL VOLUME USED FOR DILUTION: 5510279. LITERS OR 1455820. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	110780.	740.	16718.	1.50E-06	2.22E-09	1.45E 00	3.88E-06	11041.
B	110780.	745.	16719.	1.56E-06	3.39E-09	1.46E 00	3.88E-06	11042.
C	110780.	1830.	16722.	1.20E-08	7.79E-09	4.62E-07		
D	110880.	535.	16723.	6.65E-09	1.11E-08	7.93E-06		
E	110880.	210.	16724.	2.10E-08	3.93E-08	7.96E-04		
F	110880.	550.	16725.	1.62E-08	3.20E-08	1.73E-03		
G	110480.	830.	16705.	7.34E-09	2.87E-08	4.76E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.25E-05	1.56E-06	2.26E-09	7.54E 00
GROSS ALPHA	2.73E-08	3.39E-09	-3.68E-11	N/A
TRITIUM	1.17E 01	1.46E 00	2.12E-03	7.08E 01
133XE	3.12E-05	3.88E-06	5.65E-09	2.83E-03

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 414

RELEASE MADE FROM T6204

RELEASE START DATE 111080. TIME 1900.

RELEASE COMPLETION DATE 111180. TIME 230.

RELEASE DURATION : 450. MINUTES

TANK LEVELS : INITIAL 110. INCHES FINAL 8. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 5407919. FINAL 5529310.

AVERAGE RELEASE RATE: 14.94 LPM OR 3.95 GPM

AVERAGE BLOWDOWN RATE: 10210.33 LPM OR 2697.58 GPM

TOTAL VOLUME RELEASED: 6722. LITERS OR 1776. GALLONS

TOTAL VOLUME USED FOR DILUTION: 4594649. LITERS OR 1213910. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	111080.	750.	16751.	2.69E-07	2.50E-09	1.47E 00	1.09E-06	11046.
B	111080	755.	16752.	2.52E-07	2.46E-09	1.50E 00	1.09E-06	11047.
C	111080.	1810.	16757.	6.79E-09	1.48E-08	4.14E-07		
D	111180.	830.	16758.	6.71E-09	1.82E-08	3.71E-06		
E	111080.	2010.	16759.	1.27E-08	3.28E-08	1.10E-05		
F	111180.	330.	16760.	1.03E-08	2.18E-08	2.58E-04		
G	111080.	830.	16756.	6.41E-09	3.04E-09	3.08E-05		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	1.81E-06	2.69E-07	3.84E-10	1.28E 00
GROSS ALPHA	1.65E-08	2.46E-09	-8.51E-13	N/A
TRITIUM	1.01E 01	1.50E 00	2.19E-03	7.30E 01
133XE	7.33E-06	1.09E-06	1.59E-09	7.96E-04

TABLE 1.2 (PAGE 6 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 415

RELEASE MADE FROM T6204

RELEASE START DATE 112080 TIME 945.

RELEASE COMPLETION DATE 112080. TIME 1425.

RELEASE DURATION : 280. MINUTES

TANK LEVELS : INITIAL 129. INCHES FINAL 4. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 7672800. FINAL 7741000.

AVERAGE RELEASE RATE: 29.42 LPM OR 7.77 GPM

AVERAGE BLOWDOWN RATE: 9219.18 LPM OR 2435.71 GPM

TOTAL VOLUME RELEASED: 8237. LITERS OR 2176. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2581370. LITERS OR 682000. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	111980.	530.	16844.	2.45E-07	3.03E-09	6.39E-01	8.85E-07	11087.
B	111980.	535.	16845.	3.25E-07	3.02E-09	6.46E-01	8.85E-07	11088.
C	112080.	915.	16849.	1.58E-08	1.10E-08	2.38E-06		
D	112180.	855.	16850.	9.30E-09	1.06E-08	2.76E-06		
E	112080.	1055.	16851.	2.32E-08	2.14E-08	4.15E-06		
F	112180.	905.	16852.	1.06E-07	6.37E-08	3.80E-05		
G	111780.	1015.	16830.	1.32E-08	1.95E-08	5.97E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	2.68E-06	3.25E-07	9.92E-10	3.31E 00
GROSS ALPHA	2.49E-08	3.02E-09	-5.25E-11	N/A
TRITIUM	5.32E 00	6.46E-01	2.05E-03	6.85E 01
133XE	7.29E-06	8.85E-07	2.82E-09	1.41E-03

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 416

RELEASE MADE FROM T6204

RELEASE START DATE 112580. TIME 1113.

RELEASE COMPLETION DATE 112580. TIME 1525.

RELEASE DURATION : 252. MINUTES

TANK LEVELS : INITIAL 132. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 8844800. FINAL 8900570.

AVERAGE RELEASE RATE: 33.21 LPM OR 8.77 GPM

AVERAGE BLOWDOWN RATE: 8376.57 LPM OR 2213.10 GPM

TOTAL VOLUME RELEASED: 8369. LITERS OR 2211. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2110894. LITERS OR 557700. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	112480.	600.	16878.	3.74E-08	1.97E-09	4.60E-01	0.00E-01	11107.
B	112480.	605.	16879.	3.77E-08	4.18E-09	4.52E-01	0.00E-01	11112.
C	112580.	1015.	16888.	1.32E-08	1.35E-08	4.14E-07		
D	112580.	1650.	16889.	1.65E-08	1.82E-08	2.43E-06		
E	112580.	1315.	16890.	5.99E-09	2.69E-08	4.07E-04		
F	112580.	1632.	16891.	5.85E-09	7.28E-09	1.14E-03		
G	112480.	850.	16886.	2.09E-08	3.16E-08	4.46E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	3.16E-07	3.77E-08	6.62E-11	2.21E-01
GROSS ALPHA	3.50E-08	4.18E-09	-1.08E-10	N/A
TRITIUM	3.85E 00	4.60E-01	1.81E-03	6.05E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 417

RELEASE MADE FROM T6204

RELEASE START DATE 120280. TIME 1105.

RELEASE COMPLETION DATE 120280. TIME 1528.

RELEASE DURATION : 263. MINUTES

TANK LEVELS : INITIAL 123. INCHES FINAL 6. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 337100. FINAL 398900.

AVERAGE RELEASE RATE: 29.32 LPM OR 7.75 GPM

AVERAGE BLOWDOWN RATE: 8894.03 LPM OR 2349.81 GPM

TOTAL VOLUME RELEASED: 7710. LITERS OR 2037. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2339130. LITERS OR 618000. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE --AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	120180.	610.	16925.	3.66E-08	2.60E-09	5.45E-01	0.00E-01	11135.
B	120180.	615.	16926.	3.87E-08	2.61E-09	5.52E-01	0.00E-01	11136.
C	120280.	1045.	16929.	1.42E-08	1.13E-08	4.17E-07		
D	120380.	905.	16930.	6.72E-09	5.66E-09	1.56E-06		
E	120280.	1250.	16931.	1.02E-08	1.82E-08	2.49E-05		
F	120380.	920.	16932.	6.44E-09	2.27E-08	7.56E-05		
G	120280.	830.	16966.	1.06E-08	1.39E-08	4.35E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	2.98E-07	3.87E-08	9.23E-11	3.08E-01
GROSS ALPHA	2.01E-08	2.61E-09	-3.70E-11	N/A
TRITIUM	4.25E 00	5.52E-01	1.81E-03	6.04E 01

TABLE 1.2 (PAGE 9 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 418

RELEASE MADE FROM T6204

RELEASE START DATE 120580. TIME 1230.

