

**Data Table 4-5, Comparison of Annual Average Air Concentrations to DOE
Derived Concentration Technical Standards for 2013**

Stack/Facility	Radionuclide	Average Effluent Concentration (μCi/mL)	DOE DCSs (μCi/mL)	Fraction of DOE DCS
A-Area				
791-A Sandfilter Discharge	I-129	6.27E-15	3.80E-11	1.65E-04
	Sum of Fractions			1.65E-04
C-Area				
C-Area Main Stack (148')	H-3 (oxide)	3.71E-07	2.10E-07	1.76E+00
	Sum of Fractions			1.76E+00
F-Area				
235-F Sandfilter Discharge	U-234	4.68E-17	4.00E-13	1.17E-04
	U-235	6.03E-18	4.50E-13	1.34E-05
	U-238	4.42E-17	4.70E-13	9.41E-05
	Pu-238	9.13E-17	3.70E-14	2.47E-03
	Pu-239	1.13E-17	3.40E-14	3.31E-04
	Am-241	3.20E-17	4.10E-14	7.81E-04
	Sum of Fractions			3.80E-03
291-F Stack Isokinetic	Sr-89/90	1.70E-15	2.50E-11	6.78E-05
	I-129	7.74E-14	3.80E-11	1.02E-03
	Cs-137	1.60E-15	9.80E-11	1.63E-05
	U-234	4.94E-16	4.00E-13	1.24E-03
	U-235	4.53E-17	4.50E-13	1.01E-04
	U-238	1.10E-15	4.70E-13	2.34E-03
	Pu-238	5.27E-17	3.70E-14	1.43E-03
	Pu-239	1.29E-15	3.40E-14	3.80E-02
	Am-241	2.20E-16	4.10E-14	5.37E-03
	Cm-244	3.06E-17	6.90E-14	4.44E-04
Sum of Fractions			5.00E-02	
772-4F Stack	Sr-89/90	1.69E-16	2.50E-11	6.77E-06
	U-234	4.54E-17	4.00E-13	1.13E-04
	U-235	5.73E-18	4.50E-13	1.27E-05
	U-238	4.36E-17	4.70E-13	9.28E-05
	Pu-238	1.89E-17	3.70E-14	5.10E-04
	Pu-239	1.29E-17	3.40E-14	3.79E-04
	Am-241	3.71E-17	4.10E-14	9.05E-04
	Cm-244	4.95E-18	6.90E-14	7.17E-05
Sum of Fractions			2.09E-03	

Stack/Facility	Radionuclide	Average Effluent Concentration (μCi/mL)	DOE DCSs (μCi/mL)	Fraction of DOE DCS
H-Area				
241-278H Caustic Extraction	Cs-137	1.01E-13	9.80E-11	1.03E-03
	U-234	1.02E-16	4.00E-13	2.55E-04
	U-238	7.32E-17	4.70E-13	1.56E-04
	Am-241	5.49E-17	4.10E-14	1.34E-03
	Sum of Fractions			2.78E-03
291-H Stack Isokinetic	Sr-89/90	1.82E-15	2.50E-11	7.26E-05
	I-129	2.92E-13	3.80E-11	3.84E-03
	Cs-137	4.31E-15	9.80E-11	4.39E-05
	Th-230	1.23E-16	2.80E-13	4.40E-04
	U-234	8.67E-17	4.00E-13	2.17E-04
	U-238	7.46E-17	4.70E-13	1.59E-04
	Pu-238	1.15E-15	3.70E-14	3.09E-02
	Pu-239	5.47E-16	3.40E-14	1.61E-02
	Am-241	1.20E-16	4.10E-14	2.92E-03
	Cm-244	1.41E-17	6.90E-14	2.04E-04
	C-14	2.84E-11	6.60E-10	4.31E-02
	Kr-85	3.77E-06	3.60E-06	1.05E+00
	H-3 (oxide)	3.67E-09	2.10E-07	1.75E-02
	Sum of Fractions			1.16E+00
H-ETF				
241-81H ETF Process Stack	U-234	1.20E-16	4.00E-13	3.01E-04
	U-238	1.25E-16	4.70E-13	2.67E-04
	Am-241	6.06E-17	4.10E-14	1.48E-03
	Sum of Fractions			2.05E-03
241-84H ETF Lab Stack	U-234	1.05E-16	4.00E-13	2.63E-04
	U-238	4.89E-17	4.70E-13	1.04E-04
	Sum of Fractions			3.67E-04
K-Area				
K-Area Main Stack (148')	H-3 (oxide)	3.14E-06	2.10E-07	1.50E+01
	Sum of Fractions			1.50E+01
KIS Facility	Sr-89/90	4.27E-17	2.50E-11	1.71E-06
	Th-228	5.73E-17	9.40E-14	6.10E-04
	Th-230	1.38E-16	2.80E-13	4.93E-04
	Th-232	5.62E-17	1.60E-13	3.51E-04
	U-234	5.73E-17	4.00E-13	1.43E-04
	U-238	5.46E-17	4.70E-13	1.16E-04
	Pu-239	8.65E-18	3.40E-14	2.54E-04
	Am-241	1.03E-17	4.10E-14	2.52E-04
	Sum of Fractions			2.22E-03

