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Lockheed Martin Idaho Technologies Co.

DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
WASTE SITE ARA-16
ALTERNATIVE 2 - LIMITED ACTION
EXIST AND ADDED INST. CONTROLS/MONITORING

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont.)										
	Packaging, Shipping, Transportation Documentation										
	Sampling and Analysis		NA								NA
	Hazard Classification		NA								NA
	Selection and Procurement of Packaging		NA								NA
	Packaging, Shipping, Transportation Documentation Cost										NA
	Remedial Action Report										
	RA Report Preparation		1 fte		320	320	75	24,000			24,000
	Reviews and Comment Resolution		1 fte		320	320	75	24,000			24,000
	Remedial Action Report Cost										48,000
	WAG-Wide RA 5 Yr. Review - (Cost includes (1) FTE For (1) yr for the Initial Review										
	RA Report Preparation		1 yr		1,440	1,440	75	108,000			108,000
	Reviews and Comment Resolution		1 yr		440	440	75	33,000			33,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										141,000
	RD Document Preparation										
	Safety Analysis Documentation (ASA & HSP)										
	Auditable Safety Analysis/Hazards Classification		2 fte		160	320	75	24,000			24,000
	Unresolved Safety Questions		2 fte		160	320	75	24,000			24,000
	Quality Assurance		1 fte		30	30	75	2,250			2,250
	Review and Comment Resolution		2 fte		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost										100,500
	Sampling and Analysis Plan										
	Preliminary Scoping		1 fte		320	320	75	24,000			24,000
	Field Sampling Plan Preparation		1 fte		400	400	75	30,000			30,000
	Reviews and Comment Resolution		1 fte		720	720	75	54,000			54,000
	Sampling and Analysis Plan Cost										108,000

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WASTE SITE ARA-16
ALTERNATIVE 2 - LIMITED ACTION
EXIST AND ADDED INST. CONTROLS/MONITORING

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RD Document Preparation (cont.)										
	Pre-Final Inspection Report										
	Checklist Preparation		1 fte		40	40	75	3,000			3,000
	Reviews and Comment Resolution		1 fte		60	60	75	4,500			4,500
	Pre-Final Inspection Report Cost										7,500
	Remedial Design										
	Initial Review of Deed Restrictions with Governing Bodies and Public Comment										
	Legal Attorney and Env. Affairs at \$32K ea.		1 ea	32,000					32,000		32,000
	Deed Restrictions Cost										32,000
	Title Design Construction Document Package										
	Remedial Design Workplan		1 fte		40	40	75	3,000			3,000
	Archeological Survey, Coordination, & RA Oversight		1 fte	8,400	640	640	65	41,600	8,400		50,000
	Siting and Surveying		3 fte		8	24	40	960			960
	Procurement Document Package		6 dwgs	3,500					21,000		21,000
	Total Cost Title Design Construction Document Package										74,960
	Site Characterization - including: Sample Collection Materials/Labor, Shipping, SMO TOS Preparation & Analysis Reporting, ERIS Quality Reporting									Materials	
	Assume an Average of 5 per Site x 2 Sites		10 smpls	3,500	6	60	75	4,500	35,000	500	40,000
	Drilling Core Samples		8 ea	5,000					40,000		40,000
	Construction Subcontract										
	New Monitoring Wells and Equipment (ref. pg.3)		1 ls	155,000					155,000		155,000
	6' h Security Fence w/Gates, Signage and Markers		720 lf	25					18,000		18,000
	Surface Water Diversion Provision		720 lf	5					3,600		3,600
	Total Subcontractor Direct Costs										176,600
	Subcontractor Overhead and Profit @ 30%										52,980
	Total Subcontractor Directs and Indirects										229,580
	Procurement Fee and G&A at Current Business Practices										82,649
	Total Subcontractor Costs										312,229
	Project/Construction Management										45,916

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ALTERNATIVE 2 - LIMITED ACTION
EXIST AND ADDED INST. CONTROLS/MONITORING