RELEASE COMPLETION DATE 120580. TIME 1625.

RELEASE DURATION : 235. MINUTES

TANK LEVELS : INITIAL 120. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 1132400. FINAL 1189730.

AVERAGE RELEASE RATE: 32.25 LPM OR 8.52 GPM

AVERAGE BLOWDOWN RATE: 9233.79 LPM OR 2439.57 GPM

TOTAL VOLUME RELEASED: 7578. LITERS OR 2002. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2169940. LITERS OR 573300. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	120480.	830.	16972.	4.45E-08	3.42E-09	6.49E-01	0.00E-01	11161.
B	120480.	835.	16973.	4.56E-08	3.42E-09	6.55E-01	0.00E-01	11162.
C	120580.	1205.	16977.	1.56E-08	1.37E-08	4.22E-07		
D	120680.	1035.	16978.	5.80E-09	6.64E-09	1.49E-06		
E	120580.	1345.	16979.	7.81E-09	2.07E-08	8.83E-06		
F	120680.	1005.	16980.	8.62E-09	9.58E-09	2.69E-05		
G	120280.	830.	16966.	1.06E-08	1.39E-08	4.35E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	3.46E-07	4.56E-08	1.22E-10	4.06E-01
GROSS ALPHA	2.59E-08	3.42E-09	-3.64E-11	N/A
TRITIUM	4.97E 00	6.55E-01	2.28E-03	7.60E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 419

RELEASE MADE FROM T6204

RELEASE START DATE 121180. TIME 1040.

RELEASE COMPLETION DATE 121180. TIME 1414.

RELEASE DURATION : 214. MINUTES

TANK LEVELS : INITIAL 111. INCHES FINAL 6. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 2556520. FINAL 2587000.

AVERAGE RELEASE RATE: 32.33 LPM OR 8.54 GPM

AVERAGE BLOWDOWN RATE: 5390.97 LPM OR 1424.30 GPM

TOTAL VOLUME RELEASED: 6919. LITERS OR 1828. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1153668. LITERS OR 304800. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	121080.	400.	17015.	8.04E-08	2.61E-09	1.09E-01	0.00E-01	11184.
B	121080.	405.	17016.	8.42E-08	2.61E-09	1.07E-01	0.00E-01	11183.
C	121180.	1630.	17032.	1.55E-08	1.60E-08	4.21E-07		
D	121280.	837.	17033.	1.65E-08	5.96E-09	2.20E-06		
E	121180.	1140.	17034.	3.04E-08	1.73E-08	2.25E-05		
F	121280.	845.	17035.	6.93E-08	3.25E-08	4.40E-05		
G	120980.	830.	17011.	5.49E-09	2.77E-09	3.14E-05		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF DIL.	UCI/ML AFT DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.83E-07	8.42E-08	4.69E-10	1.56E 00
GROSS ALPHA	1.81E-08	2.61E-09	-9.71E-13	N/A
TRITIUM	7.57E-01	1.09E-01	6.52E-04	2.17E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 420

RELEASE MADE FROM T6204

RELEASE START DATE 121880. TIME 1635.

RELEASE COMPLETION DATE 121880. TIME 2058.

RELEASE DURATION : 263. MINUTES

TANK LEVELS : INITIAL 127. INCHES FINAL 0. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 4125300. FINAL 4164465.

AVERAGE RELEASE RATE: 31.82 LPM OR 8.41 GPM

AVERAGE BLOWDOWN RATE: 5636.48 LPM OR 1489.16 GPM

TOTAL VOLUME RELEASED: 8369. LITERS OR 2211. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1482395. LITERS OR 391650. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	121780.	650.	17070.	1.04E-08	2.76E-09	1.17E-01	0.00E-01	11211.
B	121780.	651.	17071.	1.14E-08	2.76E-09	1.19E-01	0.00E-01	11212.
C	121880.	1630.	17077.	1.14E-08	1.09E-08	4.29E-07		
D	121980.	1835.	17078.	1.71E-08	1.76E-08	3.58E-05		
E	121880.	1800.	17079.	1.82E-08	1.68E-08	1.04E-05		
F	121980.	1820.	17080.	1.70E-08	1.69E-08	3.30E-06		
G	121580.	1023.	17056.	2.39E-08	1.93E-08	1.96E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	9.54E-08	1.14E-08	-7.02E-11	-2.34E-01
GROSS ALPHA	2.31E-08	2.76E-09	-9.27E-11	N/A
TRITIUM	9.93E-01	1.19E-01	6.66E-04	2.22E 01

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 421

RELEASE MADE FROM T6204

RELEASE START DATE 121980. TIME 1937

RELEASE COMPLETION DATE 121980. TIME 2310

RELEASE DURATION 213. MINUTES

TANK LEVELS INITIAL 113. INCHES FINAL 4. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 4370100. FINAL 4404700.

AVERAGE RELEASE RATE: 33.72 LPM OR 8.91 GPM

AVERAGE BLOWDOWN RATE: 6148.40 LPM OR 1624.41 GPM

TOTAL VOLUME RELEASED: 7183. LITERS OR 1898. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1309610. LITERS OR 346000. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP. DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	121980.	1015.	17089.	4.96E-08	4.21E-09	1.13E-01	0.00E-01	11217.
B	121980.	1015.	17090.	5.15E-08	5.34E-09	1.14E-01	0.00E-01	11218.
C	121980.	1930.	17094.	1.47E-08	1.10E-08	4.26E-07		
D	122080.	1645.	17103.	1.21E-08	9.86E-09	8.05E-07		
E	121980.	2045.	17096.	2.96E-08	2.64E-08	6.91E-06		
F	122080.	1655.	17104.	1.17E-08	1.96E-08	5.32E-06		
G	121580.	1023.	17056.	2.39E-08	1.93E-08	1.96E-06		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	3.70E-07	5.15E-08	1.51E-10	5.02E-01
GROSS ALPHA	3.84E-08	5.34E-09	-7.60E-11	N/A
TRITIUM	8.19E-01	1.14E-01	6.22E-04	2.07E 01

TABLE 1.2 (PAGE 13 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 422

RELEASE MADE FROM T6204

RELEASE START DATE 122480. TIME 1325.

RELEASE COMPLETION DATE 122480. TIME 1710

RELEASE DURATION 225. MINUTES

TANK LEVELS INITIAL 114. INCHES FINAL 4 INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 5473857. FINAL 5515080.

