

Table 2-5: Target Radionuclides, Volumetric Release Criteria & Analytical Methods

Isotope	Decay Mode	Bureau Volumetric Release Criteria for 15mrem/year (pCi/g)	Bureau Required MDA (pCi/g)	Radiochemical Analysis Method	GEL Analytical Method
Americium-241	Alpha	1.25	0.05	Alpha Spectroscopy	DOE EML HASL 300 Am-05-RC Mod
Californium-252	Alpha	4.12	0.05	Alpha Spectroscopy	DOE EML HASL 300 Am-05-RC Mod
Carbon-14	Beta	6.96	1.0	Liquid Scintillation	EPA EERF C-01 Mod
Cesium-137	Beta	6.6	1.0	"High Resolution" Gamma Spectroscopy	DOE EML HASL 300 4.5.2.3/Ga-01-R
Curium-244	Alpha	2.5	0.05	Alpha Spectroscopy	DOE EML HASL 300 Am-05-RC Mod
Hydrogen-3	Beta	64.8	1.0	Liquid Scintillation	EPA 906.0 Mod
Neptunium-237	Alpha	0.6	0.05	Alpha Spectroscopy	DOE HASL 300 Mod
Plutonium-238	Alpha	1.52	0.05	Alpha Spectroscopy	DOE EML HASL 300 Pu-11-RC Mod
Plutonium-239	Alpha	1.37	0.05	Alpha Spectroscopy	DOE EML HASL 300 Pu-11-RC Mod
Strontium-90	Beta	1.03	0.1	"Radiochemistry"	EPA 905.0 Mod/DOE RP501 Rev. 1 Mod
Uranium-235	Alpha	4.82	0.05	Alpha Spectroscopy	DOE EML HASL 300 U-02-RC Mod