



Nuclear Fuel Services, Inc.
1205 Banner Hill Road
Erwin, TN 37650
(423) 743-9141

21G-05-0055
GOV-01-55
ACF-05-0107

March 11, 2005

Dr. William D. Travers, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II, Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303

References: 1) Docket No. 70-143; SNM License 124
2) Letter to W.D. Travers (NRC) from B.M. Moore (NFS), dated February 25, 2005
(21G-05-0037)

Subject: **Amendments to Biannual Effluent Monitoring Report July through December 2004**

Dear Dr. Travers:

In accordance with the requirements set forth in 10 CFR, Part 70.59, Nuclear Fuel Services, Inc. (NFS) submits the attached reports. Attachment A includes amended reports for the Radioactivity in Effluent Liquid for the monitoring period July through December 2004 (Ref. 2).

Regarding Attachment A, Radioactivity in Effluent Liquid, the radionuclide values reported are based on radionuclide-specific measurements of monthly composite samples of each effluent stream. Due to an inadvertent error, the original report did not include the results for the BLEU Complex Sanitary Sewer (BLEU Sewer). The omission has been included. Also, an inadvertent calculational error was recently discovered in the column labeled "Total Volume (l)." The calculational error has been corrected. The error caused NFS to over-report the amount of radioactivity released by the NFS Sanitary Sewer (Sewer) and the Waste Water Treatment Facility (WWTF). All data in the columns have been corrected. Please replace the previously submitted Attachment A (Ref. 2) with the current Attachment A.

If you or your staff have any questions, require additional information, or wish to discuss this, please contact me or Ms. Janice Greene, Environmental Safety Manager, at (423) 743-1730. Please reference our unique document identification number (21G-05-0055) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.


for B. Marie Moore
Vice President
Safety and Regulatory

SLS/rrm
Attachment

B. M. Moore to W. D. Travers (NRC)
March 11, 2005

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xc: Mr. William Gloersen, Project Inspector
U. S. Nuclear Regulatory Commission
Region II, Atlanta Federal Center
61 Forsyth Street, SW
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Atlanta, GA 30303

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U. S. Nuclear Regulatory Commission
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B. M. Moore to W. D. Travers (NRC)
March 11, 2005

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Attachment A
To Letter Dated March 11, 2005
B. M. Moore to W. D. Travers (NRC)

Amended Reports of Radioactivity in Effluent Liquid for the Period
July - December 2004

(One Page to Follow)

