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Western New York Nuclear Service Center

Phased Decisionmaking Alternative Technical Report

Prepared for the

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West Valley, New York

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3.5 Costs

For purposes of Phased Decisionmaking Alternative cost estimates, cost was separated into four major categories of materials, labor, waste disposal, and contingencies, which were generated for each WMA or Facility.

The two cost tables produced in the report are nearly identical, with the exception of the location where the waste would be disposed. For example, Table 3-17 displays the costs for each WMA and facility as represented by waste transported to DOE and commercial facilities; whereas, Table 3-18 presents the costs related to waste transported to commercial facilities only. Since the disposal facilities are different under each scenario, a few ancillary costs are different as well, such as waste packaging, transportation, and subsequent contingency costs (although contingency rates are equal). The distinctions are most noticeable in the sum-total costs in the last row, where labor costs are identical and waste disposal costs are different by approximately $73 million.

Figure 3-14 illustrates the annual breakdown in spending of the assumed annual $100 million site budget, using a stacked bar chart.

Based upon knowledge of past site operations, there are various wastes that would be generated under the limited removal of some items in WMA 3 remediations which might be thought of as high-level waste due to the fact that these components were, at one time, in contact with the high-level waste liquids. Table 3-19 presents the estimated volumes of these wastes prior to packaging and disposal. A likely scenario for disposal of these wastes would be to classify them as TRU and low-level (Class A and C) under a determination that they qualify as Waste Incidental to Reprocessing (WIR).

An alternative to the WIR classification would be to classify all of the "wetted" components as HLW. In order to employ additional precision to the HLW cost estimate, however, only the bottom eight-foot portion of the mobilization pumps were considered to be potential HLW. The entire length of the transfer and STS pumps in 8D-2 and 8D-4 were assumed to be HLW under this scenario.

For comparison purposes, each of these potential disposal options is evaluated for the Waste Tank Farm. Tables 3-20 and 3-21 present the results of this evaluation. The WIR option assumes all of the components would be managed as LLW and TRU wastes. The HLW option assumes the wetted pump and transfer piping surfaces would need to be managed as HLW. Since the difference between these two options applies only to waste disposal costs, these costs are the only items compared. Removal costs, worker exposure, resource requirements, and environmental releases are expected to be the same for both of these options.

Table 3-18. Total Cost with Commercial Facilities Waste Disposal (2008 Dollars)

Effort	Total Materials Cost	Total Labor Cost	Total Waste Disposal Cost	Total Contingency Cost	Total Cost
HLW Canister Removal					
Construction of DCSA	$31,851,100	$7,178,800	$0	$5,361,900	$44,391,800
LILO Modification and Operation	$9,537,600	$8,760,600	$99,200	$6,099,000	$24,496,400
Operation of DCSA	$37,800	$14,609,700	$0	$3,666,600	$18,314,100
Demolition of DCSA	$2,198,400	$7,637,600	$3,641,000	$3,369,400	$16,846,400
WMA 1 Closure					
Surface Structure Removal	$21,124,500	$126,991,100	$33,562,200	$45,419,800	$227,097,600
Subsurface Soil Removal	$12,196,200	$36,593,500	$34,008,000	$20,699,700	$103,497,400
WMA 2 Phase 1 Activities	$11,649,200	$50,651,500	$53,701,000	$29,000,500	$145,002,200
WMA 3 Phase 1 Activities	$2,224,300	$8,355,400	$2,692,500	$3,318,200	$16,590,400
WMA 5 Phase 1 Activities	$2,341,200	$9,068,800	$4,096,200	$3,876,900	$19,383,100
WMA 6 Phase 1 Activities	$456,800	$1,464,400	$1,995,100	$979,200	$4,895,500
WMA 7 Phase 1 Activities	$2,905,800	$12,660,800	$560,400	$4,005,800	$20,132,800
WMA 8 Phase 1 Activities	$7,911,000	$34,469,140	$1,525,700	$10,905,800	$54,811,600
WMA 9 Phase 1 Activities	$903,600	$6,495,100	$2,332,800	$2,433,000	$12,164,500
WMA 10 Phase 1 Activities	$315,600	$1,381,700	$675,000	$593,200	$2,965,500
WMA 12 Phase 1 Activities	$481,700	$1,605,800	$2,748,900	$1,209,300	$6,045,700
Environmental Monitoring Installations	$1,353,900	$2,784,300	$104,300	$1,060,700	$5,303,200
Security Installations	$342,500	$1,188,400	$208,500	$434,900	$2,174,300
Existing Facility Maintenance*	$8,764,900	$38,189,700	$1,690,400	$12,083,000	$60,728,000
Security	$0	$29,087,700	$0	$7,271,900	$36,359,600
Annual Environmental Monitoring	$4,544,800	$25,389,700	$342,700	$7,571,600	$37,848,800
NPP PTW Replacement	$1,781,200	$929,700	$874,100	$896,400	$4,481,400
SDA Geomembrane Replacement	$1,116,200	$4,070,800	$166,500	$1,338,400	$6,691,900
TOTALS	**$124,038,300**	**$429,564,200**	**$145,024,500**	**$171,595,200**	**$870,222,200**
GTCC Waste Disposal			$0		$0
TRU Waste Disposal			$57,977,300		$57,977,300
HLW Canister Disposal			$137,500,000		$137,500,000
TOTAL NON-PROJECT COST			$195,477,300		$195,477,300
TOTAL ALTERNATIVE COST	**$124,038,300**	**$429,564,200**	**$340,501,800**	**$171,595,193**	**$1,065,699,500**

* Includes maintenance of all existing facilities except for WMA 7 and WMA 8.

