

REPORT OF RADIOACTIVE EFFLUENTS

PAGE 1

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Facility: Surry Power Station

DOCKET: 50-280 and 50-281

YEAR: 1981

06-25-80

I. LIQUID RELEASES

		JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL	± Error
1.	Gross Radioactivity (Bq)								
	(a) Total Release	Curies	2.09E-1	8.68E-2	2.18E-1	5.22E-1	4.55E-1	4.01E-1	
	(b) Avg. Concentration Released	µCi/ml	1.55E-9	7.12E-10	1.56E-9	4.39E-9	3.16E-9	2.59E-9	
	(c) Maximum Concentration Released	µCi/ml	2.51E-9	1.32E-9	1.81E-9	6.61E-9	4.73E-9	3.44E-9	
2.	Tritium								
	(a) Total Released	Curies	3.80E+1	3.91E+1	2.94E+1	4.58E+1	4.69E+1	4.54E+1	2.45E+2
	(b) Avg. Concentration Released	µCi/ml	2.81E-7	3.20E-7	2.10E-7	3.85E-7	3.26E-7	2.93E-7	2.08E+1
3.	Dissolved Noble Gases								
	(a) Total Release	Curies	9.78E-2	1.25E-1	2.09E-1	1.33E-1	5.57E-2	7.84E-2	6.99E-1
	(b) Avg. Concentration Released	µCi/ml	7.24E-10	1.03E-9	1.49E-9	1.12E-9	3.87E-10	5.06E-10	5.94E-2
4.	Gross Alpha Radioactivity								
	(a) Total Released	Curies	1.64E-6	3.34E-6	*	9.13E-6	8.14E-6	1.36E-6	2.36E-5
	(b) Avg. Concentration Released	µCi/ml	1.21E-14	2.74E-14	*	7.67E-14	5.65E-14	8.77E-15	2.01E-6
5.	Vol. of Liquid to Disch. Canal	Liters	4.16E+7	4.45E+7	4.50E+7	4.77E+7	6.04E+7	5.95E+7	2.99E+8
6.	Vol. of Dilution Water	Liters	1.35E+11	1.22E+11	1.40E+11	1.19E+11	1.44E+11	1.55E+11	8.15E+11
7.	Isotopes Released MPC µCi/ml	Curies							
	I-131	3 x 10 ⁻⁷	2.93E-3	4.97E-3	1.54E-2	7.63E-3	6.79E-3	1.49E-2	5.26E-2
	I-132	8 x 10 ⁻⁶	*	*	3.56E-5	*	*	*	3.56E-5
	I-133	1 x 10 ⁻⁶	9.31E-4	1.57E-3	5.41E-3	6.92E-4	1.07E-3	5.40E-4	1.02E-2
	I-134	2 x 10 ⁻⁵	*	*	*	*	*	*	*
	I-135	4 x 10 ⁻⁶	*	*	5.18E-4	*	2.74E-5	*	5.45E-4
	Cs-134	9 x 10 ⁻⁶	4.40E-2	2.94E-2	3.30E-2	4.64E-2	7.00E-2	1.18E-1	3.41E-1
	Cs-136	6 x 10 ⁻⁵	*	*	2.70E-3	2.47E-3	2.22E-4	2.52E-4	5.64E-3
	Cs-137	2 x 10 ⁻⁵	8.19E-2	5.94E-2	5.52E-2	7.17E-2	1.07E-1	1.79E-1	5.54E-1
	Kr-85	3 x 10 ⁻⁶	*	*	*	*	*	*	*
	Co-57	4 x 10 ⁻⁴	6.84E-5	1.84E-5	1.52E-7	1.98E-4	2.76E-4	3.86E-6	5.65E-4
	Co-58	9 x 10 ⁻⁵	3.83E-2	1.05E-2	8.50E-3	1.07E-1	1.28E-1	3.23E-2	3.25E-1
	Co-60	3 x 10 ⁻⁵	9.82E-2	6.04E-2	8.00E-2	2.18E-1	2.15E-1	1.42E-1	8.14E-1
	Mn-54	1 x 10 ⁻⁴	2.18E-3	9.66E-4	7.05E-4	2.59E-3	4.39E-3	4.40E-4	1.13E-2
	Na-24	3 x 10 ⁻⁵	8.04E-2	3.55E-2	3.56E-2	1.95E-2	2.81E-1	2.73E-1	7.25E-1
	Cr-51	2 x 10 ⁻³	3.13E-3	*	2.62E-5	1.94E-4	3.96E-4	*	3.75E-3
	Fe-59	5 x 10 ⁻⁵	5.93E-7	*	*	*	*	*	5.93E-7
	Nb-95	1 x 10 ⁻⁴	6.10E-4	3.75E-5	1.28E-5	2.29E-4	4.80E-4	9.38E-6	1.38E-3
	Ba-La-140	2 x 10 ⁻⁵	*	*	3.59E-6	*	*	*	3.59E-6
	Rb-88	-	*	*	*	*	*	*	*
	Sb-124	2 x 10 ⁻⁵	9.17E-6	*	*	6.37E-4	7.49E-5	*	7.21E-4
	Sb-125	1 x 10 ⁻⁴	2.30E-3	1.68E-3	1.78E-3	5.75E-3	2.49E-3	6.26E-4	1.46E-2

