



Nuclear Fuel Services, Inc.

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Return Receipt Requested

21G-25-0126
GOV-01-55
ACF-25-0207
August 18, 2025

Director
Office of Nuclear Material Safety & Safeguards
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Reference: Docket No. 70-143; SNM License 124

Subject: **Biannual Effluent Monitoring Report January to June 2025**

Dear Director:

In accordance with the requirements set forth in 10 CFR Part 70.59, Nuclear Fuel Services, Inc. (NFS), submits the attached reports. Attachment 1 reports the Radioactivity in Effluent Liquid for the period January to June 2025. Attachment 2 reports the Radioactivity in Effluent Air for the period January to June 2025. Attachment 3 summarizes an evaluation of the dose and air activity concentrations for the maximally exposed offsite individual due to gaseous effluents during the period January to June 2025.

If you or your staff have any questions, require additional information, or wish to discuss this, please contact me at (423) 735-5475, or Mr. Brian W. McAllister, Environmental Safety Unit Manager, at (423) 735-5450. Please reference our unique document identification number (21G-25-0126) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

Danielle Rogers
Safety & Safeguards Director

CJB/las
Attachments

- 1) Report of Radioactivity in Effluent Liquid for the Period January to June 2025
- 2) Report of Radioactivity in Effluent Air for the Period January to June 2025
- 3) Report of Gaseous Effluent Dose and Activity Concentrations for the Maximally Exposed Off-Site Individual for the Release Period January to June 2025

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Mr. Richard Skokowski
Senior Resident Inspector
U. S. Nuclear Regulatory Commission

**Attachment 1
To Letter Dated August 18, 2025**

**Report of Radioactivity in Effluent Liquid for the Period
January to June 2025**

(2 Pages to Follow)

Radioactivity in Effluent Liquid January 1, 2025 to June 30, 2025

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	348,860,000	1.24E-12	1.17E-10	2.59E-10	4.34E-07	2.54E-08	6.22E-05
Pu-239/240	348,860,000	1.95E-11	1.41E-10	2.90E-10	6.80E-06	1.09E-04	9.74E-04
Tc-99	348,860,000	0.00E+00	4.08E-08	7.13E-08	0.00E+00	0.00E+00	0.00E+00
Th-228	348,860,000	4.43E-11	1.96E-10	3.66E-10	1.54E-05	1.89E-08	2.21E-04
Th-230	348,860,000	1.16E-10	1.98E-10	3.32E-10	4.06E-05	2.01E-03	1.16E-03
Th-232	348,860,000	0.00E+00	9.41E-11	1.99E-10	0.00E+00	0.00E+00	0.00E+00
U-233/234	348,860,000	1.01E-09	3.40E-10	2.91E-10	3.54E-04	5.67E-02	3.38E-03
U-235/236	348,860,000	6.84E-11	1.18E-10	1.84E-10	2.39E-05	1.10E+01	2.28E-04
U-238	348,860,000	1.34E-10	1.48E-10	1.89E-10	4.66E-05	1.39E+02	4.45E-04
						Total:	6.48E-03
Sewer							
Pu-238	25,138,843	0.00E+00	7.18E-11	1.77E-10	0.00E+00	0.00E+00	0.00E+00
Pu-239/240	25,138,843	0.00E+00	6.00E-11	1.52E-10	0.00E+00	0.00E+00	0.00E+00
Tc-99	25,138,843	8.70E-09	4.12E-08	7.10E-08	2.19E-04	1.29E-02	1.45E-05
Th-228	25,138,843	2.56E-11	1.79E-10	3.60E-10	6.44E-07	7.86E-10	1.28E-05
Th-230	25,138,843	2.20E-10	2.55E-10	3.76E-10	5.53E-06	2.74E-04	2.20E-04
Th-232	25,138,843	7.18E-12	1.19E-10	2.50E-10	1.81E-07	1.66E+00	2.39E-05
U-232	25,138,843	0.00E+00	1.55E-10	3.45E-10	0.00E+00	0.00E+00	0.00E+00
U-233/234	25,138,843	1.12E-08	1.16E-09	2.26E-10	2.83E-04	4.53E-02	3.75E-03
U-235/236	25,138,843	7.08E-10	3.06E-10	2.12E-10	1.78E-05	8.24E+00	2.36E-04
U-238	25,138,843	1.45E-09	4.28E-10	1.66E-10	3.66E-05	1.09E+02	4.85E-04
						Total:	4.74E-03
West Ditch							
Pu-238	119,884,000	1.13E-11	1.22E-10	2.66E-10	1.36E-06	7.94E-08	5.66E-04
Pu-239/240	119,884,000	0.00E+00	1.17E-10	2.60E-10	0.00E+00	0.00E+00	0.00E+00
Tc-99	119,884,000	0.00E+00	4.27E-08	7.49E-08	0.00E+00	0.00E+00	0.00E+00
Th-228	119,884,000	8.20E-11	1.91E-10	3.41E-10	9.83E-06	1.20E-08	4.10E-04
Th-230	119,884,000	6.35E-11	2.28E-10	4.41E-10	7.61E-06	3.77E-04	6.35E-04
Th-232	119,884,000	5.23E-11	1.64E-10	2.90E-10	6.27E-06	5.75E+01	1.74E-03
U-233/234	119,884,000	1.20E-08	1.20E-09	2.88E-10	1.44E-03	2.30E-01	3.99E-02
U-235/236	119,884,000	5.01E-10	2.81E-10	1.86E-10	6.00E-05	2.78E+01	1.67E-03
U-238	119,884,000	9.91E-10	3.56E-10	2.23E-10	1.19E-04	3.55E+02	3.30E-03
						Total:	4.82E-02
WWTF							
Am-241	4,144,701	3.89E-11	1.66E-10	3.08E-10	1.61E-07	4.70E-08	1.95E-03
Cs-137	4,144,701	0.00E+00	1.41E-09	2.09E-09	0.00E+00	0.00E+00	0.00E+00
Na-22	4,144,701	0.00E+00	1.21E-09	2.22E-09	0.00E+00	0.00E+00	0.00E+00
Np-237	4,144,701	2.01E-10	3.40E-10	5.52E-10	8.35E-07	1.19E-03	1.01E-02
Pb-212	4,144,701	1.85E-09	4.46E-09	4.43E-09	7.68E-06	5.55E-12	9.26E-04
Pu-238	4,144,701	0.00E+00	8.41E-11	2.20E-10	0.00E+00	0.00E+00	0.00E+00