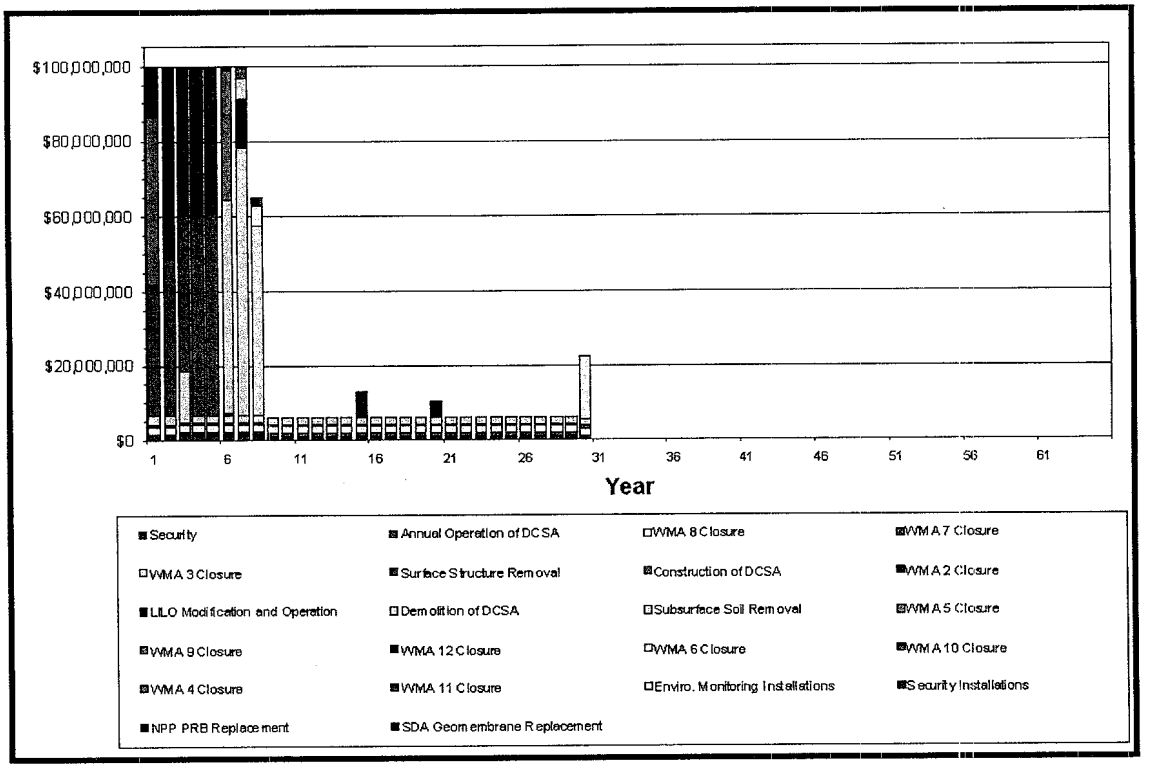

Figure 3-14. Total Costs (Y2008) by Implementation Year

Table 3-19. Volume of WMA-3 Components Potentially Classified as HLW

Location/Area	Unpackaged Volume (ft^3)	WIR Classification
Removal of NFS and Vit Process Lines	608	A
Removal of Mob and Transfer Pumps (8D-1)	515	C
Removal of Mob and Transfer Pumps (8D-2 and 8D-4)	670	TRU

Table 3-20. Cost of Waste Disposal Assuming all Contact Wastes are Classified as WIR

Waste Classification	Unpackaged Volume (ft^3)	Packaged Volume (ft^3)	Disposal Cost	Unit Cost
Class A and C Waste	1,123	1,286	$77,250	@ $50/$ft^3$
TRU Waste	670	684	$1,587,000	@ $2,300/ ft^3
			Total Disposal for WIR Option	**$1,664,250**

Table 3-21. Cost of Waste Disposal Assuming all Contact Wastes are Classified as HLW

Waste Classification	Unpackaged Volume (ft^3)	Packaged Volume (ft^3)	Disposal Cost	Unit Cost
HLW Waste	1,793	1,830	$38,430,000	@ $21,000/$ft^3$
			Total Disposal for HLW Option	**$38,430,000**