

Table 2-7. Comparison of the potential environmental impacts of the alternatives for H-Canyon enriched uranium solution.^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	0.00038	NA ^b	0.0034	0.009	0.0003	NA	NA
Worker latent cancer fatalities	0.0092	NA	0.028	0.0072	0.0072	NA	NA
Health effects from facility accidents^c (projected latent cancer fatalities)	0.14	NA	0.14	0.14	4.1	NA	NA
Health effects from transportation (projected latent cancer fatalities)							
Incident-free (involved worker)	0.00208 ^d	NA	0.000519 ^d	0.000961	0.00160	NA	NA
Accidents (offsite population) ^e	2.0	NA	2.0	2.0	2.0	NA	NA
Air resources							
Nonradiological - Nitrogen oxide incremental concentration at SRS boundary (highest annual, micrograms per cubic meter)	0.053	NA	0.083	0.083	0.053	NA	NA
Water resources							
Lead (micrograms per liter) in Upper Three Runs Creek	3	NA	3	3	3	NA	NA
Utilities (10-year totals)							
Electricity usage (megawatt-hour)	180,180	NA	39,944	41,672	140,283	NA	NA
Waste management (10-year totals)							
High-level liquid waste (million liters)	1.8	NA	0.72	1.7	1.4	NA	NA
Equivalent DWPF canisters	30	NA	7	17	23	NA	NA
Saltstone generation (cubic meters)	5,000	NA	2,000	4,800	3,900	NA	NA
Transuranic waste generation (cubic meters)	0	NA	0	0	0	NA	NA
Hazardous/mixed waste generation (cubic meters)	0	NA	0	0	0	NA	NA
Low-level radioactive waste generation (cubic meters)	6,300	NA	1,200	1,600	4,800	NA	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.
-