



Westinghouse

Westinghouse Electric Company
Nuclear Fuel
Columbia Fuel Site
P.O. Drawer R
Columbia, South Carolina 29250
USA

U. S. Nuclear Regulatory Commission
ATTN: Regional Administrator, RII
Region II
61 Forsyth Street SW, Suite 23T85
Atlanta, GA 30303

Direct tel: 803-647-3451

Our ref: NRC-02-043

Date August 26, 2002

Dear Sir:

Subject: SNM-1107/70-1151

The following report fulfills regulatory requirements as listed in 10CFR 40.65 and 10CFR 70.59 "Effluent Monitoring Requirements." For the six-month period January 1, 2002 through June 30, 2002, the following quantities of radionuclides were released to the unrestricted area by the Westinghouse Electric Company's Columbia, South Carolina Nuclear Fuel Plant:

A. Gaseous	288.9 uCi Uranium (Analyzed as gross alpha)
B. Liquid Effluent	20,864.0 uCi - U-234
	736.4 uCi - U-235
	2,945.5 uCi - U-238

Gaseous effluent results were obtained from point source gross alpha analysis of stack gas effluent, and the individual radionuclide composition is inferred from the calculated average enrichment (85.0% U-234, 3.0% U-235, and 12.0% U-238). A detailed summary report by stack is provided as Attachment "A."

Liquid effluent values were obtained by analysis of composite proportional samples prior to discharge to the Congaree River and basing the activity on the calculated average enrichment. All liquid discharges are pumped through a single discharge line to Congaree River. A detailed summary liquid discharge report is provided as Attachment "B."

Sincerely,

WESTINGHOUSE ELECTRIC COMPANY


Samuel G. McDonald, Manager
Environment, Health and Safety

cc: U.S. NRC, (2)
ATTN: William Gloerson
61 Forsyth Street SW, Suite 23T85
Atlanta, GA 30303

Director, (2)
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

FILE

70-1151/5.4

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Westinghouse Electric Company
NRC-02-43
August 26, 2002

ATTACHMENT "B"
LIQUID EFFLUENT DISCHARGES
FIRST HALF 2002

- A. Report Period: January 1, through June 30, 2002
B. Sample Location: Composite sampler at waste treatment prior to discharge to Congaree River
C. Total Liquid Flow: 7.754 E+07 liters
D. Sample Collection: Effluent Composite Sampler

Radioisotope	Concentration	LLD, uCi/ml	Quantity Released, uCi
	uCi/ml Error		
U-234	2.69 E-07 +/- 3.51 E-07	6.0 E-10	20,864.0
U-235	9.50 E-09 +/- 6.77E-09	6.0 E-10	736.4
U-238	3.80 E-08 +/- 1.92E-08	6.0 E-10	2,945.5
Total			24,545.9

Note:

1. Liquid effluent composites were analyzed by alpha spectroscopy, and significant quantities of U-236 were not detected using this method.

