



Westinghouse
Electric Corporation

Commercial Nuclear Fuel Division

Drawer R
Columbia South Carolina 29250
(803) 776 2610

NRC-97-001

February 25, 1997

U. S. Nuclear Regulatory Commission
ATTN: Regional Administrator, RII
Region II
101 Marietta St, NW, Suite 2900
Atlanta, GA 30323

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, 1996 through December 31, 1996, the following quantities of radionuclides were released to the unrestricted area by the Westinghouse Electric Corporation's Columbia, South Carolina Commercial Nuclear Fuel Division plant:

A. Gaseous	261.4	uCi Uranium (Analyzed as gross alpha)
B. Liquid Effluent	21,064.6	uCi - U-234
	1027.5	uCi - U-235
	3596.4	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 (82% U-234, 4.0% U-235, and 14.0% 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 routed through a single discharge line to Congaree River. A detailed summary liquid discharge report is provided as Attachment "B."

Sincerely,

WESTINGHOUSE ELECTRIC CORPORATION

W. L. Goodwin, Manager
Regulatory Affairs

cc: U. S. Nuclear Reg. Commission (2)
ATTN: William Gloerson
101 Marietta St, NW, Suite 2900
Atlanta, GA 30323

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

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ATTACHMENT "B"
LIQUID EFFLUENT DISCHARGES
SECOND HALF 1996

- A. Report Period: July 1, through December 31, 1996
B. Sample Location: Composite sampler prior to discharge to Congaree River
C. Total Liquid Flow: $6.79 \text{ E} + 07$ liters
D. Sample Collection: Effluent Composite Sampler

Radioisotope	Concentration	LLD, uCi/ml	Quantity Released, uCi
	uCi/ml Error		
U-234	$3.10 \text{ E} - 07 + / - 3.35 \text{ E} - 08$	$6.0 \text{ E} - 10$	21,064.6
U-235	$1.51 \text{ E} - 08 + / - 2.16 \text{ E} - 09$	$6.0 \text{ E} - 10$	1,027.5
U-238	$5.30 \text{ E} - 08 + / - 6.35 \text{ E} - 09$	$6.0 \text{ E} - 10$	3,596.4
Total			25,688.5

Note:

1. Liquid effluent composites were analyzed by alpha spectroscopy, and U-236 was not detected using this method. Any U-236 present would be in minute quantities.