Stack/Facility	Radionuclide	Average Effluent Concentration (μCi/mL)	DOE DCSs (μCi/mL)	Fraction of DOE DCS
L-Area				
L-Area Disassembly	H-3 (oxide)	4.81E-06	2.10E-07	2.29E+01
	Sum of Fractions			2.29E+01
L-Area Main Stack (148')	H-3 (oxide)	3.27E-06	2.10E-07	1.56E+01
	Sum of Fractions			1.56E+01
S-Area				
221-S Personnel Area (Zone 2)	U-234	1.17E-15	4.00E-13	2.92E-03
	U-238	1.05E-15	4.70E-13	2.22E-03
	Am-241	8.33E-16	4.10E-14	2.03E-02
	Sum of Fractions			2.55E-02
250-S Glass Waste Bldg #1509	U-234	1.23E-15	4.00E-13	3.07E-03
	U-238	8.61E-16	4.70E-13	1.83E-03
	Am-241	7.00E-16	4.10E-14	1.71E-02
	Sum of Fractions			2.20E-02
250-S Glass Waste Bldg #3940	U-234	1.02E-15	4.00E-13	2.54E-03
	U-238	1.13E-15	4.70E-13	2.40E-03
	Sum of Fractions			4.94E-03
251-S Glass Waste Bldg2 Vault A	U-234	9.61E-17	4.00E-13	2.40E-04
	U-238	7.50E-17	4.70E-13	1.60E-04
	Sum of Fractions			4.00E-04
251-S Glass Waste Bldg2 Vault B	U-234	4.08E-17	4.00E-13	1.02E-04
	U-238	6.24E-17	4.70E-13	1.33E-04
	Am-241	5.55E-17	4.10E-14	1.35E-03
	Sum of Fractions			1.59E-03
251-S Glass Waste Bldg2 Vault D	U-238	8.40E-17	4.70E-13	1.79E-04
	Sum of Fractions			1.79E-04
291-S Vit. Process (Zone 1)	U-234	1.29E-15	4.00E-13	3.24E-03
	U-238	9.26E-16	4.70E-13	1.97E-03
	Pu-238	5.25E-16	3.70E-14	1.42E-02
	Am-241	1.11E-15	4.10E-14	2.71E-02
	Sum of Fractions			4.65E-02
511-S Low Pt. Pump Pit	U-234	1.25E-15	4.00E-13	3.12E-03
	U-238	1.14E-15	4.70E-13	2.43E-03
	Am-241	3.93E-16	4.10E-14	9.58E-03
	Sum of Fractions			1.51E-02
512-S Late Wash	U-234	6.06E-17	4.00E-13	1.52E-04
	U-238	4.23E-17	4.70E-13	9.01E-05
	Am-241	3.79E-17	4.10E-14	9.23E-04
	Sum of Fractions			1.17E-03

Stack/Facility	Radionuclide	Average Effluent Concentration (μCi/mL)	DOE DCSs (μCi/mL)	Fraction of DOE DCS
Tritium				
232-H (200ft)	H-3 (elemental)	6.42E-07	2.10E-03	3.06E-04
	H-3 (oxide)	6.35E-06	2.10E-07	3.02E+01
	Sum of Fractions			3.02E+01
233-H	H-3 (elemental)	8.58E-07	2.10E-03	4.08E-04
	H-3 (oxide)	1.12E-06	2.10E-07	5.35E+00
	Sum of Fractions			5.35E+00
234-H	H-3 (elemental)	8.55E-07	2.10E-03	4.07E-04
	H-3 (oxide)	6.20E-06	2.10E-07	2.95E+01
	Sum of Fractions			2.95E+01
238-H	H-3 (oxide)	3.68E-06	2.10E-07	1.75E+01
	Sum of Fractions			1.75E+01
264-H	H-3 (elemental)	6.17E-08	2.10E-03	2.94E-05
	H-3 (oxide)	8.01E-07	2.10E-07	3.81E+00
	Sum of Fractions			3.81E+00
Z-Area				
210-Z Building Stack	U-234	1.16E-15	4.00E-13	2.91E-03
	U-238	8.77E-16	4.70E-13	1.87E-03
	Am-241	6.44E-16	4.10E-14	1.57E-02
	Sum of Fractions			2.05E-02
451-Z Saltstone Vaults	U-238	2.41E-17	4.70E-13	5.12E-05
	Am-241	3.19E-17	4.10E-14	7.79E-04
	Sum of Fractions			8.30E-04
Saltstone SDU-2	Sr-89/90	8.89E-16	2.50E-11	3.56E-05
	U-238	2.88E-17	4.70E-13	6.13E-05
	Am-241	4.00E-17	4.10E-14	9.75E-04
	Sum of Fractions			1.07E-03