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REPORT OF RADIOACTIVE EFFLUENTS

PAGE 2

03-26-81

FACILITY: Surry Power Station

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I. LIQUID RELEASES (CON'T)

		JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL	± Error	
	ISOTOPES RELEASED MPC µCi/ml									
	UNITS									
	Curies									
	Ce-141	9 x 10 ⁻⁵	8.05E-7	*	*	*	4.63E-5	2.57E-5	7.28E-5	6.19E-6
	Ce-144	1 x 10 ⁻⁵	1.31E-5	3.36E-5	2.30E-4	3.25E-5	7.38E-5	*	3.83E-4	3.26E-5
	Xe-131m	3 x 10 ⁻⁶	*	2.57E-4	1.56E-3	3.29E-4	1.89E-4	*	2.34E-3	1.99E-4
	Xe-133	3 x 10 ⁻⁶	8.56E-2	1.10E-1	1.85E-1	1.22E-1	3.25E-2	6.31E-2	5.98E-1	5.08E-2
	X3-135	3 x 10 ⁻⁶	1.19E-2	1.39E-2	2.03E-2	1.04E-2	9.54E-3	1.33E-2	7.93E-2	6.74E-3
	Xe-133m	3 x 10 ⁻⁶	1.57E-4	5.19E-4	1.54E-3	3.32E-4	*	6.08E-4	3.16E-3	2.69E-4
	Ar-41	3 x 10 ⁻⁶	1.54E-5	*	6.30E-6	*	*	1.28E-5	3.45E-5	2.93E-6
	Sr-89	3 x 10 ⁻⁷	*	*	*	*	*	*	*	*
	Sr-90	3 x 10 ⁻⁷	9.60E-6	4.30E-6	4.83E-6	*	*	*	1.87E-5	1.59E-6
	C-14	8 x 10 ⁻⁴	7.24E-4	3.24E-4	3.64E-4	4.81E-4	5.15E-4	5.15E-4	2.92E-3	2.48E-4
8.	Percent of 10CFR20	Percent	4.35E-2	5.68E-2	9.77E-2	7.44E-2	4.79E-2	7.24E-2		
II. AIRBORNE RELEASES										
1.	Total Noble Gases	Curies	2.00E+1	1.81E+1	1.50E+1	3.59E+2	3.15E+0	7.78E+1	4.93E+2	4.19E+1
2.	Total Halogens	Curies	3.08E-6	2.13E-6	7.37E-6	1.17E-3	8.13E-4	5.92E-5	2.05E-3	1.74E-4
3.	Total Particulate Gross Radioactivity (βγ)	Curies	1.84E-5	3.81E-5	9.67E-5	3.90E-4	4.11E-4	5.27E-5	1.01E-3	8.59E-5
4.	Total Tritium	Curies	1.54E+0	5.12E+0	3.73E-1	3.87E+0	2.69E+0	1.09E+0	1.47E+1	1.25E+0
5.	Total Particulate Gross Alpha Radioactivity	Curies	2.40E-6	9.12E-7	6.08E-6	4.22E-6	2.76E-6	2.71E-6	1.91E-5	1.62E-6
6.	Maximum Noble Gas Release Rate	µCi/sec	1.32E+1	3.15E+1	2.83E+1	1.06E+3	4.49E+0	6.66E+1		
7.	Percent of Applicable Limit for Technical Specifications									
(a)	Noble Gases	Percent	1.26E-2	1.33E-2	9.80E-3	2.38E-1	2.06E-3	5.14E-2		
(b)	Halogens	Percent	3.45E-5	1.53E-5	7.61E-5	1.24E-2	9.09E-3	3.60E-4		
(c)	Particulates	Percent	1.10E-2	1.67E-3	6.34E-4	6.09E-3	7.29E-3	1.74E-3		
8.	Isotopes Released:	Curies								
(a)	Particulates									
	Cs-134		1.69E-5	*	1.06E-6	6.26E-6	9.65E-6	2.76E-6	3.66E-5	3.11E-6
	Cr-51		*	*	*	3.54E-5	2.43E-5	8.22E-6	6.79E-5	5.77E-6
	Cs-137		1.15E-4	7.14E-6	1.36E-5	2.53E-5	2.60E-5	2.64E-5	2.13E-4	1.81E-5
	Cs-138		*	*	*	*	*	*	*	*
	Co-58		2.82E-4	3.25E-7	1.14E-7	1.51E-4	1.14E-4	3.92E-5	5.87E-4	4.99E-5
	Co-60		5.46E-4	1.27E-4	3.83E-5	2.92E-4	4.18E-4	6.90E-5	1.49E-3	1.27E-4
	Mn-54		1.92E-5	5.94E-8	7.29E-8	5.56E-6	5.24E-5	1.21E-6	7.85E-5	6.67E-6
	Fe-59		*	*	*	1.13E-6	8.61E-7	3.05E-7	2.30E-6	1.96E-7
	Rb-88		*	*	1.24E-4	*	*	*	1.24E-4	1.05E-5