Attachment "A" GASEOUS EFFLUENT DISCHARGES - JULY 1 THROUGH DECEMBER 31, 1996

	1996 SECOND HALF GASEOUS EFFLUENTS STACK ID	QUANTITY RELEASED uCi Uranium	GROSS ALPHA CONCENTRATION 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	5.48	1.25E-13	+/-	4.00E-14	8.00E-14	2.78	1.03E-13	5.00E-15	1.75E-14	4.49	0.22	0.77
2	FURNACE EX LINE 2	4.72	1.09E-13	+/-	3.74E-14	8.00E-14	2.78	8.94E-14	4.36E-15	1.53E-14	3.87	0.19	0.66
3	FURNACE EX LINE 3	5.43	1.25E-13	+/-	4.00E-14	8.00E-14	2.78	1.03E-13	5.00E-15	1.75E-14	4.45	0.22	0.76
4	FURNACE EX LINE 4	5.04	1.16E-13	+/-	3.85E-14	8.00E-14	2.78	9.51E-14	4.64E-15	1.62E-14	4.13	0.20	0.71
5	FURNACE EX LINE 5	5.67	1.30E-13	+/-	4.08E-14	8.00E-14	2.78	1.07E-13	5.20E-15	1.82E-14	4.65	0.23	0.79
6	NEW DECON RM	3.97	1.55E-13	+/-	7.16E-14	8.00E-14	1.64	1.27E-13	6.20E-15	2.17E-14	3.26	0.16	0.56
7	MET LAB EX	5.46	6.23E-13	+/-	1.18E-13	8.00E-14	.56	5.11E-13	2.49E-14	8.72E-14	4.48	0.22	0.76
8	INCINER EX	16.02	5.78E-13	+/-	1.04E-13	8.00E-14	1.89	4.74E-13	2.31E-14	8.09E-14	13.14	0.64	2.24
9	SUPPL INC EX	2.40	1.56E-13	+/-	5.67E-14	8.00E-14	0.94	1.28E-13	6.24E-15	2.18E-14	1.97	0.10	0.34
10	CONVERS 1-A EX	10.14	1.62E-13	+/-	4.56E-14	8.00E-14	4.17	1.33E-13	6.48E-15	2.27E-14	8.31	0.41	1.42
11	CONVERSION 1-B	0.58	2.20E-13	+/-	5.31E-14	8.00E-14	4.17	1.80E-13	8.80E-15	3.08E-14	0.48	0.02	0.08
12	SCRAP REC 2-A	4.15	1.00E-13	+/-	3.58E-14	8.00E-14	2.78	8.20E-14	4.00E-15	1.40E-14	3.40	0.17	0.58
13	SCRAP REC 2-B	1.33	5.46E-13	+/-	8.36E-14	8.00E-14	2.78	4.48E-13	2.18E-14	7.64E-14	1.09	0.05	0.19
14	CONV 3-A	29.61	7.40E-13	+/-	9.74E-14	8.00E-14	2.78	6.07E-13	2.96E-14	1.04E-13	24.28	1.18	4.15
15	CONV 3-B	4.73	1.40E-12	+/-	1.34E-13	8.00E-14	2.78	1.15E-12	5.60E-14	1.96E-13	3.88	0.19	0.66
16	MAINT ENCL 4B	13.03	2.13E-13	+/-	5.22E-14	8.00E-14	3.89	1.75E-13	8.52E-15	2.98E-14	10.68	0.52	1.82
17	CONV ENCL EX 4C	0.00	2.65E-13	+/-	5.83E-14	8.00E-14	3.89	2.17E-13	1.06E-15	3.71E-14	0.00	0.00	0.00
18	CONV ENCL EX 4D	27.42	3.83E-13	+/-	7.00E-14	8.00E-14	3.89	3.14E-13	1.53E-14	5.36E-14	19.20	0.94	3.28
19	CONV EMERG EX 4E	0.40	2.73E-13	+/-	5.91E-14	8.00E-14	3.89	2.24E-13	1.09E-14	3.82E-14	0.33	0.02	0.06
20	CHEM LAB FILTERED	7.78	8.90E-14	+/-	3.38E-14	8.00E-14	5.56	7.30E-14	3.56E-15	1.25E-14	6.38	0.31	1.09
21	DECON ROOM EX	6.45	2.90E-14	+/-	1.93E-14	8.00E-14	1.42	2.38E-14	1.16E-15	4.06E-15	5.29	0.26	0.90
22	CAL COMBGAS LN 1	0.67	2.36E-13	+/-	8.86E-14	8.00E-14	0.18	1.94E-13	9.44E-15	3.30E-14	0.55	0.03	0.09