AVERAGE RELEASE RATE: 32.22 LPM OR 8.51 GPM

AVERAGE BLOWDOWN RATE: 6934.62 LPM OR 1832.13 GPM

TOTAL VOLUME RELEASED: 7249. LITERS OR 1915. GALLONS

TOTAL VOLUME USED FOR DILUTION: 1560291. LITERS OR 412230. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	122480.	800.	17128.	1.08E-07	7.08E-08	6.69E-02	0.00E-01	11238.
B	122480.	805.	17129.	1.08E-07	7.08E-08	6.84E-02	0.00E-01	11239.
C	122480.	1200	17131.	1.74E-08	1.10E-08	9.95E-07		
D	122580.	1700	17132.	1.58E-08	2.21E-08	2.93E-06		
E	122480.	1645.	17133.	2.65E-08	1.33E-08	1.31E-04		
F	122580.	1700.	17134.	1.14E-08	1.39E-08	1.60E-06		
G	122280.	1000.	17112.	2.48E-08	2.93E-08	5.26E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	7.86E-07	1.08E-07	3.87E-10	1.29E 00
GROSS ALPHA	5.13E-07	7.08E-08	1.92E-10	N/A
TRITIUM	4.96E-01	6.84E-02	3.16E-04	1.05E 01

TABLE 1.2 (PAGE 14 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 423

RELEASE MADE FROM T6204

RELEASE START DATE 122780. TIME 615.

RELEASE COMPLETION DATE 122780. TIME 1035.

RELEASE DURATION 260. MINUTES

TANK LEVELS : INITIAL 125. INCHES FINAL 4. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 6150969 FINAL 6195445.

AVERAGE RELEASE RATE: 30.67 LPM OR 8.10 GPM
AVERAGE BLOWDOWN RATE: 6474.68 LPM OR 1710.62 GPM

TOTAL VOLUME RELEASED: 7974. LITERS OR 2107 GALLONS

TOTAL VOLUME USED FOR DILUTION: 1683417. LITERS OR 444760 GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	122680.	555.	17141.	5.10E-08	1.98E-09	1.58E-02	0.00E-01	11243.
B	122680.	600.	17142.	4.76E-08	1.97E-09	1.57E-02	0.00E-01	11244.
C	122780.	530.	17153.	7.97E-09	7.48E-09	4.21E-07		
D	122880.	435.	17154.	7.59E-09	1.13E-08	9.28E-07		
E	122780.	730.	17155.	1.98E-08	1.26E-08	8.53E-06		
F	122880.	430.	17156.	1.19E-08	1.19E-08	6.86E-07		
G	122280.	1000.	17112.	2.48E-08	2.93E-08	5.26E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	4.07E-07	5.10E-08	1.23E-10	4.11E-01
GROSS ALPHA	1.57E-08	1.97E-09	-1.29E-10	N/A
TRITIUM	1.26E-01	1.58E-02	7.43E-05	2.48E 00

TABLE 1.2 (PAGE 15 OF 15)

LIQUID WASTE SUMMARY FOR RELEASE NUMBER 424

RELEASE MADE FROM T6204

RELEASE START DATE 123180. TIME 957

RELEASE COMPLETION DATE 123180. TIME 1429

RELEASE DURATION 271. MINUTES

TANK LEVELS INITIAL 129. INCHES FINAL 5. INCHES

BLOWDOWN INTEGRATOR READINGS:
INITIAL 7090875. FINAL 7149720.

AVERAGE RELEASE RATE: 30.15 LPM OR 7.97 GPM

AVERAGE BLOWDOWN RATE: 8218.76 LPM OR 2171.40 GPM

TOTAL VOLUME RELEASED: 8172. LITERS OR 2159. GALLONS

TOTAL VOLUME USED FOR DILUTION: 2227283. LITERS OR 588450. GALLONS

DESCRIPTIONS:
A=LIQUID WASTE SAMPLE NUMBER ONE
B=LIQUID WASTE SAMPLE NUMBER TWO
C=RIVER SAMPLE - UPSTREAM BEFORE RELEASE
D=RIVER SAMPLE - DOWNSTREAM AFTER RELEASE
E=BLOWDOWN SAMPLE-DURING RELEASE
F=BLOWDOWN SAMPLE -AFTER RELEASE
G=BLOWDOWN SAMPLE - WEEKLY

	SAMP DATE	SAMP. TIME	RC NUMBER	UCI-B /ML	UCI-A /ML	UCI-3H /ML	UCI-DNG /ML	MCA NUMBER
A	123080.	630.	17166.	6.15E-07	5.31E-08	5.25E-01	0.00E-01	11259.
B	123080.	635	17167.	4.51E-07	6.06E-08	5.29E-01	0.00E-01	11260.
C	123180.	930.	17176.	1.41E-08	9.43E-09	4.32E-07		
D	10181.	1110.	17177.	7.29E-09	1.07E-08	4.65E-07		
E	123180.	1125.	17178.	2.05E-08	2.85E-08	7.36E-06		
F	10181.	1102.	17179.	1.49E-08	1.77E-08	2.41E-05		
G	122980.	830.	17163.	1.54E-08	9.96E-09	4.32E-07		

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	TOTAL CURIES	UCI/ML BEF. DIL.	UCI/ML AFT. DIL.	% OF LIMIT OR MPCW
GROSS BETA	5.03E-06	6.15E-07	2.19E-09	7.31E 00
GROSS ALPHA	4.95E-07	6.06E-08	1.85E-10	N/A
TRITIUM	4.31E 00	5.29E-01	1.93E-03	6.43E 01

TABLE 1.3: LIQUID EFFLUENT RELEASED VIA THE TURBINE BUILDING SUMP AND THE REACTOR BUILDING SUMP (CONTINUOUS RELEASE)

4 QUARTER 1980

TURBINE BUILDING SUMP

	MONTH	Oct.	Nov.	Dec.	QUARTERLY TOTAL	
VOLUME	LITERS	1.74E+06	1.94E+06	2.72E+06	6.40E+06	
TRITIUM	AVERAGE µCi/ml	5.77E-05	6.76E-05	1.40E-04	8.95E-05	*
	TOTAL CURIES	1.00E-01	1.31E-01	3.81E-01	6.12E-01	
GROSS β γ	AVERAGE µCi/ml	1.22E-08	1.00E-08	9.62E-09	1.06E-08	*
	TOTAL CURIES	2.12E-05	1.94E-05	2.62E-05	6.68E-05	
GROSS α	AVERAGE µCi/ml	8.92E-09	1.13E-08	2.91E-09	7.97E-09	
	TOTAL CURIES	1.55E-06	2.19E-05	7.92E-06	3.14E-05	

REACTOR BUILDING SUMP

	MONTH	Oct.	Nov.	Dec.	QUARTERLY TOTAL	
VOLUME	LITERS	9.58E+05	3.10E+05	4.1[illegible]E+05	1.69E+06	
TRITIUM	AVERAGE µCi/ml	4.57E-04	6.95E-04	1.89E-03	9.84E-04	*
	TOTAL CURIES	4.38E-01	2.15E-01	7.90E-01	1.44E+00	
GROSS β γ	AVERAGE µCi/ml	8.06E-09	6.85E-09	8.01E-09	7.73E-09	*
	TOTAL CURIES	7.72E-06	2.12E-06	3.35E-06	1.32E-05	
GROSS α	AVERAGE µCi/ml	3.29E-09	2.85E-09	2.91E-09	3.05E-09	*
	TOTAL CURIES	3.15E-06	8.84E-07	1.22E-06	5.25E-06	