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	Remedial Action - Operations (100 Year Duration)										
	Program Management										
	Coordination/Oversight of Technical Support		1 fte		200	200	75	15,000			15,000
	Coordination with Agency Participants		1 fte		80	80	75	6,000			6,000
	Cost and Schedule Control		1 fte		59	59	65	3,848			3,848
	Ensure Compliance of Gov't Regulation		1 fte		32	32	70	2,240			2,240
	Reviews		1 fte		32	32	65	2,080			2,080
	Audit Preparation and Coordination		1 fte		32	32	65	2,080			2,080
	Annual Operations and Maintenance Reports		1 fte		40	40	65	2,600			2,600
	Total Cost (Per Year)										33,850
	Program Management Costs - 100 Year Duration		100 yrs	33,850					3,385,000		3,385,000
	WAG-Wide RA 5 Yr. Review - (Cost Per Each, Required (1) FTE For Years 2 thru 5; (1) FTE in (5) Yr. Increments for 6 thru 95)										
	RA Report Preparation		23 yrs		1,440	33,120	75	2,484,000			2,484,000
	Reviews and Comment Resolution		23 yrs		440	10,120	75	759,000			759,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										3,243,000
	Remedial Design										
	Added Institutional Controls - 5 Yr. Review of Deed Restrictions with Governing Bodies and Public Comment Over a 100 Year Period; Total of 20 Reviews.										
	Legal Attorney and Env. Affairs at \$32K ea.		20 ea	32,000					640,000		640,000
	Total Added Institutional Controls - 100 Year Duration										640,000
	Caretaker/Maintenance										
	Caretaker		0.1 fte		1,880	188	75	14,100			14,100
	Area/Access Materials and Repair		12 mos.	500					6,000		6,000
	Caretaker/Maintenance Cost Per Year										20,100
	Monitoring Well Replacement (8 wells every 25 yrs)		3 times	358,145					1,074,434		1,074,434
	Caretaker Cost - 100 Year Duration		100 yrs	20,100					2,010,000		2,010,000
											3,084,434

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	FFA/CO Management and Oversight										
	Program Management										
	Coordination/Oversight of Technical Support		1 fte		640	640	75	48,000			48,000
	Coordination with Agency Participants		1 fte		320	320	75	24,000			24,000
	Cost and Schedule Control		1 fte		320	320	65	20,800			20,800
	Ensure Compliance of Gov't Regulation		1 fte		160	160	70	11,200			11,200
	Quarterly and Yearly Reviews		1 fte		160	160	65	10,400			10,400
	Audit Preparation and Coordination		1 fte		160	160	65	10,400			10,400
	Total Cost (Per Year)										124,800
	Total Cost (Per Year Rounded)										125,000
	Program Management - 3 Year Duration		3 yr	125,000					375,000		375,000
	RA Document Preparation										
	RD/RA SOW										
	PreDesign Studies/Preliminary Scoping		3 fte		80	240	75	18,000			18,000
	Design Criteria		1 fte		40	40	75	3,000			3,000
	RD/RA Document Preparation		1 fte		80	80	75	6,000			6,000
	Reviews and Comment Resolution		1 fte		360	360	75	27,000			27,000
	RD/RA SOW Cost										54,000
	RA Workplan										
	Preliminary Scoping		1 fte		160	160	75	12,000			12,000
	RD/RA Document Preparation		1 fte		260	260	75	19,500			19,500
	Reviews and Comment Resolution		1 fte		420	420	75	31,500			31,500
	RA Workplan Cost										63,000

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P.H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont)										
	Packaging, Shipping, Transportation Documentation										
	Sampling and Analysis										N/A
	Hazard Classification										N/A
	Selection and Procurement of Packaging										N/A
	Packaging, Shipping, Transportation Documentation Cost										N/A
	Remedial Action Report										
	RA Report Preparation		1 fte		320	320	75	24,000			24,000
	Reviews and Comment Resolution		1 fte		320	320	75	24,000			24,000
	RA Report Cost										48,000
	WAG-Wide RA 5 Yr. Review - (Cost Includes (1) FTE For (1) yr for the Initial Review										
	RA Report Preparation		1 yr		1,440	1,440	75	108,000			108,000
	Reviews and Comment Resolution		1 yr		440	440	75	33,000			33,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										141,000
	RD Document Preparation										
	Safety Analysis Documentation (ASA & HSP)										
	Auditable Safety Analysis/Hazards Classification		2 fte		160	320	75	24,000			24,000
	Unresolved Safety Questions		2 fte		160	320	75	24,000			24,000
	Quality Assurance		1 fte		30	30	75	2,250			2,250
	Reviews and Comment Resolution		2 fte		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost										100,500
	Sampling and Analysis Plan										
	Preliminary Scoping		1 fte		320	320	75	24,000			24,000
	Field Sampling Plan Preparation		1 fte		400	400	75	30,000			30,000
	Reviews and Comment Resolution		1 fte		720	720	75	54,000			54,000
	Sampling and Analysis Plan Cost										108,000

