

REPORT OF RADIOACTIVE EFFLUENTS

ATTACHMENT A

LRP 1110-3
Revision 0
March 24, 1983
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YEAR: 1983

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373, 50-374

I. Gaseous Effluents		UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Release										
a.) Noble Gas Release	Main Stack	Curies	9.88E0	9.26E-1	None Detected	None Detected	None Detected	None Detected	1.08E1	6.6.A.4.b.
b. Maximum Release Rate										
	(grab sample)	uCi/sec	1.0E1	2.30E0	N/A	N/A	N/A	N/A	1.0E1	3.11.2.1
c. Isotopes Released										
	Kr-85m	Curies	<2.0E-8*	9.26E-1	<2.0E-8*	<2.0E-8*	<2.0E-8*	<2.0E-8*	9.26E-1	
	Kr-87	Curies	<2.7E-8*	<2.7E-8*	<2.7E-8*	<2.7E-8*	<2.7E-8*	<2.7E-8*	<2.7E-1*	
	Kr-88	Curies	<6.1E-8*	<6.1E-8*	<6.1E-8*	<6.1E-8*	<6.1E-8*	<6.1E-8*	<6.1E-8*	
	Xe-133	Curies	7.0E0	<2.3E-7*	<2.3E-7*	<2.3E-7*	<2.3E-7*	<2.3E-7*	7.0E0	
	Xe-135	Curies	2.88E0	<1.9E-8*	<1.9E-8*	<1.9E-8*	<1.9E-8*	<1.9E-8*	2.88E0	
	Xe-135m	Curies	<2.8E-8*	<2.8E-8*	<2.8E-8*	<2.8E-8*	<2.8E-8*	<2.8E-8*	<2.8E-8*	
	Xe-138	Curies	<4.6E-8*	<4.6E-8*	<4.6E-8*	<4.6E-8*	<4.6E-8*	<4.6E-8*	<4.6E-8*	
	Xe-135	Curies	2.18E-3	-----	-----	-----	-----	-----	2.18E-3	
Activity of each grab sample is less than LLD (uCi/cc)										
d.)	Percent of Stack Limit	%	3.15E-4	5.62E-5	N/A	N/A	N/A	N/A	3.15E-4	
e.)	Maximum Release Rate	uCi/sec	3.69E0	3.46E-1	N/A	N/A	N/A	N/A	6.79E-1	3.11.2.1
2. Stack Iodine Releases										
a.)	Isotopes I-135	Curies	<6.01E-12*	3.11E-4	<6.01E-12*	<6.01E-12*	<6.01E-12*	<6.01E-12*	3.11E-4	6.6.A.4.b.
	I-131	Curies	6.99E-5	5.19E-5	<9.45E-13*	1.22E-4	<9.45E-13*	<9.45E-13*	2.44E-4	
	I-133	Curies	3.94E-4	4.87E-4	<7.58E-13*	2.88E-4	<7.58E-13*	<7.58E-13*	1.17E-3	
	I-132	Curies	3.7E-3	<1.74E-11*	6.48E-7	2.64E-4	1.64E-4	<1.74E-11*	4.13E-3	
b.)	Percent of Stack Limit	%	1.33E-3	1.02E-3	7.53E-10	2.21E-5	1.91E-7	N/A	6.48E-5	
c.)	Maximum Release Rate	uCi/sec	1.55E-3	3.17E-4	2.50E-7	2.52E-4	6.33E-5	N/A	3.68E-4	3.11.2.1

8408300393 840723
PDR ADDCK 05000373
PDR

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CITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373,50-374