**represents a "weighted" average.

TABLE 2.1 - RADIOACTIVE GASEOUS EFFLUENT RELEASES FOR 4th QUARTER, 19 80

	UNITS	Oct.	Nov.	Dec.	QUARTERLY TOTAL
1a. Total Noble Gases	Curies	4.43E-01	4.47E+00	3.06E-02	4.94E+00
1b. Total Tritium	Curies	3.07E-02	2.07E-02	7.03E-02	1.22E-01
1c. Total Halogens	Curies	NSA	NSA	NSA	NSA
1d. Total Particulate Gross (β,γ) Activity RT-7325	Curies	3.40E-12	3.39E-12	3.60E-12	1.04E-11
1e. Total Particulate Gross Alpha Activity RT-7325	Curies	1.12E-12	1.20E-12	1.27E-12	3.59E-12
2. Maximum Hourly Release Rate for Any One Hour Period	Ci/hr	6.60E-03	9.78E-02	2.14E-03	9.78E-02
3. Estimated Total Radioactivity Released by Nuclide (MPCa)					
Particulates MPCa	Curies	NSA	NSA	NSA	NSA
Halogens MPCa	Curies	NSA	NSA	NSA	NSA
Gases MPCa	Curies				
3H 2.00E-07		3.07E-02	2.07E-02	7.03E-02	1.22E-01
133Xe 3.00E-07		4.41E-01	4.46E+00	3.01E-02	4.93E+00
35Kr(m) 1.00E-07		3.44E-04	8.20E-04	NSA	1.16E-03
135Xe 1.00E-07		.54E-04	3.62E-03	5.34E-04	5.11E-03
133Xe(m) 3.00E-07		NSA	6.46E-03	NSA	6.46E-03
87Kr 2.00E-08		NSA	2.96E-03	NSA	2.96E-03

4.7E-05 = 4.7×10^{-5}
5.2E+03 = $5.2 \times 10^{+3}$

NSA means no significant activity.

GAS WASTE SUMMARY FOR RELEASE NUMBER 472

RELEASE START DATE 100380. TIME 1015.
RELEASE COMPLETION DATE 100380. TIME 1948.

RELEASE DURATION 573 MINUTES OR 9.55 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 135 PSIG

TANK TEMPERATURE 75 DEG-F

AVERAGE RELEASE RATE 23.40 CFM

TOTAL VOLUME OF GAS RELEASED 3.80E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 90 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY C

RC-NUMBER'S GRAB 16483. TRITIUM 16484.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.42E-05	2.00E-07	7.10E 01	5.39E-03

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 5.65E-04 CI/HR OR 1.57E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.61E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	7.4	3.5	1.5	1.6	4.3	2.9	0.0	3.2
PERCENT	2.4	4.4	1.5	1.7	0.4	0.3	0.0	1.2

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.8	4.2	6.0	6.2	3.4	3.9	4.2	5.2
PERCENT	4.0	5.8	19.8	38.5	6.0	1.0	3.0	1.8

PERCENT CALM 8.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 473

RELEASE START DATE 100480. TIME 154.
RELEASE COMPLETION DATE 100480. TIME 2022.

RELEASE DURATION 1108 MINUTES OR 18.47 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 40 PSIG

TANK TEMPERATURE 89 DEG-F

AVERAGE RELEASE RATE 15.47 CFM

TOTAL VOLUME OF GAS RELEASED 4.85E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 93 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D
RC-NUMBERS GRAB 16508. TRITIUM 16509.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.64E-06	2.00E-07	1.82E 01	1.77E-03
133XE	8.10E-05	3.00E-07	2.70E 02	3.93E-02

TOTAL CURIES OF NOBLE GAS RELEASED 3.93E-02

AVERAGE RELEASE RATE 2.22E-03 CI/HR OR 6.18E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.01E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	8.0	5.8	4.7	3.2	2.2	7.2	7.6	4.0
PERCENT	2.9	7.5	5.1	3.1	1.3	3.9	6.7	2.1

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	7.0	6.9	5.1	4.6	4.0	5.5	5.8	9.0
PERCENT	10.1	14.5	11.2	7.0	5.5	2.1	2.0	2.5

PERCENT CALM 12.5

GAS WASTE SUMMARY FOR RELEASE NUMBER 474

RELEASE START DATE 100780 TIME 2135.
RELEASE COMPLETION DATE 100880. TIME 1600.

RELEASE DURATION 1105 MINUTES OR 18.42 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 14.64 CFM

TOTAL VOLUME OF GAS RELEASED 4.58E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 91 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16519. TRITIUM 16520.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	8.70E-06	2.00E-07	4.35E 01	3.98E-03

TOTAL CURIES OF NOBLE GAS RELEASED 0.00E-01

AVERAGE RELEASE RATE 2.16E-04 CI/HR OR 6.01E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.00E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.3	3.9	2.9	2.1	1.3	3.2	2.9	2.4
PERCENT	0.7	2.0	1.1	0.2	0.5	1.3	1.8	1.6

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	2.6	3.4	3.8	2.8	3.1	4.1	4.3	4.2
PERCENT	5.0	9.5	27.0	19.2	5.9	7.6	5.4	1.5

PERCENT CALM 9.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 475

RELEASE START DATE 101080. TIME 1815.
RELEASE COMPLETION DATE 101180. TIME 1010.

RELEASE DURATION 955 MINUTES OR 15.92 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 17.40 CFM

TOTAL VOLUME OF GAS RELEASED 4.70E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 95 DEG-F FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16539. TRITIUM 16540.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	6.12E-06	2.00E-07	3.06E 01	2.88E-03
133XE	6.85E-05	3.00E-07	2.28E 02	3.22E-02

TOTAL CURIES OF NOBLE GAS RELEASED 3.22E-02

AVERAGE RELEASE RATE 2.21E-03 CI/HR OR 6.13E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.09E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	4.7	5.6	8.0	7.8	4.4	3.3	2.5	2.4
PERCENT	1.4	11.5	8.6	9.3	2.6	1.1	1.5	1.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.1	4.6	3.6	5.0	2.7	3.0	2.7	2.3
PERCENT	10.9	18.9	6.3	4.4	1.8	1.4	0.8	0.8

PERCENT CALM 17.1

GAS WASTE SUMMARY FOR RELEASE NUMBER 476

RELEASE START DATE 101480. TIME 1500.
RELEASE COMPLETION DATE 101580. TIME 715.

RELEASE DURATION 975 MINUTES OR 16.25 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 17.49 CFM

TOTAL VOLUME OF GAS RELEASED 4.83E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 102 DEG-F FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16555. TRITIUM 16556.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.55E-06	2.00E-07	1.77E 01	1.71E-03
133XE	7.48E-06	3.00E-07	2.49E 01	3.61E-03

TOTAL CURIES OF NOBLE GAS RELEASED 3.61E-03

AVERAGE RELEASE RATE 3.28E-04 CI/HR OR 9.10E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.17E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	12.0	7.9	5.6	10.0	10.6	5.6	4.5	4.5
PERCENT	0.7	3.2	1.3	1.1	0.9	1.4	3.5	2.0

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	8.1	8.2	5.9	5.9	7.3	10.2	14.8	16.9
PERCENT	5.3	12.2	9.4	16.7	10.6	6.8	13.2	9.5

PERCENT CALM 2.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 477

RELEASE START DATE 101780. TIME 1645.
RELEASE COMPLETION DATE 101880. TIME 745.