Radioactivity in Effluent Liquid

July 1, 2004 to December 31, 2004

Location	Total Volume (l)	Activity Concentration (μCi/ml)	Error Estimate (μCi/ml)	LLD (μCi/ml)	Quantity Released (Ci)	Quantity Released (g)	Fraction of ECV ¹
Banner Spring Down							
Pu-238	282,604,780	2.01E-11	1.30E-10	4.01E-10	5.67E-06	3.32E-07	1.00E-03
Pu-239/240	282,604,780	8.63E-12	1.10E-10	3.66E-10	2.44E-06	3.92E-05	4.32E-04
Tc-99	282,604,780	-1.03E-08	2.09E-08	3.66E-08	-2.91E-03	-1.72E-01	-1.72E-04
Th-228	282,604,780	1.55E-11	1.39E-10	3.79E-10	4.38E-06	5.34E-09	7.74E-05
Th-230	282,604,780	1.73E-10	1.76E-10	2.75E-10	4.89E-05	2.42E-03	1.73E-03
Th-232	282,604,780	4.13E-11	8.28E-11	1.71E-10	1.17E-05	1.07E+02	1.38E-03
U-234	282,604,780	4.29E-09	8.44E-10	3.60E-10	1.21E-03	1.94E-01	1.43E-02
U-235/236	282,604,780	1.70E-10	1.89E-10	2.38E-10	4.81E-05	2.23E+01	5.68E-04
U-238	282,604,780	1.47E-10	1.79E-10	3.64E-10	4.14E-05	1.24E+02	4.88E-04
					Total:		1.98E-02
BLEU Sewer							
Pu-238	7,087,405	2.68E-11	1.90E-10	5.56E-10	1.90E-07	1.11E-08	1.34E-03
Pu-239/240	7,087,405	5.71E-11	1.64E-10	4.52E-10	4.05E-07	6.51E-06	2.85E-03
Th-228	7,087,405	7.97E-11	2.15E-10	5.18E-10	5.65E-07	6.89E-10	3.98E-04
Th-230	7,087,405	1.96E-10	2.07E-10	3.35E-10	1.39E-06	6.89E-05	1.96E-03
Th-232	7,087,405	4.22E-11	1.11E-10	2.79E-10	2.99E-07	2.75E+00	1.41E-03
U-234	7,087,405	4.84E-10	3.56E-10	4.88E-10	3.43E-06	5.50E-04	1.61E-03
U-235/236	7,087,405	2.44E-11	1.26E-10	3.54E-10	1.73E-07	8.00E-02	8.13E-05
U-238	7,087,405	2.33E-10	2.45E-10	4.10E-10	1.65E-06	4.93E+00	7.76E-04
					Total:		1.04E-02
Sewer							
Pu-238	123,606,419	3.36E-11	1.64E-10	4.39E-10	4.16E-06	2.43E-07	1.68E-04
Pu-239/240	123,606,419	1.32E-10	1.88E-10	3.29E-10	1.64E-05	2.63E-04	6.62E-04
Tc-99	123,606,419	-2.20E-09	2.21E-08	4.11E-08	-2.72E-04	-1.61E-02	-3.66E-06
Th-228	123,606,419	7.83E-11	1.88E-10	4.51E-10	9.68E-06	1.18E-08	3.91E-05
Th-230	123,606,419	1.84E-10	1.76E-10	3.02E-10	2.27E-05	1.13E-03	1.84E-04
Th-232	123,606,419	1.09E-11	6.51E-11	2.48E-10	1.35E-06	1.24E+01	3.64E-05
U-234	123,606,419	2.58E-08	2.26E-09	4.25E-10	3.19E-03	5.12E-01	8.61E-03
U-235/236	123,606,419	1.17E-09	5.07E-10	3.52E-10	1.44E-04	6.68E+01	3.89E-04
U-238	123,606,419	6.09E-09	1.08E-09	3.46E-10	7.53E-04	2.25E+03	2.03E-03
					Total:		1.21E-02
WWTF							
Cs-137	5,319,722	5.01E-09	3.93E-09	5.02E-09	2.67E-05	3.06E-07	5.01E-03
Na-22	5,319,722	1.30E-09	2.48E-09	4.97E-09	6.91E-06	1.11E-09	2.16E-04
Pu-238	5,319,722	-3.13E-11	6.48E-11	4.53E-10	-1.66E-07	-9.74E-09	-1.56E-03
Pu-239/240	5,319,722	3.24E-11	1.31E-10	3.49E-10	1.72E-07	2.77E-06	1.62E-03
Ra-224	5,319,722	1.03E-08	1.17E-08	1.89E-08	5.46E-05	3.43E-10	5.13E-02
Tc-99	5,319,722	3.67E-09	2.27E-08	3.90E-08	1.95E-05	1.16E-03	6.12E-05
Th-228	5,319,722	1.35E-10	2.57E-10	5.24E-10	7.20E-07	8.80E-10	6.77E-04
Th-230	5,319,722	6.62E-10	3.69E-10	3.64E-10	3.52E-06	1.74E-04	6.62E-03
Th-232	5,319,722	9.82E-11	1.50E-10	2.73E-10	5.22E-07	4.79E+00	3.27E-03
U-234	5,319,722	1.12E-07	4.46E-09	4.74E-10	5.96E-04	9.56E-02	3.74E-01
U-235/236	5,319,722	6.58E-09	9.94E-10	2.58E-10	3.50E-05	1.62E+01	2.19E-02
U-238	5,319,722	5.07E-09	8.39E-10	3.40E-10	2.70E-05	8.06E+01	1.69E-02
					Total:		4.80E-01

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B