YEAR: 1983

1.	2. Effluents (cont)	3. UNITS	4. JULY	5. AUGUST	6. SEPTEMBER	7. OCTOBER	8. NOVEMBER	9. DECEMBER	10. 6 MO. TOTAL	11. TECH. SPEC.
3.	Stack Particulate									
a.	Radioactivity (β-γ)	milli-curries	3.46E0	5.66E0	2.94E-1	4.14E-2	None Detected	None Detected	9.46E0	6.6.A.1.5
b.	Alpha Radioactivity	mCi	<1E-8+	<4E-9+	<3E-9 +	NA*	<7.25E-14+	<1.85E-13+	<1E-8 +	3.11.2.3
c.	Isotopes Released									3.11.2.3
	Co-51	mCi	-----	-----	-----	-----	-----	-----	-----	
	Co-54	mCi	3.48E-2	1.49E-1	2.35E-1	9.96E-3	<2.1E-13+	<2.1E-13	3.94E-1	
	Co-53	mCi	<4.7E-13+	<4.7E-13+	<4.7E-13+	<4.7E-13+	<4.7E-13+	<4.7E-13	<4.7E-13 +	
	Co-59	mCi	<4.9E-13+	<4.9E-13+	<4.9E-13+	<4.9E-13+	<4.9E-13+	<4.9E-13	<4.9E-13 +	
	Co-60	mCi	5.96E-3	1.12E-1	5.91E-2	3.14E-2	<3.3E-13+	<3.3E-13	2.08E-1	
	Co-65	mCi	2.55E-2	2.93E-2	<7.9E-13+	<7.9E-13+	<7.9E-13+	<7.9E-13	5.48E-2	
	Co-89	mCi	5.0E-9	<7.0E-9+	<3E-9 +	NA*	<5.95E-14+	<1.25E-13+	5.0E-9	
	Co-90	mCi	<3.0E-9+	<9.0E-9+	<4E-9 +	NA*	<2.35E-14+	<7.71E-14+	<9.0E-9 +	
	Co-95	mCi	-----	-----	-----	-----	-----	-----	-----	
	Co-95	mCi	-----	-----	-----	-----	-----	-----	-----	
	Co-103	mCi	-----	-----	-----	-----	-----	-----	-----	
	Co-105	mCi	2.17E-1	-----	-----	-----	-----	-----	2.17E-1	
	Co-76	mCi	-----	7.40E-2	-----	-----	-----	-----	7.40E-2	
	Co-24	mCi	8.23E-1	3.86E0	-----	-----	-----	-----	4.68E0	
	Cs-134	mCi	<3.4E-13+	<3.4E-13+	<3.4E-13+	<3.4E-13+	<3.4E-13+	<3.4E-13	<3.4E-13 +	
	Cs-136	mCi	-----	-----	-----	-----	-----	-----	-----	
	Cs-137	mCi	<5.8E-13+	<5.8E-13+	<5.8E-13+	<5.8E-13+	<5.8E-13+	<5.8E-13	<5.8E-13 +	
	Fe-99m	mCi	-----	1.27E-1	-----	-----	-----	-----	1.27E-1	
	Fe-56	mCi	2.36E-0	1.31E0	-----	-----	-----	-----	3.62E0	
	Fe-38	mCi	5.34E-6	-----	-----	-----	-----	-----	5.34E-6	

* = Not Available (Samples destroyed in fire accident)

+ Activity of each sample is less than LLD (uCi/cc).