RELEASE DURATION 900 MINUTES OR 15.00 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 58 PSIG

TANK TEMPERATURE 90 DEG-F

AVERAGE RELEASE RATE 17.68 CFM

TOTAL VOLUME OF GAS RELEASED 4.50E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16589. TRITIUM 16590.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.97E-06	2.00E-07	2.49E 01	2.24E-03
133XE	2.31E-05	3.00E-07	7.70E 01	1.04E-02

TOTAL CURIES OF NOBLE GAS RELEASED 1.04E-02

AVERAGE RELEASE RATE 8.43E-04 CI/hr. OR 2.34E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.83E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.8	7.7	8.0	9.3	16.2	15.5	12.5	6.5
PERCENT	0.7	3.5	14.7	6.7	18.9	9.4	5.4	2.6

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	7.8	9.1	10.0	7.8	4.1	4.4	3.3	3.2
PERCENT	3.1	8.0	11.7	7.8	1.2	1.5	1.0	0.4

PERCENT CALM 3.4

GAS WASTE SUMMARY FOR RELEASE NUMBER 478

RELEASE START DATE 101880. TIME 1745.
RELEASE COMPLETION DATE 101980. TIME 1318.

RELEASE DURATION 1173 MINUTES OR 19.55 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 42 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 14.04 CFM

TOTAL VOLUME OF GAS RELEASED 4.66E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 98 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16601 TRITIUM 16598.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	2.68E-06	2.00E-07	1.34E 01	1.25E-03
133XE	2.59E-04	3.00E-07	8.63E 02	1.21E-01
85KRM	7.37E-07	1.00E-07	7.37E 00	3.44E-04
135XE	1.18E-06	1.00E-07	1.18E 01	5.50E-04

TOTAL CURIES OF NOBLE GAS RELEASED 1.22E-01

AVERAGE RELEASE RATE 6.29E-03 CI/HR OR 1.75E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.98E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	9.0	9.0	5.2	2.2	3.4	3.2	2.6	4.2
PERCENT	1.5	2.2	0.1	0.7	1.1	1.1	1.6	2.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	5.0	6.5	7.3	8.0	6.2	5.1	1.0	0.0
PERCENT	12.8	40.1	28.9	4.0	1.2	0.2	0.2	0.0

PERCENT CALM 2.1

GAS WASTE SUMMARY FOR RELEASE NUMBER 479

RELEASE START DATE 102280. TIME 1500.
RELEASE COMPLETION DATE 102380. TIME 1154.

RELEASE DURATION 1254 MINUTES OR 20.90 HOURS

TANK PRESSURES INITIAL 435 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 13.42 CFM

TOTAL VOLUME OF GAS RELEASED 4.77E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 101 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16609. TRITIUM 16608.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	7.63E-06	2.00E-07	3.81E 01	3.64E-03
133XE	4.80E-05	3.00E-07	1.60E 02	2.29E-02
135XE	8.47E-07	1.00E-07	8.47E 00	4.04E-04

TOTAL CURIES OF NOBLE GAS RELEASED 2.33E-02

AVERAGE RELEASE RATE 1.29E-03 CI/HR OR 3.58E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 4.36E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PERCENT CALM 0.0

GAS WASTE SUMMARY FOR RELEASE NUMBER 480

RELEASE START DATE 102580. TIME 2320.
RELEASE COMPLETION DATE 102680. TIME 2045.

RELEASE DURATION 1285 MINUTES OR 21.42 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 30 PSIG

TANK TEMPERATURE 74 DEG-F

AVERAGE RELEASE RATE 13.71 CFM

TOTAL VOLUME OF GAS RELEASED 4.99E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 90 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16657. TRITIUM 16658.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.04E-05	2.00E-07	5.20E 01	5.19E-03
133XE	1.64E-04	3.00E-07	5.47E 02	8.18E-02

TOTAL CURIES OF NOBLE GAS RELEASED 8.18E-02

AVERAGE RELEASE RATE 4.06E-03 CI/HR OR 1.13E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.29E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.4	4.3	3.7	2.7	2.3	2.1	3.8	6.5
PERCENT	2.7	7.5	3.1	0.6	0.3	0.5	1.7	5.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	6.3	5.2	5.8	3.8	2.0	4.5	5.0	5.2
PERCENT	15.5	28.3	17.2	2.3	0.9	2.4	3.8	1.5

PERCENT CALM 6.0

GAS WASTE SUMMARY FOR RELEASE NUMBER 481

RELEASE START DATE 103080. TIME 1945.
RELEASE COMPLETION DATE 103180. TIME 1555.

RELEASE DURATION 1210 MINUTES OR 20.17 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 47 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 14.15 CFM

TOTAL VOLUME OF GAS RELEASED 4.85E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 97 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16678. TRITIUM 16677.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	5.48E-06	2.00E-07	2.74E 01	2.66E-03
133XE	2.69E-04	3.00E-07	8.97E 02	1.30E-01

TOTAL CURIES OF NOBLE GAS RELEASED 1.30E-01

AVERAGE RELEASE RATE 6.60E-03 CI/HR OR 1.83E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.06E-02 %
METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	2.7	7.0	7.8	5.5	3.0	1.6	1.8	2.1
PERCENT	0.1	4.2	8.2	5.6	0.5	0.5	0.5	0.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	7.9	7.3	5.9	3.5	3.0	3.3	3.4	2.0
PERCENT	6.7	23.9	18.2	7.2	6.7	2.9	1.3	0.1

PERCENT CALM 12.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 482

RELEASE START DATE 110280. TIME 1550.
RELEASE COMPLETION DATE 110380. TIME 830.

RELEASE DURATION 1000 MINUTES OR 16.67 HOURS

TANK PRESSURES INITIAL 415 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 15.96 CFM

TOTAL VOLUME OF GAS RELEASED 4.52E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16687. TRITIUM 16688.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.56E-06	2.00E-07	2.28E 01	2.06E-03
133XE	3.59E-03	3.00E-07	1.20E 04	1.62E 00
133XEM	1.43E-05	3.00E-07	4.77E 01	6.46E-03

TOTAL CURIES OF NOBLE GAS RELEASED 1.63E 00

AVERAGE RELEASE RATE 9.78E-02 CI/HR OR 2.72E 01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 3.02E-01 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	9.1	8.6	9.9	8.0	9.8	9.9	8.9	9.8
PERCENT	9.6	19.2	16.9	3.4	5.4	7.3	4.6	5.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	12.8	13.8	11.0	9.4	9.4	14.2	9.2	7.6
PERCENT	5.2	5.6	4.2	2.0	1.4	4.3	1.5	3.2

PERCENT CALM 0.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 483

RELEASE START DATE 110680. TIME 1830.
RELEASE COMPLETION DATE 110780. TIME 1146.