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B.
 Note: A value of "0" was substituted for negative analytical results.

**Radioactivity in Effluent Liquid
 January 1, 2025 to June 30, 2025**

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
WWTF							
Pu-239/240	4,144,701	0.00E+00	1.01E-10	2.37E-10	0.00E+00	0.00E+00	0.00E+00
Pu-241	4,144,701	0.00E+00	1.71E-08	2.99E-08	0.00E+00	0.00E+00	0.00E+00
Tc-99	4,144,701	6.35E-08	1.29E-07	2.19E-07	2.63E-04	1.56E-02	1.06E-03
Th-228	4,144,701	0.00E+00	1.79E-10	3.79E-10	0.00E+00	0.00E+00	0.00E+00
Th-230	4,144,701	1.70E-10	2.43E-10	3.81E-10	7.05E-07	3.49E-05	1.70E-03
Th-231	4,144,701	0.00E+00	4.66E-08	5.90E-08	0.00E+00	0.00E+00	0.00E+00
Th-232	4,144,701	0.00E+00	1.04E-10	2.34E-10	0.00E+00	0.00E+00	0.00E+00
U-232	4,144,701	9.18E-12	1.23E-10	2.57E-10	3.80E-08	1.78E-09	1.53E-04
U-233/234	4,144,701	3.96E-08	1.47E-09	1.55E-10	1.64E-04	2.63E-02	1.32E-01
U-235/236	4,144,701	2.21E-09	3.48E-10	1.28E-10	9.15E-06	4.23E+00	7.36E-03
U-238	4,144,701	4.36E-10	1.57E-10	1.30E-10	1.81E-06	5.39E+00	1.45E-03
						Total:	1.57E-01

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B.
 Note: A value of "0" was substituted for negative analytical results.