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REPORT OF RADIOACTIVE EFFLUENTS

PAGE 3

YEAR 1981

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II. AIRBORNE RELEASES (CONT'D.)

	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL	\pm Error
B. Isotopes Released (con't.)	CURIES								
(a) Particulates (con't.)									
Nb-95		*	*	3.36E-6	5.97E-6	2.42E-6	2.39E-6	1.41E-5	1.20E-6
Zn-65		*	*	*	*	*	*	*	*
Zr-95		*	*	*	2.77E-6	1.52E-6	9.22E-7	5.21E-6	4.43E-7
Ru-103		*	*	2.82E-9	*	1.03E-6	*	1.03E-6	8.76E-8
(b) Halogens									
I-131		3.08E-6	1.23E-6	6.79E-6	1.07E-3	8.11E-4	3.11E-5	1.92E-3	1.63E-4
I-132		*	*	*	*	*	*	*	*
I-133		*	8.97E-7	5.84E-7	9.91E-5	1.65E-6	2.81E-5	1.30E-4	1.11E-5
I-134		*	*	*	*	*	*	*	*
I-135		*	*	*	*	*	*	*	*
(c) Gases									
Xe-133		1.98E+1	1.74E+1	1.47E+1	3.55E+2	3.07E+0	7.61E+1	4.86E+2	4.13E+1
Xe-133m		*	*	*	*	*	6.75E-1	6.75E-1	5.74E-2
Xe-135		1.36E-1	5.86E-1	3.48E-1	3.00E+0	8.19E-2	1.03E+0	5.18E+0	4.40E-1
Kr-85m		*	6.26E-2	*	6.48E-2	*	*	1.27E-1	1.08E-2
Kr-85		*	*	*	*	*	*	*	*
Kr-87		*	*	*	*	*	*	*	*
Kr-88		*	*	*	1.56E-1	*	*	1.56E-1	1.33E-2
Ar-41		*	*	*	2.42E-1	*	*	2.42E-1	2.06E-2
III. SOLID RADIOACTIVE WASTE DISPOSAL									
(a) Total Amount Solid Waste Packaged	Ft ³	7.67E+3	1.02E+4	1.59E+4	4.66E+3	4.49E+3	5.51E+3	4.84E+4	
(b) Estimated Total Activity	Curies	8.28E+0	1.52E+0	3.57E+0	1.11E+3	6.18E+0	6.06E+0	1.13E+3	
(c) Date of Shipment and Disposition	BARNWELL, S.C.	1-6-81	2-3-81	3-2,3,5,6,9,10,11,12,13,16,17,18,19,20,23,24,26-81	4-2-81	5-05-81	6-2-81		
		1-8-81	2-4-81		4-4-81	5-07-81	6-5-81		
		1-9-81	2-5-81		4-8-81	5-13-81	6-9-81		
		1-12-81	2-6-81		4-9-81	5-14-81	6-11-81		
		1-13-81	2-10-81	Richland, WA	4-14-81	5-19-81	6-16-81		
		1-14-81	2-12-81		4-21-81	5-21-81	6-19-81		
		1-15-81	2-13-81			5-26-81	6-25-81		
		1-20-81	2-16-81		4-24-81(2)	5-27-81	6-26-81		
		1-21-81	2-18-81		4-28-81				
		1-22-81	2-20-81(2)		4-29-81				
		1-26-81	2-26-81						
		1-28-81							