RELEASE DURATION 1036 MINUTES OR 17.27 HOURS

TANK PRESSURES INITIAL 485 PSIG FINAL 50 PSIG

TANK TEMPERATURE 78 DEG-F

AVERAGE RELEASE RATE 16.25 CFM

TOTAL VOLUME OF GAS RELEASED 4.77E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY C

RC-NUMBERS GRAS 16714. TRITIUM 16715.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.07E-05	2.00E-07	5.35E 01	5.10E-03
133XE	3.32E-03	3.00E-07	1.11E 04	1.58E 00
85KRM	1.72E-06	1.00E-07	1.72E 01	8.20E-04
135XE	3.30E-06	1.00E-07	3.30E 01	1.57E-03

TOTAL CURIES OF NOBLE GAS RELEASED 1.58E 00

AVERAGE RELEASE RATE 9.21E-02 CI/HR OR 2.56E 01 UCI/SEC

PERCENT OF TECH SPEC LIMIT 2.85E-01 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	8.6	8.0	5.6	3.8	4.1	5.7	8.2	8.1
PERCENT	1.0	2.4	0.6	0.9	0.6	0.6	4.0	3.3

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	9.3	8.1	7.4	12.2	16.3	13.3	8.9	6.8
PERCENT	9.7	7.5	4.5	16.4	29.1	11.2	6.1	0.9

PERCENT CALM 1.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 484

RELEASE START DATE 111280. TIME 2245.
RELEASE COMPLETION DATE 111380. TIME 1708.

RELEASE DURATION 1103 MINUTES OR 18.38 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 50 PSIG

TANK TEMPERATURE 83 DEG-F

AVERAGE RELEASE RATE 14.53 CFM

TOTAL VOLUME OF GAS RELEASED 4.54E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 99 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16783. TRITIUM 16782.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.60E-06	2.00E-07	2.30E 01	2.09E-03
133XE	9.38E-04	3.00E-07	3.13E 03	4.26E-01

TOTAL CURIES OF NOBLE GAS RELEASED 4.26E-01

AVERAGE RELEASE RATE 2.33E-02 CI/HR OR 6.46E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 7.20E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	14.3	11.5	9.3	8.8	7.2	0.0	11.0	0.0
PERCENT	0.0	49.8	31.0	4.0	0.3	0.0	0.2	0.0

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	1.3	6.5	2.9	1.4	8.9	11.1	0.0	0.0
PERCENT	0.1	0.1	0.2	0.1	0.3	0.3	0.0	0.0

PERCENT CALM 13.5

GAS WASTE SUMMARY FOR RELEASE NUMBER 485

RELEASE START DATE 111480. TIME 1827.
RELEASE COMPLETION DATE 111580. TIME 1010.

RELEASE DURATION 943 MINUTES OR 15.72 HOURS

TANK PRESSURES INITIAL 390 PSIG FINAL 50 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 15.70 CFM

TOTAL VOLUME OF GAS RELEASED 4.19E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 98 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16820. TRITIUM 16821.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	8.10E-06	2.00E-07	4.05E 01	3.40E-03
133XE	1.54E-03	3.00E-07	5.13E 03	6.46E-01
135XE	4.89E-06	1.00E-07	4.89E 01	2.05E-03

TOTAL CURIES OF NOBLE GAS RELEASED 6.48E-01

AVERAGE RELEASE RATE 4.14E-02 CI/HR OR 1.15E 01 UCI/SEC

PERCENT OF TECH SPEC LIMIT 1.29E-01 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	0.0	0.0	5.7	5.5	3.6	4.4	4.8
PERCENT	0.0	0.0	0.0	2.8	19.0	4.7	18.5	27..6

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	3.9	1.6	0.0	5.4	4.6	0.0	0.0	0.0
PERCENT	6.9	0.3	0.0	3.1	1.1	0.0	0.0	0.0

PERCENT CALM 15.8

GAS WASTE SUMMARY FOR RELEASE NUMBER 486

RELEASE START DATE 111980. TIME 1655.
RELEASE COMPLETION DATE 112080. TIME 1250.

RELEASE DURATION 1195 MINUTES OR 19.92 HOURS

TANK PRESSURES INITIAL 420 PSIG FINAL 50 PSIG

TANK TEMPERATURE 88 DEG-F

AVERAGE RELEASE RATE 13.29 CFM

TOTAL VOLUME OF GAS RELEASED 4.50E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 32000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16846. TRITIUM 16847.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	5.30E-06	2.00E-07	2.65E 01	2.38E-03
133XE	1.87E-04	3.00E-07	6.23E 02	8.41E-02

TOTAL CURIES OF NOBLE GAS RELEASED 8.41E-02

AVERAGE RELEASE RATE 4.34E-03 CI/HR OR 1.21E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.36E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	3.6	4.1	5.8	2.5	2.7	9.5	7.0
PERCENT	0.0	1.7	2.9	0.7	0.1	0.6	14.4	9.9

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	8.7	7.1	10.2	8.0	1.6	0.0	0.0	0.0
PERCENT	16.6	14.6	26.6	8.0	0.4	0.0	0.0	0.0

PERCENT CALM 3.4

GAS WASTE SUMMARY FOR RELEASE NUMBER 487

RELEASE START DATE 112480. TIME 2040.
RELEASE COMPLETION DATE 112580. TIME 1430.

RELEASE DURATION 1070 MINUTES OR 17.83 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 88 DEG-F

AVERAGE RELEASE RATE 15.24 CFM

TOTAL VOLUME OF GAS RELEASED 4.62E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 31000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16882. TRITIUM 16881.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.33E-07	2.00E-07	1.66E 00	1.54E-04
133XE	1.57E-04	3.00E-07	5.23E 02	7.25E-02
87KR	6.41E-06	2.00E-08	3.20E 02	2.96E-03

TOTAL CURIES OF NOBLE GAS RELEASED 7.55E-02

AVERAGE RELEASE RATE 4.24E-03 CI/HR OR 1.18E 00 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 2.03E-02 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	0.0	5.5	5.5	0.0	0.0	0.0	8.1
PERCENT	0.0	0.0	0.6	5.1	0.0	0.0	0.0	0.2

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	9.1	7.8	6.0	4.3	3.9	0.0	0.0	0.0
PERCENT	6.6	11.1	45.8	23.5	2.3	0.0	0.0	0.0

PERCENT CALM 4.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 488

RELEASE START DATE 112980. TIME 1443.
RELEASE COMPLETION DATE 113080. TIME 1010.

RELEASE DURATION 1165 MINUTES OR 19.42 HOURS

TANK PRESSURES INITIAL 410 PSIG FINAL 50 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 13.46 CFM

TOTAL VOLUME OF GAS RELEASED 4.44E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 93 DEG-F. FLOWRATE 31000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16924. TRITIUM 16923.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.24E-05	2.00E-07	6.20E 01	5.51E-03
133XE	5.58E-05	3.00E-07	1.86E 02	2.48E-02

TOTAL CURIES OF NOBLE GAS RELEASED 2.48E-02

AVERAGE RELEASE RATE 1.56E-03 CI/HR OR 4.33E-01 UCI/SEC

PERCENT OF TECH SPEC LIMIT 5.25E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	9.4	8.0	10.3	25.1	23.4	9.5	0.0	0.0
PERCENT	2.6	4.4	12.5	66.3	8.8	1.0	0.0	0.0

PERCENT CALM 3.9

GAS WASTE SUMMARY FOR RELEASE NUMBER 489

RELEASE START DATE 120580. TIME 1815.
RELEASE COMPLETION DATE 120680. TIME 1525.