**Attachment 2
To Letter Dated August 18, 2025**

**Report of Radioactivity in Effluent Air for the Period
January to June 2025**

(3 Pages to Follow)

Radioactivity in Effluent Air January 1, 2025 to June 30, 2025

Location	Total Volume (m ³)	Activity Concentration (μCi/ml)	Error Estimate (μCi/ml)	LLD (μCi/ml)	Quantity Released (Ci)	Quantity Released (g)	Fraction of ECV ¹
Main Stack 416		1032.11 m³/min		17.20 m³/sec			
Th-228	268,969,820	1.05E-15	1.84E-16	8.08E-17	2.83E-07	3.46E-10	5.27E-02
Th-230	268,969,820	1.05E-15	1.84E-16	8.08E-17	2.83E-07	1.40E-05	5.27E-02
Th-232	268,969,820	7.90E-16	1.38E-16	6.06E-17	2.13E-07	1.95E+00	1.98E-01
U-234	268,969,820	2.48E-13	4.33E-14	1.91E-14	6.68E-05	1.07E-02	4.97E+00
U-235	268,969,820	9.49E-15	1.65E-15	7.28E-16	2.55E-06	1.18E+00	1.58E-01
U-238	268,969,820	2.63E-15	4.59E-16	2.02E-16	7.09E-07	2.12E+00	4.39E-02
						Total:	5.47E+00
Stack 327 Bldg. 330		969.22 m³/min		16.15 m³/sec			
Pu-241	252,575,845	3.05E-15	4.33E-16	4.98E-16	7.70E-07	7.48E-09	3.81E-03
Tc-99	252,575,845	9.86E-14	1.40E-14	1.61E-14	2.49E-05	1.47E-03	1.10E-04
U-234	252,575,845	9.61E-14	1.21E-14	9.04E-15	2.43E-05	3.89E-03	1.92E+00
U-235	252,575,845	2.97E-15	3.75E-16	2.80E-16	7.51E-07	3.48E-01	4.96E-02
						Total:	1.98E+00
Stack 421 Bldg. 100		32.11 m³/min		0.54 m³/sec			
Pu-241	8,369,491	6.45E-15	1.17E-15	1.25E-15	5.40E-08	5.24E-10	8.07E-03
Tc-99	8,369,491	2.09E-13	3.78E-14	4.04E-14	1.75E-06	1.03E-04	2.32E-04
U-234	8,369,491	2.57E-14	1.70E-14	2.48E-14	2.15E-07	3.45E-05	5.14E-01
U-235	8,369,491	7.95E-16	5.24E-16	7.67E-16	6.66E-09	3.08E-03	1.33E-02
						Total:	5.36E-01
Stack 424 Bldg. 100		27.95 m³/min		0.47 m³/sec			
Pu-241	7,284,557	2.17E-15	9.16E-16	9.70E-16	1.58E-08	1.53E-10	2.71E-03
Tc-99	7,284,557	7.01E-14	2.96E-14	3.14E-14	5.11E-07	3.02E-05	7.79E-05
U-234	7,284,557	5.63E-15	1.05E-14	2.02E-14	4.10E-08	6.57E-06	1.13E-01
U-235	7,284,557	1.74E-16	3.26E-16	6.24E-16	1.27E-09	5.87E-04	2.90E-03
						Total:	1.18E-01
Stack 573 Bldg 306-W		109.98 m³/min		1.83 m³/sec			
Pu-241	28,691,729	1.48E-15	7.33E-16	9.23E-16	4.24E-08	4.12E-10	1.85E-03
Tc-99	28,691,729	4.78E-14	2.37E-14	2.98E-14	1.37E-06	8.12E-05	5.31E-05
U-234	28,691,729	6.93E-16	7.28E-15	1.86E-14	1.99E-08	3.19E-06	1.39E-02
U-235	28,691,729	2.14E-17	2.25E-16	5.75E-16	6.15E-10	2.85E-04	3.57E-04
						Total:	1.61E-02
Stack 600 Bldg. 110		301.71 m³/min		5.03 m³/sec			
Pu-241	78,654,926	2.07E-15	5.10E-16	6.37E-16	1.63E-07	1.58E-09	2.58E-03
Tc-99	78,654,926	6.68E-14	1.65E-14	2.06E-14	5.26E-06	3.11E-04	7.42E-05
U-234	78,654,926	2.91E-14	9.01E-15	1.25E-14	2.29E-06	3.67E-04	5.82E-01
U-235	78,654,926	9.01E-16	2.79E-16	3.85E-16	7.08E-08	3.28E-02	1.50E-02
						Total:	6.00E-01
Stack 615 Bldg. 306-W		46.61 m³/min		0.78 m³/sec			
Pu-241	12,149,655	1.30E-15	7.60E-16	9.55E-16	1.59E-08	1.54E-10	1.63E-03

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B. Fraction of ECV at the stack is provided for reference only. Concentrations at off-site locations are significantly less than those reported here (at stack) due to the atmospheric dispersion that occurs before the effluent exits the site.