Attachment "A" GASEOUS EFFLUENT DISCHARGES - JANUARY 1 THROUGH JUNE 30, 2002

2002 FIRST HALF GASEOUS EFFLUENTS STACK IDENTIFICATION		QUANTITY RELEASED uCi URANIUM/ 6months	GROSS ALPHA (URANIUM) Conc., uCi/ml		ERROR	LLD, uCi/ml	Flow Rate Meters/sec	Derived Isotopic Concentration			DERIVED ISOTOPIC DISCHARGE, uCi			
								U234	U235	U238	U234	U235	U238	
1	FURNACE EX LINE 1	14.27	3.30E-13	+/-	6.50E-14	8.00E-14	2.78	2.81E-13	9.90E-15	3.96E-14	12.13	0.43	1.71	
2	FURNACE EX LINE 2	4.42	1.02E-13	+/-	3.61E-14	8.00E-14	2.78	8.67E-14	3.06E-15	1.22E-14	3.76	0.13	0.53	
3	FURNACE EX LINE 3	4.41	1.02E-13	+/-	3.61E-14	8.00E-14	2.78	8.67E-14	3.06E-15	1.22E-14	3.75	0.13	0.53	
4	FURNACE EX LINE 4	3.70	8.56E-14	+/-	3.31E-14	8.00E-14	2.78	7.28E-14	2.57E-15	1.03E-14	3.15	0.11	0.44	
5	FURNACE EX LINE 5	4.65	1.08E-13	+/-	3.72E-14	8.00E-14	2.78	9.18E-14	3.24E-15	1.30E-14	3.95	0.14	0.56	
6	NEW DECON RM	9.37	3.68E-13	+/-	1.10E-13	8.00E-14	1.64	3.13E-13	1.10E-14	4.42E-14	7.96	0.28	1.12	
7	MET LAB EX	4.44	5.14E-13	+/-	1.07E-13	8.00E-14	0.56	4.37E-13	1.54E-14	6.17E-14	3.77	0.13	0.53	
8	INCINER EX	18.89	6.60E-13	+/-	1.11E-13	8.00E-14	1.89	5.61E-13	1.98E-14	7.92E-14	16.06	0.57	2.27	
9	SUPPL INC EX	3.06	2.09E-13	+/-	6.56E-14	8.00E-14	0.94	1.78E-13	6.27E-15	2.51E-14	2.60	0.09	0.37	
10	CONVERS 1-A EX	9.07	1.41E-13	+/-	4.25E-14	8.00E-14	4.17	1.20E-13	4.23E-15	1.69E-14	7.71	0.27	1.09	
11	CONVERSION 1-B	0.29	4.80E-13	+/-	7.84E-14	8.00E-14	4.17	4.08E-13	1.44E-14	5.76E-14	0.25	0.01	0.03	
12	SCRAP REC 2-A	5.49	1.10E-13	+/-	3.75E-14	8.00E-14	2.78	9.35E-14	3.30E-15	1.32E-14	4.67	0.16	0.66	
12a	S-1030-A	0.33	2.29E-13	+/-	5.42E-14	8.00E-14	7.56	1.95E-13	6.87E-15	2.75E-14	0.28	0.01	0.04	
13	SCRAP REC 2-B	0.29	1.87E-13	+/-	4.89E-14	8.00E-14	2.78	1.59E-13	5.61E-15	2.24E-14	0.25	0.01	0.03	
14	CONV 3-A	20.33	1.23E-12	+/-	1.26E-13	8.00E-14	2.78	1.05E-12	3.69E-14	1.48E-13	17.28	0.61	2.44	
15	CONV 3-B	3.03	4.68E-13	+/-	7.74E-14	8.00E-14	2.78	3.98E-13	1.40E-14	5.62E-14	2.58	0.09	0.36	
16	MAINT ENCL 4B	0.00	4.68E-13	+/-	7.74E-14	8.00E-14	3.89	3.98E-13	1.40E-14	5.62E-14	0.00	0.00	0.00	
17	CONV ENCL EX 4C	9.62	1.59E-13	+/-	4.51E-14	8.00E-14	3.89	1.35E-13	4.77E-15	1.91E-14	8.18	0.29	1.15	
18	CONV ENCL EX 4D	0.00	3.29E-13	+/-	6.49E-14	8.00E-14	3.89	2.80E-13	9.87E-15	3.95E-14	0.00	0.00	0.00	
19	CONV EMERG EX 4E	5.99	4.31E-13	+/-	7.43E-14	8.00E-14	3.89	3.66E-13	1.29E-14	5.17E-14	5.09	0.18	0.72	
20	CHEM LAB FILTERED EX	7.82	9.05E-13	+/-	1.08E-13	8.00E-14	5.56	7.69E-13	2.72E-14	1.09E-13	6.65	0.23	0.94	
21	DECON ROOM EX	32.24	1.46E-12	+/-	1.37E-13	8.00E-14	1.42	1.24E-12	4.38E-14	1.75E-13	27.40	0.97	3.87	
22	CAL COMBGAS LN 1	1.59	5.67E-13	+/-	8.52E-14	8.00E-14	0.18	4.82E-13	1.70E-14	6.80E-14	1.35	0.05	0.19	