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YEAR: 1983

PLANT: JASALLE COUNTY HPS UNIT 1

DOCKET NOS: 50-373, 50-374

1. G	Effluents (cont'd)	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6MO. TOTAL	TECH. SPEC. REF.
3. M	Rad. Particulate									
4. P	Main Stack									5.5.A.4.b.
		%	1.2E-5	1.51E-5	3.52E-6	1.07E-6	N/A	N/A	2.31E-5	
e. A	Release Rate	uCi/sec	1.29E-3	2.11E-3	1.13E-4	1.54E-5	N/A	N/A	5.95E-4	3.11.2.1.1.
4. S	Iodine and									6.6.A.4.b.
P	Particulate	Curies	7.62E-3	6.51E-3	2.95E-4	7.15E-4	1.64E-4	N/A	1.53E-2	3.11.2.3.
a. P	Main Stack									
		%	1.33E-3	1.02E-3	3.52E-6	2.21E-5	1.91E-7	N/A	6.51E-5	
5. G	Rad. Tritium									6.6.A.4.b.
a. R	Release Rate	Curies	5.25E-5	<3.8E-9*	<3.03E-9*	<2.84E-9*	<3.04E-9	<1.20E-9*	5.25E-5	
b. A	Release Rate	uCi/sec	1.96E-5	N/A	NA	N/A	N/A	N/A	3.30E-6	
c. P	Tech Spec									
		%	3.51E-8	N/A	NA	N/A	N/A	N/A	3.51E-8	
* Activity of each grab sample is less than LLD (uCi/cc).										

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PLANT: LASALLE COUNTY NPS UNIT 1

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11. Radioactive Effluents:	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6MO. TOTAL	TECH. SPEC.
a. Total Release	Curies	1.80E-1	1.09E-1	9.77E-1	4.56E-1	4.59E-1	None Released	2.18E0	6.6.A.1.1
b. Conc. Released	uCi/ml	1.93E-7	3.64E-7	2.38E-7	2.60E-7	2.24E-7	N/A	2.39E-7	
c. Percent of Tech Spec	%	3.35E-4	5.36E-4	4.55E-4	5.62E-4	4.74E-4	N/A	5.62E-4	
d. (on Avg. Conc.)	%	4.27E-5	1.94E-5	1.95E-4	6.23E-5	8.23E-5	N/A	4.03E-4	3.11.1.1
2. Total Release	Curies	1.75E-1	1.08E-1	9.24E-1	4.54E-1	4.55E-1	Released	2.12E0	6.6.A.1.1
b. Conc. Released	uCi/ml	3.35E-4	5.36E-4	4.55E-4	5.62E-4	4.74E-4	N/A	4.69E-4	
c. Percent of Tech Spec	%	1.82E-5	1.12E-5	9.60E-5	4.70E-5	4.73E-5	N/A	2.20E-4	
3. Released Noble Gases		None		None			None		5.6.A.4.1
a. Total Release	Curies	Detected	3.2E-5	Detected	9.1E-6	3.8E-6	Released	4.49E-5	
b. Conc. Released	uCi/ml	N/A	1.07E-10	N/A	5.20E-12	1.85E-12	N/A	4.92E-12	
c. Percent of Tech Spec	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.11.1.1
4. Gross Alpha Radioactivity							None		6.6.A.4.1
a. Total Release	Curies	<5.23E-7	<2.01E-7	4.06E-6	Not	<3.24E-7	Released	4.06E-6	
b. Avg. Conc. Released	uCi/ml	<1E-9	<1E-9	2.0E-9	Available*	<3.38E-10	N/A	2.0E-9	
5. Volume of Liquid Waste	Liters	5.23E5	2.01E5	2.03E6	8.08E5	9.59E5	0.0	4.52E6	
6. Volume of Dilution Water	Liters	9.16E8	2.99E8	4.10E9	1.75E9	2.05E9	0.0	9.12E9	

