

This data was obtained from the Sealed Source Disposal and National Security: Problem Statement and Solution Set, Deliverable (Part 1) of the Removal and Disposition of Disused Sources Focus Group of the Radioisotopes Subcouncil of the Nuclear Government and Sector Coordinating Councils, December, 2009, Table 2, page 12.

The Current Commercial Sealed Source Disposal Landscape

Radionuclide	Maximum Limit Allowed ^a			
	Non-GTCC Sources			GTCC Sources
	Barnwell Facility (3 States)	Richland Facility (11 States)	No Facility (36 States)	GTCC Facility ^b
Americium-241 Plutonium-238 Plutonium-239	10 nCi/gm	100 nCi/gm	No Disposal (ND)	>100 nCi/gm
Californium-252	10 Ci	13 Ci ^c	ND	Not applicable ^d (NA)
Curium-244	100 nCi/gm	100 nCi/gm	ND	>100 nCi/gm
Cobalt-60	10 Ci	145 Ci ^c	ND	NA
Cesium-137	10 Ci	976 Ci	ND	>976 Ci
Iridium-192	10 Ci	13 Ci ^c	ND	NA
Strontium-90	10 Ci	1,486 Ci	ND	>1,486 Ci
Radium-226	Disposal of radium-226 is available to all states at Richland facility up to 1.2 Ci per source. ^e			NA

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	Disposal available commercially for Compact States up to maximum Class C limits for applicable radionuclides, considering concentration averaging.
	Disposal available commercially for Compact States but maximum limit is less than Class C limits for applicable radionuclides due to site-specific administrative limits, waste acceptance criteria, or license conditions
	Disposal capability being developed by DOE ^b
	No disposal available

- a The maximum curie or activity limit allowed for an individual sealed source containing the specified radionuclide based on site-specific administrative limits, waste acceptance criteria, application of concentration averaging, or license conditions.
- b A GTCC LLRW disposal facility does not currently exist; DOE is preparing an Environmental Impact Statement analyzing potential disposal alternatives for this waste. The maximum limit for the facility will be determined during the implementation and licensing phase for the selected alternative and will be greater than the Class C waste classification values shown in the Table (which assumes application of concentration averaging).
- c The facility may accept sources in excess of this limit on a case-by-case basis based on worker exposure and other site-specific considerations.
- d Sealed sources consisting of these radionuclides are not classified as GTCC LLRW when sent for disposal because there is no maximum Class C limit for the radionuclide or the radionuclide is not included in the list of radionuclides in 10 CFR 61.55, Tables 1 and 2 that determine LLRW classification.
- e Diffuse radium-226 is still considered naturally occurring radioactive material (NORM) for purposes of disposal, but discrete Ra-226 sources are now considered "byproduct material" per the NRC and

compatible Agreement State regulations. However, the 2005 *Energy Policy Act* has excluded radium-226 sources as LLRW, and some compact regulations still consider radium-226 containing waste as NORM. Disposal options are therefore still available to all states.