Note: A value of "0" was substituted for negative analytical results.

Radioactivity in Effluent Air January 1, 2025 to June 30, 2025

Location	Total Volume (m ³)	Activity Concentration (μCi/ml)	Error Estimate (μCi/ml)	LLD (μCi/ml)	Quantity Released (Ci)	Quantity Released (g)	Fraction of ECV ¹
Stack 615 Bldg. 306-W		46.61 m³/min		0.78 m³/sec			
Tc-99	12,149,655	4.22E-14	2.46E-14	3.09E-14	5.13E-07	3.03E-05	4.69E-05
U-234	12,149,655	4.73E-16	7.75E-15	1.98E-14	5.75E-09	9.22E-07	9.47E-03
U-235	12,149,655	1.46E-17	2.40E-16	6.14E-16	1.78E-10	8.24E-05	2.44E-04
						Total:	1.14E-02
Stack 646 Bldg. 110		39.98 m³/min		0.67 m³/sec			
Pu-241	10,419,151	1.54E-15	7.99E-16	9.46E-16	1.61E-08	1.56E-10	1.93E-03
Tc-99	10,419,151	4.98E-14	2.58E-14	3.06E-14	5.19E-07	3.07E-05	5.54E-05
U-234	10,419,151	5.34E-16	7.69E-15	1.98E-14	5.57E-09	8.92E-07	1.07E-02
U-235	10,419,151	1.65E-17	2.38E-16	6.11E-16	1.72E-10	7.97E-05	2.75E-04
						Total:	1.29E-02
Stack 701 Bldg. 307		127.31 m³/min		2.12 m³/sec			
Pu-241	33,182,052	1.51E-15	8.65E-16	1.08E-15	5.02E-08	4.87E-10	1.89E-03
Tc-99	33,182,052	4.89E-14	2.80E-14	3.49E-14	1.62E-06	9.60E-05	5.43E-05
U-234	33,182,052	4.69E-15	1.03E-14	2.25E-14	1.56E-07	2.49E-05	9.38E-02
U-235	33,182,052	1.45E-16	3.18E-16	6.94E-16	4.81E-09	2.23E-03	2.42E-03
						Total:	9.81E-02
Stack 702 Bldg. 307		161.82 m³/min		2.70 m³/sec			
Pu-241	42,177,296	1.37E-15	7.67E-16	9.46E-16	5.78E-08	5.61E-10	1.71E-03
Tc-99	42,177,296	4.43E-14	2.48E-14	3.06E-14	1.87E-06	1.11E-04	4.92E-05
U-234	42,177,296	4.99E-15	9.88E-15	1.97E-14	2.10E-07	3.37E-05	9.97E-02
U-235	42,177,296	1.54E-16	3.06E-16	6.09E-16	6.51E-09	3.01E-03	2.57E-03
						Total:	1.04E-01
Stack 703 Exhaust Room Air		414.08 m³/min		6.90 m³/sec			
Pu-241	107,925,107	5.19E-14	2.91E-14	3.59E-14	5.61E-06	5.44E-08	6.49E-02
Th-228	107,925,107	4.31E-16	1.04E-15	2.29E-15	4.65E-08	5.68E-11	2.15E-02
Th-230	107,925,107	2.48E-16	5.98E-16	1.32E-15	2.68E-08	1.33E-06	1.24E-02
Th-232	107,925,107	3.53E-16	8.50E-16	1.88E-15	3.81E-08	3.49E-01	8.82E-02
U-234	107,925,107	2.70E-15	6.51E-15	1.44E-14	2.91E-07	4.67E-05	5.40E-02
U-235	107,925,107	2.79E-16	6.72E-16	1.48E-15	3.01E-08	1.39E-02	4.64E-03
U-238	107,925,107	3.40E-16	8.19E-16	1.81E-15	3.66E-08	1.09E-01	5.66E-03
						Total:	2.51E-01
Stack 773 Bldg. 440		169.19 m³/min		2.82 m³/sec			
Pu-241	44,029,884	6.27E-14	3.14E-14	3.86E-14	2.76E-06	2.68E-08	7.83E-02
Th-228	44,029,884	2.21E-16	1.42E-15	3.43E-15	9.72E-09	1.19E-11	1.10E-02
Th-230	44,029,884	2.84E-16	1.82E-15	4.41E-15	1.25E-08	6.19E-07	1.42E-02
Th-232	44,029,884	1.89E-16	1.22E-15	2.94E-15	8.33E-09	7.64E-02	4.73E-02
U-234	44,029,884	5.83E-16	3.75E-15	9.07E-15	2.57E-08	4.12E-06	1.17E-02
U-235	44,029,884	1.02E-16	6.59E-16	1.59E-15	4.51E-09	2.09E-03	1.71E-03