RELEASE DURATION 1270 MINUTES OR 21.17 HOURS

TANK PRESSURES INITIAL 440 PSIG FINAL 49 PSIG

TANK TEMPERATURE 81 DEG-F

AVERAGE RELEASE RATE 13.38 CFM

TOTAL VOLUME OF GAS RELEASED 4.81E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 101 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 16976. TRITIUM 16975.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	1.39E-05	2.00E-07	6.95E 01	6.69E-03
133XE	1.87E-05	3.00E-07	6.23E 01	9.00E-03
135XE	1.11E-06	1.00E-07	1.11E 01	5.34E-04

TOTAL CURIES OF NOBLE GAS RELEASED 9.54E-03
AVERAGE RELEASE RATE 7.67E-04 CI/HR OR 2.13E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 3.01E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	0.0	4.3	8.0	11.2	6.0	5.6	6.8	5.8
PERCENT	0.0	0.3	1.5	6.0	7.7	11.6	8.3	2.8

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	8.3	10.1	5.8	5.0	4.3	4.5	2.0	1.4
PERCENT	6.1	8.3	12.5	16.1	11.2	3.6	0.1	0.1

PERCENT CALM 3.8

GAS WASTE SUMMARY FOR RELEASE NUMBER 490

RELEASE START DATE 121280. TIME 1242.
RELEASE COMPLETION DATE 121380. TIME 1115.

RELEASE DURATION 1353 MINUTES OR 22.55 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 12.23 CFM

TOTAL VOLUME OF GAS RELEASED 4.69E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 17036. TRITIUM 17037.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	8.70E-06	2.00E-07	4.35E 01	4.08E-03
133XE	1.63E-05	3.00E-07	5.43E 01	7.64E-03

TOTAL CURIES OF NOBLE GAS RELEASED 7.64E-03

AVERAGE RELEASE RATE 5.20E-04 CI/HR OR 1.44E-01 UCI/SEC

PERCENT OF TECH SPEC LIMIT 1.88E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	9.9	7.0	5.6	2.6	2.4	3.0	5.5	0.0
PERCENT	4.8	18.9	10.6	7.9	1.7	2.1	0.7	0.0

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.3	8.3	4.8	5.1	2.5	4.4	4.9	3.8
PERCENT	3.3	15.5	7.6	7.0	0.7	1.6	1.1	0.2

PERCENT CALM 16.3

GAS WASTE SUMMARY FOR RELEASE NUMBER 491

RELEASE START DATE 121980. TIME 1208.
RELEASE COMPLETION DATE 122080. TIME 906.

RELEASE DURATION 1258 MINUTES OR 20.97 HOURS
TANK PRESSURES INITIAL 400 PSIG FINAL 50 PSIG

TANK TEMPERATURE 80 DEG-F

AVERAGE RELEASE RATE 12.12 CFM

TOTAL VOLUME OF GAS RELEASED 4.32E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 102 DEG-F. FLOWRATE 33000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 17081. TRITIUM 17082.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	4.91E-05	2.00E-07	2.45E 02	2.12E-02
133XE	9.28E-06	3.00E-07	3.09E 01	4.01E-03

TOTAL CURIES OF NOBLE GAS RELEASED 4.01E-03

AVERAGE RELEASE RATE 1.20E-03 CI/HR OR 3.34E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 5.27E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	4.4	7.2	8.3	6.5	2.3	2.2	2.1	2.3
PERCENT	0.2	5.1	26.9	5.4	3.8	1.6	0.4	0.4

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	2.5	0.0	0.0	0.0	2.1	2.4	2.6	1.8
PERCENT	0.4	0.0	0.0	0.0	1.2	1.8	1.3	0.8

PERCENT CALM 50.7

GAS WASTE SUMMARY FOR RELEASE NUMBER 492

RELEASE START DATE 122280. TIME 1900.
RELEASE COMPLETION DATE 122380. TIME 1003.

RELEASE DURATION 903 MINUTES OR 15.05 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 55 PSIG

TANK TEMPERATURE 86 DEG-F

AVERAGE RELEASE RATE 17.89 CFM

TOTAL VOLUME OF GAS RELEASED 4.57E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 102 DEG-F FLOWRATE 30000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 17107. TRITIUM 17108.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	3.71E-06	2.00E-07	1.85E 01	1.70E-03
133XE	5.95E-06	3.00E-07	1.98E 01	2.72E-03

TOTAL CURIES OF NOBLE GAS RELEASED 2.72E-03

AVERAGE RELEASE RATE 2.94E-04 CI/HR OR 8.16E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.08E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	6.3	10.9	6.6	6.6	8.3	5.6	4.8	6.5
PERCENT	1.1	16.5	10.5	15.3	8.4	2.3	0.8	1.2

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	7.1	10.8	5.0	4.5	4.8	5.6	4.6	4.8
PERCENT	4.3	7.0	5.7	3.2	6.1	6.8	2.9	1.7

PERCENT CALM 6.2

GAS WASTE SUMMARY FOR RELEASE NUMBER 493

RELEASE START DATE 122780. TIME 607.
RELEASE COMPLETION DATE 122780. TIME 2355.

RELEASE DURATION 1068 MINUTES OR 17.80 HOURS

TANK PRESSURES INITIAL 425 PSIG FINAL 50 PSIG

TANK TEMPERATURE 84 DEG-F

AVERAGE RELEASE RATE 15.18 CFM

TOTAL VOLUME OF GAS RELEASED 4.59E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 105 DEG-F. FLOWRATE 30000. ACFM

STABILITY CATAGORY E

RC-NUMBERS GRAB 17144. TRITIUM 17145.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	7.31E-05	2.00E-07	3.65E 02	3.36E-02
133XE	9.70E-06	3.00E-07	3.23E 01	4.45E-03

TOTAL CURIES OF NOBLE GAS RELEASED 4.45E-03

AVERAGE RELEASE RATE 2.14E-03 CI/HR OR 5.93E-01 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 9.50E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE:

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	4.3	3.5	3.8	10.3	0.0	5.4	2.8	2.0
PERCENT	4.9	8.3	4.2	3.7	0.0	0.1	0.7	1.2
DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	4.4	5.6	5.6	7.7	10.3	5.5	3.4	2.9
PERCENT	4.2	7.7	7.5	8.9	18.7	11.9	7.1	2.9

PERCENT CALM 8.0

GAS WASTE SUMMARY FOR RELEASE NUMBER 494

RELEASE START DATE 10181 TIME 155.
RELEASE COMPLETION DATE 10181. TIME 1800.

RELEASE DURATION 965 MINUTES OR 16.08 HOURS

TANK PRESSURES INITIAL 430 PSIG FINAL 50 PSIG

TANK TEMPERATURE 83 DEG-F

AVERAGE RELEASE RATE 17.06 CFM

TOTAL VOLUME OF GAS RELEASED 4.66E 08

REACTOR BUILDING VENTILLATION SYSTEM:
EXHAUST TEMPERATURE 100 DEG-F. FLOWRATE 30000. ACFM

STABILITY CATAGORY D

RC-NUMBERS GRAB 17181. TRITIUM 17182.

ACTIVITY RELEASED BY NUCLIDE

ISOTOPE	ACTIVITY UCI/SCC	MPC(A) UCI/SCC	ACTIVITY/ MPC(A)	TOTAL CURIES
3H	6.54E-06	2.00E-07	3.27E 01	3.05E-03
133XE	4.82E-06	3.00E-07	1.61E 01	2.25E-03

TOTAL CURIES OF NOBLE GAS RELEASED 2.25E-03

AVERAGE RELEASE RATE 3.29E-04 CI/HR OR 9.14E-02 UCI/SEC

PERCENT OF TECH. SPEC. LIMIT 1.31E-03 %

METEORLOGICAL DATA COLLECTED DURING RELEASE.

DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE
MPH	5.6	5.2	6.6	2.3	11.1	0.0	0.0	2.4
PERCENT	9.3	23.2	16.5	0.8	1.8	0.0	0.0	0.1

DIRECTION	S	SSW	SW	WSW	W	WNW	NW	NNW
MPH	0.0	4.6	4.6	7.3	8.7	3.7	3.1	3.8
PERCENT	0.0	2.9	5.3	8.4	11.6	5.8	4.3	5.0

PERCENT CALM 4.9

TABLE 3.1 - NON-RADIOLOGICAL EFFLUENT FOR 19 80

	MONTH	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBE
(A) SR NR 1.1 S		(5)	(4)	(5)	(6)	(4)	(5)
(Total) Million Gallons		69.18	73.87	61.51	77.48	68.44	72.3
Non-Radioactive Liquid Effluent. Released to the River.	(Average) ppm Fe	.449	.143	.261	.283	.284	.252
	(Average) ppm Cu	.020	.026	.013	.011	.019	.021
	(Average) ppm Zn	.140	.167	.057	.074	.436	.118
	(Average) ppm Cr^{+6}	.011	.003	.002	.004	.008	.007
	(Average) ppm P	1.841	1.831	1.220	1.131	.943	3.102
	(Average) ppm pH	8.38	8.29	8.3	8.24	8.04	8.0
	(Average) ppm TDS	842	1203	900	1114	1345	1339
	(Maximum) ppm Fe	1.070	.395	.429	.754	.444	.602
	(Maximum) ppm Cu	.031	.051	.027	.019	.027	.027
	(Maximum) ppm Zn	.231	.400	.109	.128	1.336	.147
	(Maximum) ppm Cr^{+6}	.045	.007	.006	.007	.020	.010
	(Maximum) ppm P	2.098	2.721	1.485	2.169	1.083	4.70
	(Maximum) Max pH	9.3	8.8	9.0	8.9	8.7	8.4
	(Maximum) Min pH	7.6	7.5	7.1	7.0	7.4	7.4
	(Maximum) ppm TDS	1492	2123	1720	2074	1998	1858
	(Maximum) ppm 321	0	0	0	0	.09	0
	(Maximum) ppm 71-D5	0	1.68	0	0	11.16	0
	(Maximum) ppm Cl_2	0.22	.45	.4	.2	.50	.3
(B) SR NR 1.2 S		(5)	(4)	(5)	(6)	(4)	
Farm Pond Effluent To Platte-Temp.	°F Max	75	72	66	65	56	44
	°F Avg	71.8	70	63	53.8	46.8	38
(C) SR NR 1.3 M (1) Note (14)			(13)	(13)	(12)	(12)	(14)
(Total) (Gal)		404,015	498,227	884,874	460,246	511,990	719,375
Turbine Bldg. Sump Effluent	(Average) ppm Fe	.404	4.55	.447	.768	14.54	.43
	(Average) ppm Cu	.031	.790	.048	.059	.968	.021
	(Average) ppm Zn	.512	1.254	.915	1.519	3.50	.91
	(Average) ppm Cr^{+6}	.013	.008	.001	.003	.005	.002
	(Average) ppm P	1.204	2.860	2.635	3.1	1.942	2.29
	(Average) ppm TDS	515	1309	863	699	737.5	308
	(Average) pH	7.87	7.20	8.12	7.32	6.08	7.51

NOTE 1: Value in parenthesis indicates the number of measurements made.

TABLE 4.1 - RADIOCHEMISTRY SUMMARY FOR 4 QUARTER, 19 80

SYSTEM	BETA/GAMMA	ALPHA	TRITIUM	
FARM POND (Effluent)				
	2.56E-08	3.17E-08	1.10E-04	Maximum
	6.51E-09	5.56E-09	4.16E-07	Minimum
	1.25E-08 (14)	1.31E-08 (14)	3.37E-05 (14)	Average
COOLING TOWER BLOWDOWN				
	1.06E-07	6.37E-08	3.23E-03	Maximum
	5.49E-09	2.56E-09	4.22E-07	Minimum
	1.80E-08 (48)	1.82E-08 (48)	3.60E-04(196)	Average
REACTOR BUILDING SUMP (Effluent)				
	2.21E-08	9.75E-09	1.52E-02	Maximum
	5.28E-09	1.39E-09	2.06E-05	Minimum
	7.73E-09 (43)	3.05E-09 (43)	9.84E-04 (43)	Average
TURBINE BUILDING SUMP (Effluent)				
	3.82E-08	2.91E-08	2.37E-04	Maximum
	5.36E-09	2.22E-09	2.94E-06	Minimum
	1.06E-08 (40)	7.97E-09 (40)	8.95E-05 (40)	Average
SYSTEM 31				
	7.89E-09	4.29E-09	3.84E-04	Maximum
	5.32E-09	1.39E-09	3.03E-05	Minimum
	6.03E-09 (28)	2.65E-09 (28)	2.17E-04 (28)	Average
SYSTEM 32				
	3.37E-07	5.02E-09	3.61E-04	Maximum
	4.61E-09	1.41E-09	2.76E-05	Minimum
	2.02E-09 (29)	2.71E-09 (29)	2.28E-04 (29)	Average
SYSTEM 41				
	2.24E-08	2.84E-08	4.43E-07	Maximum
	8.85E-09	4.30E-09	4.23E-07	Minimum
	1.69E-08 (3)	1.59E-08 (3)	4.32E-07 (3)	Average
SYSTEM 42				
	3.22E-08	2.49E-08	6.36E-07	Maximum
	6.06E-09	2.70E-09	4.23E-07	Minimum
	1.51E-08 (3)	1.12E-08 (3)	5.53E-07 (3)	Average
SYSTEM 46				
	2.05E-08	4.51E-09	8.88E-05	Maximum
	5.43E-09	1.39E-09	6.89E-05	Minimum
	8.08E-09 (28)	2.65E-09 (28)	7.64E-05 (28)	Average
SYSTEM 47				
	9.76E-09	4.26E-09	2.38E-04	Maximum
	5.32E-09	1.40E-09	1.70E-04	Minimum
	6.29E-09 (29)	2.76E-09 (29)	1.96E-04 (29)	Average

NOTES: 1. All activities expressed in units of UCI/ML
2. ( ) Represents the number of samples represented by the average value.

TABLE 5.1 - SOLID WASTE (LOW LEVEL) FOR 19 80

		UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1.	Total Volume of Titanium From Hydrogen Getter Shipped	ft^3	0	0	0	0	0	0	0
2.	Curies of Tritium ~~Table 4.4, Item 1~~	Ci	0	0	0	0	0	0	0
3.	Total Volume of Wastes (Not Getters) Shipped For Offsite Disposal	ft^3	0	0	0	0	0	0	0
4.	Curies Involved in Table 4.4, Item 3	Ci	0	0	0	0	0	0	0
5.	Description / Shipping Date	Ci							
6.	Total Curies Involved in Offsite Shipments	Ci	0	0	0	0	0	0	0

Note: 1.5E+09 means $1.5 \times 10^{+9}$; Similarly, 2.7E-07 means 2.7×10^{-7}