

**Table E-3.** Applicable facilities for each alternative.

Material (Table)	No-Action Alternative	Other alternatives	Conversion	Interim storage	Additional conversion	Post-stabilization storage
Mk-31 (Table E-4)	L-Reactor Basin	Metal	F-Canyon FA-Line FB-Line	Existing vaults <sup>a</sup>	Actinide Packaging Facility <sup>b</sup>	Storage vault <sup>a</sup>
		Liquid waste (DWPF) <sup>c</sup> Dry Storage	F-Canyon	High-level waste <sup>d</sup>		
		Vitrify	Beyond timeframe of this EIS F-Canyon FA-Line FB-Line	Existing vaults <sup>a</sup>	F-Canyon	No credible accidents resulting in a release from vitrified material.
		Oxide	F-Canyon FA-Line FB-Line	Existing vaults <sup>a</sup>	Actinide Packaging Facility	Storage vault <sup>a</sup>
Americium/curium (Table E-5)	F-Canyon	Vitrify	F-Canyon	Not applicable	Not applicable	No credible accidents resulting in a release from vitrified material.
		Waste Oxide	F-Canyon F-Canyon F-Canyon hot cell <sup>e</sup>	High-level waste <sup>d</sup> Storage vault <sup>a</sup>	Beyond timeframe of this EIS	Beyond timeframe of this EIS
H-Canyon uranium solutions (Table E-6)	H-Canyon H-Outside	Oxide (low enriched uranium)	FA-Line	Storage vault <sup>a</sup>	Beyond timeframe of this EIS	Beyond timeframe of this EIS
		Oxide (enriched uranium)	Uranium Solidification Facility	Storage vault <sup>f</sup>	Beyond timeframe of this EIS	Beyond timeframe of this EIS
		Liquid waste (DWPF)	H-Canyon	High-level waste <sup>d</sup>		

**Table E-3.** (continued).

Material (Table)	No-Action Alternative	Other alternatives	Conversion	Interim storage	Additional conversion	Post-stabilization storage
H-Canyon plutonium-239 solutions (Table E-7)	H-Canyon	Oxide	H-Canyon HB-Line	Existing vaults <sup>a</sup>	Actinide Packaging Facility	Storage vault <sup>a</sup>
		Liquid waste (DWPF)	H-Canyon	High-level waste <sup>d</sup>		
		Vitrify	Solution transport (Section 4.3)	F-Canyon	F-Canyon	No credible accidents resulting in a release from vitrified material.
		Metal	Solution transport (Section 4.3)	F-Canyon	FB-Line Actinide Packaging Facility	Storage vault <sup>a</sup>
H-Canyon neptunium solutions (Table E-8)	H-Canyon	Oxide	H-Canyon HB-Line	Existing vaults <sup>a</sup>	Actinide Packaging Facility	Storage vault <sup>a</sup>
		Vitrify	Solution transport (Section 4.3)	F-Canyon	F-Canyon	No credible accidents resulting in a release from vitrified material.
		<i>Waste</i>	<i>H-Canyon</i>	<i>High-level waste<sup>d</sup></i>		
H-Canyon plutonium-242 solutions (Table E-9)	H-Canyon <sup>g</sup>	Oxide	H-Canyon <sup>g</sup> HB-Line	Existing vaults <sup>a</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Vitrify	H-Canyon <sup>g</sup> HB-Line	Existing vaults <sup>a</sup>	FB-Line F-Canyon	No credible accidents resulting in a release from vitrified material.
		<i>Waste</i>	<i>H-Canyon</i>	<i>High-level waste<sup>d</sup></i>		
Mk-16/22 (Table E-10)	Reactor basins	Oxide (low enriched uranium)	F/H-Canyon <sup>h</sup> F/H-Outside FA-Line	Storage vault <sup>f</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.

Dry storage	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
Oxide (enriched uranium)	H-Canyon H-Outside Uranium Solidification Facility	Storage vault <sup>f</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
Liquid waste (DWPF)	F/H-Canyon <sup>h</sup> F/H-Outside	High-level waste <sup>d</sup>		

**Table E-3.** (continued).

Material (Table)	No-Action Alternative	Other alternatives	Conversion	Interim storage	Additional conversion	Post-stabilization storage
Other aluminum-clad fuels <sup>i</sup> (N/A)	Bounded by Mk-31 No-Action (See Table E-4) or Mk-16/22 (See Table E-10)	Liquid waste (DWPF)  Dry storage	Bounded by Mk16/22 liquid waste alternative (see Table E-10)  Beyond timeframe of this EIS	Beyond timeframe of this EIS	Beyond timeframe of this EIS	Beyond timeframe of this EIS
Vault solids (Table E-11)	235-F FB-Line	Metal	HB-Line Phase I H-Canyon	Existing vaults <sup>a</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Oxide	HB-Line Phase II HB-Line Phase I H-Canyon	Existing vaults <sup>a</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Repackage	HB-Line Phase II Actinide Packaging Facility	Storage vault <sup>a</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Liquid waste (DWPF)	HB-Line Phase I	High-level waste <sup>d</sup>		
		Vitrify	HB-Line Phase I H-Canyon HB-Line Phase II	Existing vaults <sup>a</sup>	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
Plutonium-238 (Table E-12)	HB-Line Vault	Improving storage	Bounded by No-Action Alternative	Storage vault	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Oxide	HB-Line Phase I H-Canyon HB-Line Phase III	HB-Line vault	Beyond timeframe of this EIS.	Beyond timeframe of this EIS.
		Liquid waste (DWPF)	HB-Line Phase I H-Canyon	High-level waste <sup>d</sup>		

a. Accident analysis for the 235-F facility is representative for both existing and new storage vaults; for new storage vaults, the analysis assumes that the ruptured storage container accident would not be credible after repackaging and improving storage conditions.

b. The source terms associated with FB-Line drying are used in conjunction with FB-Line accidents to be representative of the new Actinide Packaging Facility.

c. DWPF = Defense Waste Processing Facility.

- d. Accident analysis information for the existing tank inventory; if this information requires revision after analysis *for different isotopic* content, safety documentation will be updated in accordance with DOE Orders 5480.23 and 5480.21.
  - e. The americium/curium source term was used in the relevant accident scenarios for HB-Line to provide a representative accident analysis for the americium/curium Processing to Oxide Alternative.
  - f. Accident analysis for storage operations at the Uranium Solidification Facility are representative for new uranium storage vaults.
  - g. The accident analysis for F-Canyon was used for plutonium-242 alternatives because it is more representative of this solution's source term.
  - h. This alternative enables either canyon to process fuel; H-Canyon accidents are representative for Mk-16 and -22 processing.
  - i. Because this material group consists of small quantities of a wide variety of aluminum-clad fuels, the accident impacts from this material group would be minimal. Each alternative for this material group is bounded by the accident analysis presented for other groups. Therefore, impacts reference the bounding accident analysis.
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