REPORT OF RADIOACTIVE EFFLUENTS

PAGE 1

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1. LIQUID RELEASES		UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	± Error
Gross Radioactivity (By)										
(a)	Total Release	Curies	6.24E-1	6.53E-1	9.44E-1	6.58E-1	4.16E-1	9.24E-1		
(b)	Avg. Concentration Released	µCi/ml	2.21E-9	2.46E-9	4.11E-9	2.80E-9	2.89E-9	6.84E-9		
(c)	Maximum Concentration Released	µCi/ml	2.57E-9	4.77E-9	5.19E-9	3.88E-9	5.46E-9	8.83E-9		
2. Tritium										
(a)	Total Released	Curies	4.91E+1	5.25E+1	3.61+1	4.02E+1	6.74E+1	4.08E+1	2.86E+2	2.43E+1
(b)	Avg. Concentration Released	µCi/ml	1.74E-7	1.98E-7	1.57E-7	1.71E-7	4.68E-7	3.03E-7		
3. Dissolved Noble Gases										
(a)	Total Release	Curies	2.50E-1	2.86E+0	3.34E+0	1.10E+0	1.48E+0	1.36E+0	1.04E+1	8.83E-1
(b)	Avg. Concentration Released	µCi/ml	8.87E-10	1.08E-8	1.45E-8	4.69E-9	1.03E-8	1.01E-8		
4. Gross Alpha Radioactivity										
(a)	Total Released	Curies	1.75E-6	*	3.90E-6	2.99E-6	3.55E-6	6.31E-6	1.85E-5	1.57E-6
(b)	Avg. Concentration Released	µCi/ml	6.21E-15	*	1.69E-14	1.27E-14	2.46E-14	4.67E-14		
5.	Vol. of Liquid to Disch. Canal	Liters	6.45E+7	5.93E+7	4.68E+7	4.80E+7	4.56E+7	4.62E+7	3.10E+8	1.09E+7
6.	Vol. of Dilution Water	Liters	2.82E+11	2.65E+11	2.30E+11	2.35E+11	1.44E+11	1.35E+11	1.29E+12	4.52E+10
7.	Isotopes Released MPC µCi/ml	Curies								
	I-131	3 x 10 ⁻⁷	1.85E-1	2.07E-1	5.56E-1	2.43E-1	1.46E-1	1.71E-1	1.51E+0	1.28E-1
