



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

Director, Office of Nuclear Material  
Safety and Safeguards  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-001

Direct tel: 803-647-1000

Our ref: LTR-RAC-07-16

February 26, 2007

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 July 1, 2006 through December 31, 2006, 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	266.3 uCi Uranium (Analyzed as gross alpha)
B. Liquid Effluent	3487.2 uCi - U-234
	123.1 uCi - U-235
	492.3 uCi - U-238

Gaseous effluent results were obtained from point source gross alpha analysis of stack gas effluent, and the individual radionuclide activity composition (85.0% U-234, 3.0% U-235, and 12.0% U-238) is inferred from the calculated average enrichment. 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

A handwritten signature in cursive script, reading 'Marc Rosser'.

Marc A. Rosser, Manager  
Environment, Health and Safety

cc: U.S. NRC, (2)  
ATTN: Regional Administrator, RII  
Region II  
61 Forsyth Street SW, Suite 23T85  
Atlanta, Georgia 30303

**ATTACHMENT "B"**  
**LIQUID EFFLUENT DISCHARGES**  
**SECOND HALF 2006**

- A. Report Period: July 1, through December 31, 2006  
 B. Sample Location: Composite Sampler at Waste Treatment, prior to discharge to Congaree River  
 C. Total Liquid Flow: 7.779 E+07 liters  
 D. Sample Collection: Effluent Composite Sampler

Radioisotope	Concentration	LLD, uCi/ml	Quantity Released, uCi
	uCi/ml      Error		
U-234	4.48 E-08+/-0.28 E-08	6.00 E-10	3487.2
U-235	0.158 E-08+/-0.08 E-08	6.00 E-10	123.1
U-238	6.33 E-09+/-1.10 E-09	6.00E-10	492.3
Total			4102.6

Note:

- 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 - JULY 1 THROUGH DECEMBER 31, 2006

