Table 2-3. Comparison of the potential environmental impacts of the alternatives for plutonium-242.[a]

Factors	Alternatives						
	Continuing Storage	Processing to Metal	Processing to Oxide	Blending Down to Low Enriched Uranium	Processing and Storage for Vitrification (DWPF)	Vitrification (F-Canyon)	Improving Storage
Health effects of Normal Operations							
Radiological health effects (10-year totals):							
Population latent cancer fatalities	0.00025	NA[b]	0.0017	NA	NA	0.0017	NA
Worker latent cancer fatalities	0.0052	NA	0.024	NA	NA	0.027	NA
Health effects from facility accidents[c] (projected latent cancer fatalities)	6.5	NA	6.5	NA	NA	6.5	NA
Health effects from transportation (projected latent cancer fatalities)							
Incident-free (involved worker)	0.00172[d]	NA	0.0012	NA	NA	0.00122	NA
Accidents (offsite population)[e]	2.0	NA	2.0	NA	NA	2.0	NA
Air resources							
Nonradiological - Nitrogen oxide incremental concentration at SRS boundary (highest annual, micrograms per cubic meter)	0.012	NA	0.033	NA	NA	0.11	NA
Water resources							
Lead (micrograms per liter) in Upper Three Runs Creek	3.2	NA	2.7	NA	NA	2.8	NA
Utilities (10-year totals)							
Electricity usage (megawatt-hour)	132,990	NA	41,425	NA	NA	42,146	NA
Waste management (10-year totals)							
High-level liquid waste generation (million liters)	1.2	NA	0.12	NA	NA	0.16	NA
Equivalent DWPF canisters	20	NA	2	NA	NA	3	NA
Saltstone generation (cubic meters)	3,300	NA	330	NA	NA	420	NA
Transuranic waste generation (cubic meters)	0	NA	56	NA	NA	61	NA
Hazardous/mixed waste generation (cubic meters)	0	NA	60	NA	NA	60	NA
Low-level radioactive waste generation (cubic meters)	5,600	NA	4,300	NA	NA	4,700	NA

a. Includes transportation of associated radioactive waste.

b. NA = Not applicable.
c. Assumes highly unlikely occurrence of maximum consequence accident.
d. Waste transportation only.
e. Maximum reasonably foreseeable latent cancer fatalities from medium probability accident based on the shipment of transuranic waste.