	I-132	8 x 10 ⁻⁶	*	*	1.65E-3	*	*	4.20E-5	1.69E-3	1.44E-4
	I-133	1 x 10 ⁻⁶	3.05E-3	4.39E-2	1.10E-1	1.53E-2	2.45E-2	3.39E-2	2.31E-1	1.96E-2
	I-134	2 x 10 ⁻⁵	*	*	*	*	*	2.27E-5	2.27E-5	1.93E-6
	I-135	4 x 10 ⁻⁶	*	1.72E-4	4.49E-3	*	6.14E-4	1.83E-3	7.11E-3	6.04E-4
	Cs-134	9 x 10 ⁻⁶	1.15E-1	1.77E-1	2.11E-1	1.22E-1	9.13E-2	1.76E-1	8.92E-1	7.58E-2
	Cs-136	6 x 10 ⁻⁵	5.71E-3	1.17E-2	3.32E-2	9.05E-3	2.21E-3	1.56E-2	7.75E-2	6.58E-3
	Ca-137	2 x 10 ⁻⁵	1.63E-1	2.59E-1	2.93E-1	1.72E-1	1.32E-1	2.40E-1	1.26E+0	1.07E-1
	Kr-85	3 x 10 ⁻⁶	*	*	*	*	*	*	*	*
	Co-57	4 x 10 ⁻⁴	3.89E-5	1.63E-5	1.67E-5	3.78E-5	2.00E-6	5.54E-4	6.66E-4	5.66E-5
	Co-58	9 x 10 ⁻⁵	1.65E-2	4.25E-3	1.46E-1	2.56E-1	1.34E-1	4.21E-1	9.78E-1	8.31E-2
	Co-60	3 x 10 ⁻⁵	1.39E-1	1.79E-2	2.46E-2	3.01E-2	3.51E-2	1.65E-1	4.12E-1	3.50E-2
	Mn-54	1 x 10 ⁻⁴	6.56E-4	1.20E-3	1.70E-3	5.54E-4	1.50E-3	5.23E-3	1.08E-2	9.21E-4
	Na-24	3 x 10 ⁻⁵	2.24E-1	1.39E-1	1.66E-1	1.92E-1	5.90E-1	5.40E-2	1.37E+0	1.16E-1
	Cr-51	2 x 10 ⁻³	3.35E-4	5.92E-6	1.74E-5	3.41E-3	7.75E-3	3.72E-2	4.87E-2	4.14E-3
	Fe-59	5 x 10 ⁻⁵	*	*	2.02E-6	*	4.02E-4	3.64E-4	7.68E-4	6.53E-5
	Nb-95	1 x 10 ⁻⁴	1.48E-5	5.72E-6	1.63E-5	1.49E-5	7.17E-4	3.07E-3	3.84E-3	3.26E-4
	Ba-La-140	2 x 10 ⁻⁵	1.04E-5	4.87E-5	2.39E-6	6.42E-6	1.34E-4	*	2.02E-4	1.72E-5
	Rb-88	-	*	4.37E-2	5.87E-2	7.76E-2	2.25E-2	2.99E-2	2.32E-1	1.98E-2
	Sb-124	2 x 10 ⁻³	2.61E-5	9.10E-6	4.63E-3	3.22E-3	2.70E-3	5.22E-3	1.58E-2	1.34E-3
	Sb-125	1 x 10 ⁻⁴	7.93E-4	2.41E-4	1.33E-3	7.44E-4	5.53E-3	5.62E-3	1.43E-2	1.21E-3