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RD Document Preparation (continued)										
	Pre-Final Inspection Report										
	Checklist Preparation		1 fte		40	40	75	3,000			3,000
	Reviews and Comment Resolution		1 fte		60	60	75	4,500			4,500
	Pre-Final Inspection Report Cost										7,500
	Remedial Design										
	Initial Review of Deed Restrictions with Governing Bodies and Public Comment										
	Legal Attorney and Env. Affairs at \$32K ea.		1 ea	32,000					32,000		32,000
	Deed Restrictions Cost										32,000
	Title Design Construction Document Package - For Construction Subcontract										
	Remedial Design Workplan		1 fte		320	320	75	24,000			24,000
	Archeological Survey, Coordination, & RA Oversight		1 fte	8,400	640	640	65	41,600	8,400		50,000
	Siting and Surveying		1 site		80	80	40	3,200			3,200
	Procurement Document Package		50 dwgs	3,500					175,000		175,000
	Total Title Design Package										252,200
	Site Characterization - Including: Sample Collection Materials/Labor, Shipping, SMO TOS Preparation & Analysis Reporting, ERIS Quality Reporting									(Materials)	
	Assume a Total of 5 Soil and Tank Samples		5 smpls	3,500	6	30	75	2,250	17,500	500	20,250

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E, V P, H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST	
Remedial Action - Construction Subcontract #1 of 3												
	Site Prep: Grading, Leveling, Gravel Base 250'x250'		1 lot	50,000					50,000		50,000	
	Add Voltage Regulators to Exist. (3.1) mi. OH Line		1 lot	50,000					50,000		50,000	
	Temp. Overhead Powerline(1/2 mi. Overhead)		1 lot	150,000					150,000		150,000	
	Temporary Equip Pad & Personal/Equip.Decon Area		1 lot	15,000					15,000		15,000	
	Remove Underground Piping From Bldg. to Tank		1 lot	50,000					50,000		50,000	
	Fill Tank with Petroset or Zeolite		55 bags	100	1.45	80	160	12,760	5,500		18,260	
	Subtotal Subcontractor Directs										333,260	
	Subcontractor Overhead and Profit @ 30%										99,978	
	Total Subcontractor Directs and Indirects #1 of 3										433,238	
In-Situ Vitrification Treatment Subcontract #2 of 3												
	Permitting, Acceptance, Procedures Documentation		1 lot	280,000					280,000		280,000	
	Cold Test - Proof of Process		Assumed Already Performed During Treatability Studies Associated with WAG-1 Activities and Not Required									N/A
	Mobilization/Demobilization		1 lot	260,000					260,000		260,000	
	Operations-Personnel, Equip. & Mat'l's		1 lot	240,000					240,000		240,000	
	Subtotal Subcontractor Directs										780,000	
	Subcontractor Overhead and Profit @ 10%										78,000	
	Total Subcontractor Directs and Indirects #2 of 3										858,000	
	Total Subcontractor Directs and Indirects #1 and #2										1,291,238	
	Procurement and G&A Fees										196,510	
	Total Subcontractor Cost										1,487,748	
	Miscellaneous: PPE's and Consumables		1 lot	10,000					10,000		10,000	
	Treatment Support Personnel (LMITCO)		4 fte		160	640	70	44,800			44,800	
	Support equipment: Forklift, Crane, etc.		1 lot		160	160	110	17,600			17,600	
	Total Subcontract Costs For #1 and #2 of 3										1,560,148	
	Project/Construction Management for Subcontract #1 & #2 of 3										156,015	