23	CAL COMBGAS LN 2	0.80	3.15E-13	+/-	6.35E-14	8.00E-14	0.18	2.68E-13	9.45E-15	3.78E-14	0.68	0.02	0.10	
24	CAL COMBGAS LN 3	0.58	2.28E-13	+/-	5.40E-14	8.00E-14	0.18	1.94E-13	6.84E-15	2.74E-14	0.49	0.02	0.07	
25	CAL COMBGAS LN 4	0.51	1.99E-13	+/-	5.05E-14	8.00E-14	0.18	1.69E-13	5.97E-15	2.39E-14	0.43	0.02	0.06	
26	CAL COMBGAS LN 5	1.34	5.27E-13	+/-	8.22E-14	8.00E-14	0.18	4.48E-13	1.58E-14	6.32E-14	1.14	0.04	0.16	
27	CHEM LAB # 2	3.72	4.10E-13	+/-	7.25E-14	8.00E-14	0.58	3.49E-13	1.23E-14	4.92E-14	3.16	0.11	0.45	
28	CHEM LAB #3	0.47	9.50E-14	+/-	3.49E-14	8.00E-14	0.64	8.08E-14	2.85E-15	1.14E-14	0.40	0.01	0.06	
29	HP LAB EX	0.83	9.13E-14	+/-	3.42E-14	8.00E-14	0.58	7.76E-14	2.74E-15	1.10E-14	0.71	0.02	0.10	
30	DEV LAB 1 EX	5.95	4.05E-13	+/-	7.20E-14	8.00E-14	0.94	3.44E-13	1.22E-14	4.86E-14	5.06	0.18	0.71	
31	DEV LAB 2 EX	8.54	5.81E-13	+/-	8.63E-14	8.00E-14	0.94	4.94E-13	1.74E-14	6.97E-14	7.26	0.26	1.02	
32	PELLET COMBINED	6.32	8.61E-14	+/-	3.32E-14	8.00E-14	4.72	7.32E-14	2.58E-15	1.03E-14	5.37	0.19	0.76	
33	SOLV X N	6.71	1.59E-13	+/-	4.51E-14	8.00E-14	3.33	1.35E-13	4.77E-15	1.91E-14	5.70	0.20	0.81	
34	SOLV X S	3.18	3.46E-13	+/-	6.66E-14	8.00E-14	3.33	2.94E-13	1.04E-14	4.15E-14	2.70	0.10	0.38	
35	SCRAP REC DRY	6.86	4.67E-13	+/-	7.73E-14	8.00E-14	0.94	3.97E-13	1.40E-14	5.60E-14	5.83	0.21	0.82	
36	MAP COMBINED	0.00	3.08E-13	+/-	6.28E-14	8.00E-14	2.78	2.62E-13	9.24E-15	3.70E-14	0.00	0.00	0.00	
37	IFBA EX	5.88	8.00E-14	+/-	3.20E-14	8.00E-14	4.72	6.80E-14	2.40E-15	9.60E-15	5.00	0.18	0.71	
38	MAINT WELD EX	5.88	4.01E-14	+/-	2.27E-14	8.00E-14	0.94	3.41E-14	1.20E-15	4.81E-15	5.00	0.18	0.71	
39	AC-3	5.48	9.34E-14	+/-	3.46E-14	8.00E-14	3.89	7.94E-14	2.80E-15	1.12E-14	4.66	0.16	0.66	
40	BULK BLEND EX	5.24	1.21E-13	+/-	3.94E-14	8.00E-14	2.78	1.03E-13	3.63E-15	1.45E-14	4.45	0.16	0.63	
41	AC-5	5.65	9.61E-14	+/-	3.51E-14	8.00E-14	3.89	8.17E-14	2.88E-15	1.15E-14	4.80	0.17	0.68	
42	AC-8	4.93	8.39E-14	+/-	3.28E-14	8.00E-14	3.89	7.13E-14	2.52E-15	1.01E-14	4.19	0.15	0.59	
43	AMMONIA FUME SC 1008-A	3.14	1.07E-13	+/-	3.70E-14	8.00E-14	1.89	9.10E-14	3.21E-15	1.28E-14	2.67	0.09	0.38	
44	AMMONIA FUME SC 1008-B	0.00	1.17E-13	+/-	3.87E-14	8.00E-14	1.89	9.95E-14	3.51E-15	1.40E-14	0.00	0.00	0.00	
45	AC-4	4.84	8.00E-14	+/-	3.20E-14	8.00E-14	3.89	6.80E-14	2.40E-15	9.60E-15	4.11	0.15	0.58	
46	HOT OIL RM EX	20.74	3.43E-14	+/-	2.10E-14	8.00E-14	3.89	2.92E-14	1.03E-15	4.12E-15	17.63	0.62	2.49	
47	ERBIA FURNACE EX	10.24	8.06E-14	+/-	3.21E-14	8.00E-14	8.06	6.85E-14	2.42E-15	9.67E-15	8.70	0.31	1.23	
48	ERBIA SCRUBBER EX	5.39	8.00E-14	+/-	3.20E-14	8.00E-14	4.44	6.80E-14	2.40E-15	9.60E-15	4.58	0.16	0.65	
49	ERBIA CHANGE ROOM	2.38	8.07E-14	+/-	3.22E-14	8.00E-14	1.89	6.86E-14	2.42E-15	9.68E-15	2.02	0.07	0.29	
Total uCi		288.9						TOTAL DERIVED ISOTOPIC RELEASE			245.6	8.7	34.7	Total 288.90