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PAGE 2

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I. LIQUID RELEASES (CON'T)

UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	± Error	
Isotopes Released MPC μ Ci/ml									
Ce-141 9×10^{-5}	*	*	1.07E-6	*	*	*	1.07E-6	9.10E-8	
Ce-144 1×10^{-6}	2.01E-4	2.23E-3	8.27E-4	3.72E-4	6.81E-4	*	4.31E-3	3.66E-4	
Xe-131m 3×10^{-6}	7.04E-3	7.73E-3	4.19E-2	6.56E-3	1.21E-3	1.68E-2	8.12E-2	6.91E-3	
Xe-133 3×10^{-6}	1.96E-1	2.08E+0	2.56E+0	6.82E-1	1.13E+0	9.02E-1	7.55E+0	6.42E-1	
X3-135 3×10^{-6}	3.95E-2	6.36E-1	6.06E-1	3.29E-1	2.85E-1	3.67E-1	2.26E+0	1.92E-1	
Xe-133m 3×10^{-6}	2.44E-3	6.01E-2	6.61E-2	2.26E-2	2.89E-2	2.76E-2	2.08E-1	1.77E-2	
Ar-41 3×10^{-6}	*	1.20E-2	8.92E-5	5.91E-4	2.78E-5	2.00E-4	1.29E-2	1.10E-3	
Sr-89 3×10^{-7}	6.95E-5	8.49E-5	9.22E-5	*	*	*	2.47E-4	2.10E-5	
Sr-90 3×10^{-7}	*	*	*	*	*	*			
C-14 8×10^{-4}	2.58E-4	3.15E-4	3.42E-4	2.20E-4	3.56E-4	2.80E-4	1.77E-3	1.50E-4	
8. Percent of 10CFR20	Percent	2.61E-1	6.53E-1	1.36E+0	5.20E-1	7.27E-1	8.18E-1		
II. AIRBORNE RELEASES									
1. Total Noble Gases	Curies	1.07E+2	4.67E+2	7.27E+3	7.93E+2	2.99E+3	1.98E+3	1.36E+4	1.16E+3
2. Total Halogens	Curies	2.16E-3	1.63E-3	3.01E-2	4.24E-3	1.59E-2	6.82E-3	6.09E-2	5.18E-3
3. Total Particulate Gross Radioactivity (By)	Curies	5.15E-4	4.39E-5	4.30E-4	9.22E-5	1.16E-4	9.53E-5	1.29E-3	1.10E-4
4. Total Tritium	Curies	3.07E-1	1.28E-1	5.17E+0	2.86E+1	8.23E+0	4.73E+0	4.72E+1	4.01E+0
5. Total Particulate Gross Alpha Radioactivity	Curies	1.50E-5	1.59E-6	6.31E-6	4.69E-6	2.60E-6	2.20E-6	3.24E-5	2.75E-6
6. Maximum Noble Gas Release Rate	μ Ci/sec.	2.55E+2	2.08E+2	5.47E+4	9.08E+2	1.04E+4	2.10E+4		
7. Percent of Applicable Limit for Technical Specifications									
(a) Noble Gases	Percent	7.60E-2	3.59E-1	4.86E+0	7.04E-1	2.14E+0	1.33E+0		
(b) Halogens	Percent	1.74E-2	8.43E-3	2.67E-1	2.96E-2	1.00E-1	7.26E-2		
(c) Particulates	Percent	3.02E-3	1.08E-3	1.89E-3	1.58E-3	1.36E-3	2.90E-3		
8. Isotopes Released:	Curies								
(a) Particulates									
Cs-134		2.90E-5	1.07E-5	4.08E-6	9.86E-6	1.43E-5	1.89E-5	8.68E-5	7.38E-6
Cr-51		2.78E-6	4.50E-7	*	*	*	*	3.23E-6	2.75E-7
Cs-137		8.40E-5	3.16E-5	6.24E-5	3.12E-5	3.30E-5	9.29E-5	3.35E-4	2.85E-5
Cs-138		6.99E-5	5.94E-5	3.46E-4	9.25E-5	2.91E-4	7.41E-5	9.33E-4	7.93E-5
Co-58		3.70E-5	1.54E-5	1.73E-5	3.06E-5	2.93E-5	6.31E-5	1.93E-4	1.64E-5
Co-60		1.01E-4	3.70E-5	7.93E-5	6.82E-5	4.03E-5	8.27E-5	4.09E-4	3.47E-5
Mn-54		7.70E-7	4.48E-7	1.99E-7	6.99E-7	1.97E-7	6.23E-7	2.94E-6	2.50E-7
Fe-59		*	*	6.93E-8	*	*	*	6.93E-8	5.89E-9
Rb-88		1.40E-3	8.27E-7	5.07E-4	1.66E-4	2.75E-1	1.78E-6	2.77E-1	2.36E-2

FACILITY: Surry Power Station

REPORT OF RADIOACTIVE EFFLUENTS

YEAR 1981

PAGE 3

DOCKET: 50-280 and 50-281

AIRBORNE RELEASES (CONT'D.)

