Table 2-6. Comparison of the potential environmental impacts of the alternatives for H-Canyon plutonium-239 solutions.[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	0.00025	0.0055	NA[b]	0.041	0.00023	NA
Worker latent cancer fatalities	0.0052	0.044	0.04	NA	0.02	0.021	NA
Health effects from facility accidents[c] (projected latent cancer fatalities)	4.1	6.5	4.1	NA	4.1	6.5	NA
Health effects from transportation (projected latent cancer fatalities)							
Incident-free (involved worker)	0.00172[d]	0.0022[e]	0.00195	NA	0.00374[d]	0.00146[e]	NA
Accidents (offsite population)[f]	2.0	2.0	2.0	NA	2.0	2.0	NA
Air resources							
Nonradiological - Nitrogen oxide incremental concentration at SRS boundary (highest annual, micrograms per cubic meter)	0.012	0.14	0.033	NA	0.083	0.096	NA
Water resources							
Lead (micrograms per liter) in Upper Three Runs Creek	3.2	3.3	3	NA	3	3.2	NA
Utilities (10-year totals)							
Electricity usage (megawatt-hour)	132,990	135,462	106,221	NA	150,579	124,310	NA
Waste management (10-year totals)							
High-level liquid waste (million liters)	1.2	1.3	0.68	NA	6.8	1.0	NA
Equivalent DWPF canisters	20	24	11	NA	57	17	NA
Saltstone generation (cubic meters)	3,300	3,500	1,800	NA	19,000	2,700	NA
Transuranic waste generation (cubic meters)	0	32	160	NA	0	0	NA
Hazardous/mixed waste generation (cubic meters)	0	0	190	NA	0	0	NA
Low-level radioactive waste generation (cubic meters)	5,600	7,500	6,600	NA	6,400	4,800	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. No approved packaging for material transport; waste transport only.
f. Maximum reasonably foreseeable latent cancer fatalities from medium probability accident based on the shipment of transuranic waste.