

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: ZION

Docket Nos: 50-295 and 50-304

Unit TWO Discharge

YE/R: 1978

II. Liquid Effluents	UNITS	JULY	AUGUST	SEPTEMBER	THIRD QUARTER	OCTOBER	NOVEMBER	DECEMBER	FOURTH QUARTER	Grc. Total	REMARKS
1. Gross Radioactivity*											
a) Total Release	Curies	NO LIQUID	NO LIQUID	2.36E-2	*2.43E-2	1.38E-1	5.46E-2	6.55E-2	2.58E-1	*2.82E-1	E. 6.17E-1
b) Average Concentration Released	uci/ml	WASTE	WASTE	4.60E-10	4.60E-10	1.04E-9	4.26E-10	4.95E-10	6.54E-10	5.57E-10	E. 6.17E-10
c) Maximum Concentration Released	uci/ml	DISCHARGED	DISCHARGED	7.21E-9	7.21E-9	5.34E-8	4.28E-9	8.29E-9	5.34E-8	5.34E-8	E. 6.17E-8
d) Percent of Tech Spec Limit (5 curies)	%			4.72E-1	4.72E-1	2.76	1.09	1.31	5.16	5.63	E. 6.17E-1
2. Tritium (1)											
a) Total Release	Curies			2.91E+1	2.91E+1	8.33E+1	3.56E+1	2.18E+1	1.40E+2	1.70E+2	E. 6.17E+2
b) Average Concentration Released	uci/ml			5.68E-7	5.68E-7	6.29E-7	2.78E-7	1.65E-7	1.57E-7	4.63E-7	E. 6.17E-7
c) Percent of Tech Spec Limit (3 X 10 ⁻³ uci/ml)	%			1.89E-2	1.89E-2	2.1E-2	9.26E-3	5.50E-3	1.19E-2	1.54E-2	E. 6.17E-2
3. Dissolved Noble Gases											
a) Total Release	Curies			ND	ND	ND	ND	8.82E-4	8.82E-4	8.82E-4	E. 6.17E-4
b) Average Concentration Released	uci/ml			ND	ND	ND	ND	6.66E-12	2.32E-12	1.11E-12	E. 6.17E-12

N.D. = No detectable activity above background * Excluding tritium and Dissolved Noble Gases

(1) Minimum detectable tritium is 1 X 10⁻⁵ uc/cc

*Includes Sr⁸⁹, Sr⁹⁰ for Third Quarter

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YE/R: 1978

FACILITY: ZION

Packet Nos: 50-295 and 50-304

II. Liquid Effluents	UNITS	JULY	AUGUST	SEPTEMBER	THIRD QUARTER	OCTOBER	NOVEMBER	DECEMBER	FOURTH QUARTER	6mo. Total	TECH SPEC
4. Gross Alpha Radioactivity		NO LIQUID WASTE	NO LIQUID WASTE								
a) Total Release	Curies			4.59E-5	4.59E-5	2.08E-5	1.33E-5	5.61E-6	3.97E-5	8.56E-5	6.61E-5
b) Average Concentration Released	uci/ml	DISCHARGED	DISCHARGED	8.95E-13	8.95E-13	1.57E-13	1.04E-13	4.24E-14	1.01E-13	4.98E-13	6.61E-13
5. Volume of Liquid Waste to Discharge	Liters			3.98E+6	3.98E+6	1.85E+7	9.82E+6	1.59E+7	4.42E+7	4.82E+7	6.61E+6
6. Volume of Dilution Water	Liters			5.13E+10	5.13E+10	1.33E+11	1.20E+11	1.32E+11	3.93E+11	4.44E+11	6.61E+10
7. Isotopes Released	Curies										6.61E-20
Cs-134				4.90E-3	4.90E-3	1.68E-2	9.34E-3	2.20E-2	4.81E-2	5.30E-2	
Cs-137				2.51E-4	2.51E-4	8.28E-3	1.10E-4	2.75E-4	8.67E-3	8.92E-3	
I-131				6.05E-5	6.05E-5	1.15E-3	4.10E-4	1.23E-3	2.79E-3	2.85E-3	
Cs-137				5.95E-3	5.95E-3	2.24E-2	1.09E-2	2.32E-2	5.65E-2	6.25E-2	
Co-58				6.74E-3	6.74E-3	3.73E-2	6.46E-3	4.66E-3	4.84E-2	5.52E-2	
Co-60				4.70E-3	4.70E-3	2.55E-2	1.39E-2	1.23E-2	5.17E-2	5.64E-2	
Cr-51				ND	ND	1.08E-2	4.87E-4	ND	1.13E-2	1.13E-2	
Mn-54				4.31E-4	4.31E-4	3.03E-3	9.19E-4	8.44E-4	4.79E-3	5.22E-3	
Co-57				ND	ND	ND	3.26E-5	ND	3.26E-5	3.26E-5	
Sr-89				--	4.47E-4*	--	--	--	(1)		
Sr-90				--	2.68E-4*	--	--	--	(1)		
Kr-85m				ND	ND	ND	ND	1.49E-5	1.49E-5	1.49E-5	
I-132				ND	ND	ND	ND	ND	ND	ND	

N.D. = No detectable activity above background

(1) Waiting for analysis results - data will be presented in an errata to the annual report

*Analysis for both U1 and U2 3rd quarter

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Unit TWO Technology

Socket Nos: 50-295 and 50-304

YEAR: 1978

ACTIVITY: ZION

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