	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	± Error
8. Isotopes Released (con't.)	CURIES								
(a) Particulates (con't.)									
Nb-95		9.07E-7	4.81E-7	*	5.56E-7	1.07E-7	*	2.05E-6	1.74E-7
Zn-65		2.01E-7	*	*	*	*	*	2.01E-7	1.71E-8
Zr-95		7.86E-7	6.41E-7	*	*	*	*	1.43E-6	1.21E-7
Ru-103		*	*	*			*		
(b) Halogens									
I-131		1.55E-3	7.52E-4	2.30E-2	2.64E-3	8.63E-3	6.48E-3	4.31E-2	3.66E-3
I-132		*	*	*	*	*	1.68E-7	1.68E-7	1.43E-8
I-133		6.12E-4	8.79E-4	7.13E-3	1.58E-3	5.83E-3	3.37E-4	1.64E-2	1.39E-3
I-134		*	*	*	*	*	*		
I-135		*	*	*	1.57E-5	1.48E-3	*	1.50E-3	1.28E-4
(c) Gases									
Xe-133		9.86E+1	4.13E+2	7.02E+3	6.23E+2	2.82E+3	1.89E+3	1.29E+4	1.09E+3
Xe-133m		3.20E-2	4.71E-1	5.07E+1	1.22E-1	5.45E+0	8.96E+0	6.57E+1	5.59E+0
Xe-135		7.80E+0	5.26E+1	1.12E+2	1.66E+2	1.64E+2	5.95E+1	5.62E+2	4.78E+1
Kr-85m		*	3.81E-1	3.70E+0	2.59E-1	3.61E-1	6.06E-2	4.76E+0	4.05E-1
Kr-85		*	*	*	*	1.60E+0	4.89E+0	6.49E+0	5.52E-1
Kr-87		*	*	*	*	*	*		
Kr-88		*	2.77E-1	5.14E+0	2.31E-1	5.95E-2	8.06E-2	5.79E+0	4.92E-1
Ar-41		*		*	3.60E-1	8.28E-2	*	4.43E-1	3.76E-2
III. SOLID RADIOACTIVE WASTE DISPOSAL									
(a) Total Amount Solid Waste Packaged	Ft ³	6.09E+3	4.52E+3	1.44E+4	9.02E+3	4.64E+3	1.20E+4	5.07E+4	4.31E+3
(b) Estimated Total Activity	Curies	6.62E+0	4.94E+0	1.95E+2	4.32E+0	1.26E+1	6.28E+0	2.30E+2	1.95E+1
(c) Date of Shipment and Disposition		Barnwell, S.C.	Barnwell, S.C.	Barnwell, S.C.	Barnwell, S.C.	Barnwell, S.C.	Barnwell, S.C.		
		07-02-81	08-03-81	09-02, 08,	10-1-81	11-3-81			
		07-07-81	08-07-81	10, 11, 15,	10-5-81	11-5-81	12-1-81, 12-3-81		
		07-10-81	08-11-81	16, 17, 18,	10-7-81	11-10-81	12-8-81, 12-10-81		
		07-15-81	08-13-81	21, 22, 23,	10-9-81 (2)	11-12-81	12-16-81, 12-29-81		
		07-17-81	08-19-81	24, 25, 25,	10-23-81	11-18-81			
		07-20-81	08-25-81	28, 28, 29,	10-26-81	11-19-81	Richland, Washington		
		07-23-81	08-27-81	30-81	10-28-81 (2)	11-23-81	12-4-81, 12-9-81		
		07-28-81		Richland, WA	10-29-81	11-24-81	12-11-81, 12-16-81		
		07-30-81		09-30-81			12-18-81, 12-21-81		
				09-30-81			12-28-81		

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

~~RRPI~~
I.C. HOSEY
2. DOCKET FILE

R. H. LEASBURG
VICE PRESIDENT
NUCLEAR OPERATIONS

March 8, 1982

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ATLANTA, GEORGIA
1/A

Mr. James P. O'Reilly
Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Serial No. 120
NO/RMT:rmt
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Dear Mr. O'Reilly:

Enclosed are the following Annual Reports for Surry Power Station Unit Nos. 1 and 2 for the calendar year 1981.

<u>Title of Report</u>	<u>Applicable Technical Specification</u>
Report of Radioactive Effluents	T.S. 6.6.3.b
Radiological Environmental Monitoring Report	T.S. 6.6.3.c

Very truly yours,

R. H. Leasburg

Enclosures:

1. Report of Radioactive Effluents
2. Radiological Environmental Monitoring Annual Report

cc: Director, Office of Inspection and Enforcement
c/o Distribution Services Branch, DDC, ADM
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 (Enclosure 1 only)

Director, Office of Nuclear Reactor Regulation
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