23	CAL COMBGAS LN 2	0.99	3.78E-13	+/-	1.12E-13	8.00E-14	0.18	3.10E-13	1.51E-14	5.29E-14	0.81	0.04	0.14
24	CAL COMBGAS LN 3	0.81	3.06E-13	+/-	1.01E-13	8.00E-14	0.18	2.51E-13	1.22E-14	4.28E-14	0.66	0.03	0.11
25	CAL COMBGAS LN 4	1.12	4.38E-13	+/-	1.21E-13	8.00E-14	0.18	3.59E-13	1.75E-14	6.13E-14	0.92	0.04	0.16
26	CAL COMBGAS LN 5	1.15	4.53E-13	+/-	1.23E-13	8.00E-14	0.18	3.71E-13	1.81E-14	6.34E-14	0.94	0.05	0.16
27	CHEM LAB 2	0.80	8.40E-14	+/-	5.28E-14	8.00E-14	0.58	6.89E-14	3.36E-15	1.18E-14	0.66	0.03	0.11
28	CHEM LAB #3	1.94	1.93E-13	+/-	8.01E-14	8.00E-14	0.64	1.58E-13	7.72E-15	2.70E-14	1.59	0.08	0.27
29	HP LAB EX	1.03	1.12E-12	+/-	2.45E-13	8.00E-14	0.58	9.18E-13	4.48E-14	1.57E-13	0.84	0.04	0.14
30	DEV LAB 1 EX	4.29	2.88E-13	+/-	7.70E-14	8.00E-14	0.94	2.36E-13	1.15E-14	4.03E-14	3.52	0.17	0.60
31	DEV LAB 2 EX	3.11	2.09E-13	+/-	6.56E-14	8.00E-14	0.94	1.71E-13	8.36E-15	2.93E-14	2.55	0.12	0.44
32	PELLET COMBINED	11.20	1.51E-13	+/-	5.58E-14	8.00E-14	4.72	1.24E-13	6.04E-15	2.11E-14	9.18	0.45	1.57
33	SOLV X N	4.60	9.30E-14	+/-	3.45E-14	8.00E-14	3.33	7.63E-14	3.72E-15	1.30E-14	3.77	0.18	0.64
34	SOLV X S	1.07	4.31E-13	+/-	7.43E-14	8.00E-14	3.33	3.53E-13	1.72E-14	6.03E-14	.88	0.04	0.15
35	SCRAP REC DRY	3.33	2.25E-13	+/-	6.81E-14	8.00E-14	0.94	1.85E-13	9.00E-15	3.15E-14	2.73	0.13	0.47
36	MAP COMBINED	0.00	1.67E-13	+/-	4.63E-14	8.00E-14	6.67	1.37E-13	6.68E-15	2.34E-14	0.00	0.00	0.00
37	U308 HF STRIP	10.94	3.69E-13	+/-	8.72E-14	8.00E-14	1.89	3.03E-13	1.48E-14	5.17E-14	8.97	0.44	1.53
38	IFBA EX	6.58	8.80E-14	+/-	4.26E-14	8.00E-14	4.72	7.22E-14	3.52E-15	1.23E-14	5.40	0.26	0.92
39	MAINT WELD EX	10.95	7.37E-13	+/-	1.23E-13	8.00E-14	0.94	6.04E-13	2.95E-14	1.03E-13	8.98	0.44	1.53
40	AC-3	3.53	2.09E-13	+/-	6.56E-14	8.00E-14	3.89	1.71E-13	8.36E-15	2.93E-14	2.89	0.14	0.49
41	BULK BLEND EX	4.14	9.60E-14	+/-	4.45E-14	8.00E-14	2.78	7.87E-14	3.84E-15	1.34E-14	3.39	0.17	0.58
42	AC-5	3.77	3.73E-13	+/-	1.11E-13	8.00E-14	3.89	3.06E-13	1.49E-14	5.22E-14	3.09	0.15	0.53
43	AC-8	20.91	3.52E-13	+/-	7.82E-14	8.00E-14	3.89	2.89E-13	1.41E-14	4.93E-14	17.15	0.84	2.93
44	AMMONIA FUME 1008-A	8.65	2.92E-13	+/-	7.75E-14	8.00E-14	1.89	2.39E-13	1.17E-14	4.09E-14	7.09	0.35	1.21
45	AMMONIA FUME 1008-B	0.00	1.00E-13	+/-	4.54E-14	8.00E-14	1.89	8.20E-14	4.00E-15	1.40E-14	0.00	0.00	0.00
	Total uCi	261.4						Total Derived Isotopic Release			214.3	10.5	36.6