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DOCKET NOS.: 50-373, 50-374

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1. Effluents (cont'd)	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6MO. TOTAL	TECH. SPEC.
1. Total Released	milli-curies	4.52E0	5.63 E-1	5.29E1	1.83E0	4.32E0	None Released	6.41E1	
Co-60	mCi	2.39E0	5.00E-2	5.49E-1	7.31E-1	2.27E-1	-----	3.95E0	
Co-60m	mCi	4.72E-1	2.46E-1	2.74E0	4.86E-1	2.08E0	-----	6.02E0	
Co-58	mCi	1.37E-1	3.30E-2	3.60E-1	1.77E-1	8.72E-1	-----	1.58E0	
Co-59	mCi	<6.17E-2	<2.37E-2	<2.39E-1	1.86E-2	5.84E-2	-----	7.7E-2	
Co-60	mCi	2.29E-1	8.30E-2	9.99E-1	2.42E-1	8.09E-1	-----	2.36E0	
Co-65	mCi	2.49E-1	6.40E-2	5.38E-1	1.41E-1	2.64E-1	-----	1.26E0	
Co-89	mCi	<2.09E-3	5.37E-4	<4.06E-3	NA*	<3.93E-3	-----	5.37E-4	
Co-90	mCi	<2.62E-3	6.70E-4	3.18E-3	NA**	<8.04E-4	-----	3.85E-3	
Co-91	mCi	-----	-----	1.10E-2	-----	-----	-----	1.10E-2	
Co-96	mCi	-----	-----	-----	1.7E-2	-----	-----	1.7E-2	
Co-99m	mCi	-----	-----	-----	-----	4.1E-3	-----	4.1E-3	
Co-131	mCi	-----	-----	-----	-----	-----	-----	-----	
Co-132	mCi	1.9E-2	-----	-----	-----	-----	-----	1.9E-2	
Co-135	mCi	1.3E-2	-----	-----	-----	-----	-----	1.3E-2	
Fe-55	mCi	4.56E-1	5.42E-2	4.77E1	NA*	<3.22E-1	-----	4.82E1	
Sb-122	mCi	2.49E-1	-----	-----	-----	-----	-----	2.49E-1	
Sb-124	mCi	2.37E-1	-----	1.10E-2	6.2E-3	-----	-----	2.54E-1	
Ce-144	mCi	<1.67E-1	<6.41E-2	<6.48E-1	<2.58E-1	<3.06E-1	-----	<6.48E-1	
Er-82	mCi	6.3E-2	-----	-----	-----	-----	-----	6.3E-2	
Xe-133	mCi	-----	2.00E-2	-----	-----	-----	-----	2.00E-2	
Xe-133m	mCi	-----	-----	-----	-----	-----	-----	-----	
Xe-135	mCi	-----	1.20E-2	-----	9.1E-3	3.8E-3	-----	2.49E-2	

NA=Not Available (Samples destroyed in Fire Accident)

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FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373, 50-374

III. Waste Shipped Offsite For B... or Disposal		UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6MO. TOTAL	TECH. SPEC.
1. Sp... Sludge Bottoms	Sins, Filter Laborator									6.6.A.4.a.
a. Qu...	Shipped	Cu. meters	1.04E2	7.08E1	5.37E1	5.10E1	3.33E1	4.31E1	3.21E2	
b. Typ...	Evap. Bottoms		Evap. Bottoms	Evap. Bottoms	Evap. Bottoms	Evap. Bottoms	Evap. Bottoms	Evap. Bottoms	N/A	
c. Rad...	Activity - Total	curies	1.876	2.650	3.845	3.420	5.399	6.522	2.671E1	
d. Mea...	Measured or estimate?		Measured	Measured	Measured	Measured	Measured	Measured	N/A	
e. Pri...	Radionuclides		Cr-51, Fe-59, Co-58, Mn-54	Cr-51, Fe-59, Co-58, Mn-54	Cr-51, Fe-59, Co-58, Mn-54	Cr-51, Fe-59, Co-58, Mn-54	Cr-51, Fe-59, Co-58, Mn-54	Same	N/A	
f. Mea...	Measured or estimate?		Measured	Measured	Measured	Measured	Measured	Measured	N/A	
g. Typ...	Container (LSA, Type A, Lge. Quantity)		LSA	LSA	LSA	LSA	LSA	LSA	N/A	
h. Con...	Volume	Cu. meters	2.12E-1 or 3.29E-1	2.12E-1	2.12E-1 or 3.29E-1	2.12E-1	2.12E-1 or 3.29E-1	Same	N/A	
i. Sol...	Encapsulation Agent		Cement	Cement	Cement	Cement	Cement	Cement	N/A	
2. Dry...	Compressible									6.6.A.4.b.
a. Was...	Contaminated		None		None					
b. Equ...	Equipment, etc.		Shipped		Shipped					
c. Qua...	Shipped	Cu. meters	N/A	2.09E1	N/A	1.99E1	1.87E1	1.60E0	6.11E1	
d. Rad...	Activity - Total	Curies	N/A	0.079	N/A	9.12E-2	2.55E-1	1.04E0	1.465	
e. Mea...	Measured or estimate?		N/A	Measured	N/A	Measured	Measured	Measured	N/A	
f. Pri...	Principle Radionuclides		N/A	Cr-51, Fe-59, Co-58, Mn-54	N/A	Cr-51, Fe-59, Co-58, Mn-54	Same	Same	N/A	
g. Mea...	Measured or estimate?		N/A	Measured	N/A	Measured	Measured	Measured	N/A	
h. Typ...	Container (LSA, Type A, Type B, Lge. Quantity)		N/A	LSA	N/A	LSA	LSA	LSA	N/A	
i. Con...	Volume	Cu. meters	N/A	2.12E-1 or 2.72E0	N/A	2.12E-1 or 2.72E0	2.12E-1, 3.29E-1 or 2.72E0	2.12E-1 or 3.29E-1	N/A	
j. Typ...	Type of Waste		N/A	DAW	N/A	DAW	DAW	DAW	N/A	