2006 SECOND 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 uCi/ml			DERIVED ISOTOPIC DISCHARGE, uCi			
									U234	U235	U238	U234	U235	U238	
1	FURNACE EX LINE 1	5.01	1.01E-13	+/-	3.60E-14	8.00E-14	2.78	8.59E-14	3.03E-15	1.21E-14	4.26	0.15	0.60		
2	FURNACE EX LINE 2	5.63	9.96E-14	+/-	3.57E-14	8.00E-14	2.78	8.47E-14	2.99E-15	1.20E-14	4.79	0.17	0.68		
3	FURNACE EX LINE 3	5.59	1.03E-14	+/-	1.15E-14	8.00E-14	2.78	8.76E-15	3.09E-16	1.24E-15	4.75	0.17	0.67		
4	FURNACE EX LINE 4	5.28	8.84E-14	+/-	3.37E-14	8.00E-14	2.78	7.51E-14	2.65E-15	1.06E-14	4.49	0.16	0.63		
5	FURNACE EX LINE 5	6.16	1.42E-13	+/-	4.27E-14	8.00E-14	2.78	1.21E-13	4.26E-15	1.70E-14	5.24	0.18	0.74		
6	NEW DECON RM	3.62	1.24E-13	+/-	6.41E-14	8.00E-14	1.64	1.05E-13	3.72E-15	1.49E-14	3.08	0.11	0.43		
7	MET LAB EX	1.62	1.39E-13	+/-	6.78E-14	8.00E-14	0.56	1.18E-13	4.17E-15	1.67E-14	1.38	0.05	0.19		
8	INCINER EX	4.68	8.00E-14	+/-	5.15E-14	8.00E-14	1.89	6.80E-14	2.40E-15	9.60E-15	3.98	0.14	0.56		
9	SUPPL INC EX	5.77	8.00E-14	+/-	5.15E-14	8.00E-14	0.94	6.80E-14	2.40E-15	9.60E-15	4.90	0.17	0.69		
10	CONVERS 1-A EX	12.64	1.98E-13	+/-	5.04E-14	8.00E-14	4.17	1.68E-13	5.94E-15	2.38E-14	10.74	0.38	1.52		
11	CONVERSION 1-B	0.05	1.23E-13	+/-	3.97E-14	8.00E-14	4.17	1.05E-13	3.69E-15	1.48E-14	0.04	0.00	0.01		
12	S-1030-A	12.37	2.63E-13	+/-	5.80E-14	8.00E-14	7.50	2.24E-13	7.89E-15	3.16E-14	10.51	0.37	1.48		
13	S-1030-B	4.92	5.01E-13	+/-	8.01E-14	8.00E-14	7.50	4.26E-13	1.50E-14	6.01E-14	4.18	0.15	0.59		
14	MAINT ENCL 4B	0.00	7.64E-13	+/-	9.89E-14	8.00E-14	3.89	6.49E-13	2.29E-14	9.17E-14	0.00	0.00	0.00		
15	CONV ENCL EX 4C	10.76	1.38E-13	+/-	4.20E-14	8.00E-14	3.89	1.17E-13	4.14E-15	1.66E-14	9.15	0.32	1.29		
16	CONV ENCL EX 4D	0.00	2.77E-13	+/-	5.96E-14	8.00E-14	3.89	2.35E-13	8.31E-15	3.32E-14	0.00	0.00	0.00		
17	CONV EMERG EX 4E	1.79	4.14E-13	+/-	7.28E-14	8.00E-14	3.89	3.52E-13	1.24E-14	4.97E-14	1.52	0.05	0.21		
18	CHEM LAB FILTERED EX	10.59	1.01E-13	+/-	3.60E-14	8.00E-14	5.56	8.59E-14	3.03E-15	1.21E-14	9.00	0.32	1.27		
19	DECON ROOM EX	12.58	5.57E-13	+/-	8.45E-14	8.00E-14	1.42	4.73E-13	1.67E-14	6.68E-14	10.69	0.38	1.51		
20	CAL COMBGAS LN 1	1.56	5.48E-13	+/-	8.38E-14	8.00E-14	0.16	4.66E-13	1.64E-14	6.58E-14	1.33	0.05	0.19		
21	CAL COMBGAS LN 2	2.58	1.23E-12	+/-	8.45E-14	8.00E-14	0.16	1.05E-12	3.69E-14	1.48E-13	2.19	0.08	0.31		
22	CAL COMBGAS LN 3	0.75	2.91E-13	+/-	6.11E-14	8.00E-14	0.16	2.47E-13	8.73E-15	3.49E-14	0.64	0.02	0.09		
23	CAL COMBGAS LN 4	0.77	2.03E-13	+/-	5.10E-14	8.00E-14	0.16	1.73E-13	6.09E-15	2.44E-14	0.65	0.02	0.09		
