

**Table 2-9.** Comparison of the potential environmental impacts of the alternatives for Mark-31 targets.<sup>a</sup>

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
<b>Health effects of Normal Operations</b>							
Radiological health effects (10-year totals):							
Population latent cancer fatalities	0.00006	0.00025	0.00023	NA <sup>b</sup>	0.00043	0.00032	0.00006
Worker latent cancer fatalities	0.0056	0.084	0.072	NA	0.044	0.1	0.0056
<b>Health effects from facility accidents<sup>c</sup> (projected latent cancer fatalities)</b>	0.0089	6.5	6.5	NA	6.5	6.5	0.0089
<b>Health effects from transportation (projected latent cancer fatalities)</b>							
Incident-free (involved worker)	0.00731 <sup>d</sup>	0.00503	0.00497	NA	0.00643	0.00542	0.00732
Accidents (offsite population) <sup>e</sup>	2.0	2.0	2.0	NA	2.0	2.0	2.0
<b>Air resources</b>							
Nonradiological - Nitrogen oxide incremental concentration at SRS boundary (highest annual, micrograms per cubic meter)	0	0.28	0.28	NA	0.23	0.34	0
<b>Water resources</b>							
Lead (micrograms per liter) in Upper Three Runs Creek	0	3.4	3.5	NA	6.1	3.9	0
<b>Utilities (10-year totals)</b>							
Electricity usage (megawatt-hour)	14	63,748	50,637	NA	44,362	71,093	14
<b>Waste management (10-year totals)</b>							
High-level liquid waste generation (million liters)	1.2	2.1	1.9	NA	3.7	2.6	1.2
Equivalent DWPF canisters	28	43	41	NA	78	53	28
Saltstone generation (cubic meters)	3,200	5,700	5,200	NA	10,000	7,000	3,200
Transuranic waste generation (cubic meters)	0	77	62	NA	0	93	0
Hazardous/mixed waste generation (cubic meters)	50	16	20	NA	34	16	50
Low-level radioactive waste generation (cubic meters)	29,000	18,000	18,000	NA	22,000	19,000	29,000

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.
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