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B. Fraction of ECV at the stack is provided for reference only. Concentrations at off-site locations are significantly less than those reported here (at stack) due to the atmospheric dispersion that occurs before the effluent exits the site.

Note: A value of "0" was substituted for negative analytical results.

**Radioactivity in Effluent Air
 January 1, 2025 to June 30, 2025**

Location	Total Volume (m ³)	Activity Concentration (μCi/ml)	Error Estimate (μCi/ml)	LLD (μCi/ml)	Quantity Released (Ci)	Quantity Released (g)	Fraction of ECV ¹
Stack 773 Bldg. 440		169.19 m³/min		2.82 m³/sec			
U-238	44,029,884	2.05E-16	1.32E-15	3.19E-15	9.03E-09	2.69E-02	3.42E-03
						Total:	1.68E-01
Stack 796 Bldg. 100		18.24 m³/min		0.30 m³/sec			
Pu-241	4,753,044	1.78E-15	8.37E-16	9.43E-16	8.47E-09	8.22E-11	2.23E-03
Tc-99	4,753,044	5.76E-14	2.71E-14	3.05E-14	2.74E-07	1.62E-05	6.40E-05
U-234	4,753,044	9.07E-16	7.92E-15	1.96E-14	4.31E-09	6.91E-07	1.81E-02
U-235	4,753,044	2.80E-17	2.45E-16	6.07E-16	1.33E-10	6.17E-05	4.67E-04
						Total:	2.09E-02

¹ ECV: Effluent Concentration Value from 10-CFR-20, Appendix B. Fraction of ECV at the stack is provided for reference only. Concentrations at off-site locations are significantly less than those reported here (at stack) due to the atmospheric dispersion that occurs before the effluent exits the site.

Note: A value of "0" was substituted for negative analytical results.

**Attachment 3
To Letter Dated August 18, 2025**

**Report of Gaseous Effluent Dose and Activity Concentrations
for the Maximally Exposed
Off-Site Individual for the Release Period
January to June 2025**

(3 Pages to Follow)

Report of Potential Gaseous Effluent Dose to the Maximally Exposed Offsite Individual and on the Maximum Radionuclide Concentrations for the Period: January to June 2025

Introduction

During this biannual period, NRC License SNM-124, Section 9.1.1.3, required NFS to assess the total effective dose equivalent (TEDE) to the maximally exposed offsite receptor and the maximum radioactive air concentrations at the site boundary attributable to NFS' air effluents. The required biannual assessment has been completed and the details of the assessment are provided in the subsequent sections.

Summary of Methods

In accordance with SNM-124, Section 9.1.1.4, and internal procedure NFS-HS-A-27, the U.S. Department of Energy's CAP88-PC computer program was used to estimate off-site doses and activity concentrations for gaseous effluents. NFS operated thirteen (13) radiological stacks during the first half of 2025. Based on effluent types and stack physical characteristics, releases from these stacks were grouped into effective stacks for modeling purposes. To accommodate the co-location limitation of the model, the effective stacks were taken to be at the approximate center of the plant site. The distance to the site boundary (nearest model receptor distance) was conservatively taken to be 150 meters for all sectors.

Meteorological data was based on the average wind speed and direction frequencies from the onsite meteorological tower covering the time period for this report. Atmospheric stability class D (neutral atmosphere) was used for all releases (default value recommended by the U.S. Environmental Protection Agency in "User's Guide for COMPLY"). The most conservative inhalation class was assumed for each radionuclide released. A particle size (activity median aerodynamic diameter or AMAD) of 1.0 micron was assumed for modeling purposes since no information on actual particle sizes exists.

Because CAP88-PC models releases over an entire year, the six-month source term (i.e., total curies of each radionuclide released over the period, given in Attachment 2) was annualized (i.e., transformed into a 12-month release) so that airborne activity concentrations would not be under-estimated during the release period.