24	CAL COMBGAS LN 5	2.50	8.47E-13	+/-	1.04E-13	8.00E-14	0.16	7.20E-13	2.54E-14	1.02E-13	2.13	0.08	0.30		
25	CHEM LAB # 2	5.26	4.94E-13	+/-	7.96E-14	8.00E-14	0.16	4.20E-13	1.48E-14	5.93E-14	4.47	0.16	0.63		
26	CHEM LAB #3	0.67	9.99E-14	+/-	3.58E-14	8.00E-14	0.58	8.49E-14	3.00E-15	1.20E-14	0.57	0.02	0.08		
27	HP LAB EX	1.09	9.03E-14	+/-	3.40E-14	8.00E-14	0.64	7.68E-14	2.71E-15	1.08E-14	0.93	0.03	0.13		
28	DEV LAB 1 EX	2.35	1.78E-13	+/-	4.78E-14	8.00E-14	0.58	1.51E-13	5.34E-15	2.14E-14	2.00	0.07	0.28		
29	DEV LAB 2 EX	2.37	1.34E-13	+/-	4.14E-14	8.00E-14	0.94	1.14E-13	4.02E-15	1.61E-14	2.01	0.07	0.28		
30	PELLET COMBINED	24.98	8.90E-14	+/-	3.38E-14	8.00E-14	0.94	7.57E-14	2.67E-15	1.07E-14	21.23	0.75	3.00		
31	SOLV X N	4.95	1.01E-13	+/-	3.60E-14	8.00E-14	4.72	8.59E-14	3.03E-15	1.21E-14	4.21	0.15	0.59		
32	SOLV X S	4.16	3.39E-13	+/-	6.59E-14	8.00E-14	3.33	2.88E-13	1.02E-14	4.07E-14	3.54	0.12	0.50		
33	SCRAP REC DRY	6.53	5.83E-13	+/-	8.64E-14	8.00E-14	3.33	4.96E-13	1.75E-14	7.00E-14	5.55	0.20	0.78		
34	MAP COMBINED	0.00	3.35E-13	+/-	6.55E-14	8.00E-14	0.94	2.85E-13	1.01E-14	4.02E-14	0.00	0.00	0.00		
35	ABF HOOD TORIT EX	2.63	1.02E-13	+/-	3.61E-14	8.00E-14	1.42	8.67E-14	3.06E-15	1.22E-14	2.24	0.08	0.32		
36	IFBA EX	6.34	8.95E-14	+/-	3.39E-14	8.00E-14	4.72	7.61E-14	2.69E-15	1.07E-14	5.39	0.19	0.76		
37	MAINT WELD EX	4.56	3.26E-13	+/-	6.46E-14	8.00E-14	0.94	2.77E-13	9.78E-15	3.91E-14	3.88	0.14	0.55		
38	AC-3	6.33	8.80E-13	+/-	1.06E-13	8.00E-14	3.78	7.48E-13	2.64E-14	1.06E-13	5.38	0.19	0.76		
39	PELLET LINE 6	5.12	8.94E-13	+/-	1.07E-13	8.00E-14	2.78	7.60E-13	2.68E-14	1.07E-13	4.35	0.15	0.61		
40	AC-5	6.83	1.19E-13	+/-	3.90E-14	8.00E-14	3.78	1.01E-13	3.57E-15	1.43E-14	5.81	0.20	0.82		
41	AC-8	5.43	8.08E-14	+/-	3.22E-14	8.00E-14	3.78	6.87E-14	2.42E-15	9.70E-15	4.62	0.16	0.65		
42	AMMONIA FUME SC 1008-A	3.62	2.43E-13	+/-	5.58E-14	8.00E-14	1.89	2.07E-13	7.29E-15	2.92E-14	3.08	0.11	0.43		
43	AMMONIA FUME SC 1008-B	1.87	4.21E-13	+/-	7.34E-14	8.00E-14	1.89	3.58E-13	1.26E-14	5.05E-14	1.59	0.06	0.22		
44	AC-4	5.53	8.98E-14	+/-	3.39E-14	8.00E-14	3.89	7.63E-14	2.69E-15	1.08E-14	4.70	0.17	0.66		
45	HOT OIL RM EX	28.02	5.79E-13	+/-	8.61E-14	8.00E-14	3.89	4.92E-13	1.74E-14	6.95E-14	23.82	0.84	3.36		
46	ERBIA FURNACE EX	10.96	1.79E-13	+/-	4.79E-14	8.00E-14	8.17	1.52E-13	5.37E-15	2.15E-14	9.32	0.33	1.32		
47	ERBIA SCRUBBER EX	5.74	8.07E-14	+/-	3.22E-14	8.00E-14	4.33	6.86E-14	2.42E-15	9.68E-15	4.88	0.17	0.69		
48	ERBIA CHANGE ROOM	3.77	1.11E-13	+/-	3.77E-14	8.00E-14	1.90	9.44E-14	3.33E-15	1.33E-14	3.20	0.11	0.45		
Total uCi		266.3							TOTAL DERIVED ISOTOPIC			226.4	8.0	32.0	Total 266.3