Ridgeland, Washington
 Barnwell, South Carolina
 Chem Nuclear Co.
 W. H. Hittman Nuclear & Development Co.

SOLID RADIOACTIVE WASTE SUMMARY
 UNITS 1/2
 LASALLE COUNTY NUCLEAR POWER STATION
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Date	DISPOSITION OF MATERIAL		Type of Waste	Type of Container	Solidification Agent	Principle Nuclides	Shipment Volume (ft ³)	Shipment Activity (mCi)	Volume per Month (ft ³)	Activity Per Month (mCi)
	TRANS CO.	BURIAL SITE								
01-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Cr-51	442	142.0	442	142.0
05-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Fe-59	413	34.2	855	176.2
08-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-58	405	46.6	1260	227.8
13-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-60	412.5	36.2	1672.5	259.2
15-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Mn-54	392.0	44.6	2062.5	303.8
20-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Zn-65	405.0	585.0	2467.5	888.6
22-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement		397.5	391.0	2865	1279.6
27-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement		397.5	312.0	3262.5	1551.0
29-1-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement		468.0	284.0	3670.5	1875.0
03-2-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Cr-51	405.0	736.0	405.0	736.0
12-2-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Fe-59				
24-2-83	Tri-State M.T.	RWA	Evap. Bottoms and DAW	LSA	Cement	Co-58	450.0	721.0	855.0	1457.0
29-2-83	Tri-State M.T.	RWA	Evap. Bottoms and DAW	LSA	Cement	Co-60	450.0	656.0	1305.0	2113.0
			Evap. Bottoms	LSA	Cement	Mn-54				
			Evap. Bottoms	LSA	Cement	Zn-65	520.5	616.0	1825.5	2729.0
09-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Cr-51	375.1	717.0	375.1	717.0
14-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Fe-59	319.8	706.0	694.9	1423.0
16-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-58	300.0	541.0	994.9	1964.0
23-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-60	300.0	656.0	1294.9	2620.0
28-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Mn-54	300.0	623.0	1594.9	3243.0
30-3-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Zn-65	300.0	602.0	1894.9	3845.0
05-4-83	Tri-State M.T.	RWA	DAW	LSA	N/A	Cr-51	702.0	91.2	702.0	91.2
07-4-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Fe-59				
14-4-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-58	300.0	385.0	1002.0	476.2
19-4-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Co-60	300.0	499.6	1302.0	975.8
19-4-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Mn-54	300.0	366.0	1602.0	1341.8
21-4-83	Tri-State M.T.	RWA	Evap. Bottoms	LSA	Cement	Zn-65	300.0	618.0	1902.0	1959.8