Summary of Results

Doses are reported in Table 1 below and are derived from the CAP88-PC "Synopsis Report." These doses are at the location of the maximally exposed (off-site) individual (MEI). The results include an adjustment (using the normalization factor mentioned above) to convert the "annualized" doses back to those doses that were actually received in the six-month release period. Activity concentrations reported in Table 2 come directly from the CAP88-PC "Concentration Tables" report; no adjustments are

needed for these concentrations. The CAP88-PC output reports are available for review at NFS.

Table 1 summarizes the six-month dose to a hypothetical individual at the MEI location, which was determined to be approximately 550 meters North-Northeast from the center of the plant site. The TEDE to the MEI was estimated to be 3.5E-03 mrem for gaseous effluents released during the first half of 2025. The highest organ committed dose equivalent (CDE) to the MEI was estimated to be 1.7E-02 mrem to the lungs. These MEI doses are well below the Environmental Radiological Monitoring Program action levels and applicable regulatory limits/ALARA constraints.

Table 1. Organ Doses and Total Effective Dose Equivalent at the MEI Location

Organ	Committed Dose Equivalent (mrem per first half of 2025)
Adrenals	2.5E-04
Urinary Bladder Wall	3.0E-04
Bone Surface	9.6E-03
Brain	2.5E-04
Breasts	2.6E-04
Stomach Wall	5.1E-03
Small Intestine	2.8E-04
Upper Large Intestine Wall	1.5E-03
Lower Large Intestine Wall	3.7E-03
Kidneys	2.9E-03
Liver	9.1E-04
Muscle	2.6E-04
Ovaries	2.7E-04
Pancreas	2.5E-04
Red Bone Marrow	1.2E-03
Skin	5.4E-04
Spleen	2.5E-04
Testes	2.8E-04
Thymus	2.5E-04
Thyroid	2.6E-03
Gall Bladder Wall	2.5E-04
Heart Wall	2.5E-04
Uterus	2.5E-04
Extra-thoracic	1.4E-02
Lungs	1.7E-02
Total Effective Dose Equivalent	3.5E-03 mrem
Location of MEI:	550 meters North-Northeast

Table 2 summarizes the maximum radioactive air concentrations at or beyond the site boundary, as determined by CAP88-PC, for the radionuclides released. The total sum of fractions was estimated to be 5.7E-04 and indicates that exposures to the offsite public from gaseous effluents were much less than 1% of the 10 CFR 20, Appendix B, Table 2, Col. 1 values for all offsite receptors including the site boundary. It is noted that the location of the maximum airborne concentration for a given radionuclide does not necessarily correspond to the MEI location. This is due primarily to the fact that the maximum concentrations for individual nuclides can vary due to differences in values input into the dispersion model for each of the effective stacks - such inputs include stack height, stack diameter, flow rate, and total radionuclide activities released per stack. Another reason for the disparity is the fact that the MEI dose includes both inhalation and ingestion pathways.

Table 2. Maximum Predicted Airborne Concentrations at or Beyond the Site Boundary

Maximum Predicted Airborne Concentrations at or Beyond the Site Boundary					
Nuclide	Maximum Concentration (µCi/mL)	Concentration Location		10 CFR 20, App. B, Table 2, Col. 1 Value (µCi/mL)	Ratio of Maximum Concentration to 10 CFR 20 Value
		Sector	Dist. (m)		
⁹⁹ Tc	2.2E-17	NNE	400	9.E-10	2.5E-08
²²⁸ Th	8.4E-20	NNE	600	2.E-14	4.2E-06
²³⁰ Th	7.5E-20	NNE	650	2.E-14	3.8E-06
²³² Th	6.6E-20	NNE	600	4.E-15	1.6E-05
²³⁴ U	2.6E-17	NNE	600	5.E-14	5.1E-04
²³⁵ U	9.0E-19	NNE	600	6.E-14	1.5E-05
²³⁸ U	1.6E-19	NNE	700	6.E-14	2.7E-06
²³⁸ Pu	0.0E+00	N/A	N/A	2.E-14	0.0E+00
²³⁹ Pu	0.0E+00	N/A	N/A	2.E-14	0.0E+00
²⁴¹ Pu	7.7E-18	NNE	350	8.E-13	9.6E-06
²⁴¹ Am	9.7E-26	NNE	550	2.E-14	4.9E-12
Sum of Fractions:					5.7E-04

N/A: Not Applicable due to 0.0 max. concentration.