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	Title Design Construction Document Package - For Construction Subcontract #3 of 3										
	Siting and Surveying		3 fte		8	24	40	960			960
	Final Design Construction Document Package		10 dwgs	3000					30,000		30,000
	Total Title Design Package										30,960
	Remedial Action - Construction Subcontract #3 of 3										
	Soil Cap										
	Import Fill to Grade		121 cy	4	Included				484		484
	Mine Low Perm Soil		382 cy	3	Included				1,146		1,146
	Import Low Perm. Soil		382 cy	7	Included				2,674		2,674
	Place and Compact Soil		382 cy	4	Included				1,528		1,528
	Vegetate Cover		1 ls	500	Included				500		500
	Surveying: Grades, Lines, and Levels		3 fte		24	72	40	2,880			2,880
	Reclamation Seeding		1 ls	1,000					1,000		1,000
	Mobilization & Demobilization (1 Crew - See Recap)		1 crew	10,000					10,000		10,000
	Subtotal Subcontractor Directs										20,212
	Access Restriction Fence										
	6' Security Fence - 1 gate		400 lf	25					10,000		10,000
	Surface Water Drainage		400 lf	5					2,000		2,000
	Subtotal Subcontractor Directs										32,212
	Subcontractor Overhead and Profit @ 30%										9,664
	Total Subcontractor Directs and Indirects #3 and #3										41,876
	Procurement and G&A Fees										15,075
	Total Subcontractor Cost										56,951
	Project/Construction Management for Subcontract #3 of 3										8,375

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3A - ISV OF THE ARA-16 TANK AT ARA-16
SOIL BARRIER CAP

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
Remedial Action - Operations (100 Year Duration)											
Program Management											
	Coordination/Oversight of Technical Support		1 fte		200	200	75	15,000			15,000
	Coordination with Agency Participants		1 fte		80	80	75	6,000			6,000
	Cost and Schedule Control		1 fte		59	59	65	3,848			3,848
	Ensure Compliance of Gov't Regulation		1 fte		32	32	70	2,240			2,240
	Reviews		1 fte		32	32	65	2,080			2,080
	Audit Preparation and Coordination		1 fte		32	32	65	2,080			2,080
	Annual Operations and Maintenance Reports		1 fte		40	40	65	2,600			2,600
	Total Cost (Per Year)										33,850
	Program Management Costs - 100 Year Duration		100 yrs	33,850					3,385,000		3,385,000
WAG-Wide RA 5 Yr. Review - (Cost Per Each, Required (1) FTE For Years 2 thru 5; (1) FTE in (5) Yr. Increments for 6 thru 95)											
	RA Report Preparation		23 yrs		1,440	33,120	75	2,484,000			2,484,000
	Reviews and Comment Resolution		23 yrs		440	10,120	75	759,000			759,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										3,243,000
Remedial Design											
Added Institutional Controls - 5 Yr. Review of Deed Restrictions with Governing Bodies and Public Comment Over a 100 Year Period; Total of 20 Reviews.											
	Legal Attorney and Env. Affairs at \$32K ea.		20 ea	32,000					640,000		640,000
	Total Added Institutional Controls - 100 Year Duration										640,000
Caretaker/Maintenance											
	Caretaker		0.1 fte		1,880	188	75	14,100			14,100
	Cap Maintenance		1600 sf	0.04					64		64
	Area/Access Materials and Repair		12 mos.	500					6,000		6,000
	Caretaker/Maintenance Cost Per Year										20,164
	Caretaker Cost - 100 Year Duration		100 yrs	20,164					2,016,400		2,016,400

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DETAILED COST ESTIMATE (CONT.SHEET)

Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B1 - REMOVAL AND ISV OF THE ARA-16
TANK AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	FFA/CO Management and Oversight										
	Program Management										
	Coordination/Oversight of Technical Support		1 fte		640	640	75	48,000			48,000
	Coordination with Agency Participants		1 fte		320	320	75	24,000			24,000
	Cost and Schedule Control		1 fte		320	320	65	20,800			20,800
	Ensure Compliance of Gov't Regulation		1 fte		160	160	70	11,200			11,200
	Quarterly and Yearly Reviews		1 fte		160	160	65	10,400			10,400
	Audit Preparation and Coordination		1 fte		160	160	65	10,400			10,400
	Total Cost (Per Year)										124,800
	Total Cost (Per Year Rounded)										125,000
	Program Management - 3 Year Duration		3 yr	125,000					375,000		375,000
	RA Document Preparation										
	RD/RA SOW										
	PreDesign Studies/Preliminary Scoping		3 fte		80	240	75	18,000			18,000
	Design Criteria		1 fte		40	40	75	3,000			3,000
	RD/RA Document Preparation		1 fte		80	80	75	6,000			6,000
	Reviews and Comment Resolution		1 fte		360	360	75	27,000			27,000
	RD/RA SOW Cost										54,000
	RA Workplan										
	Preliminary Scoping		1 fte		160	160	75	12,000			12,000
	RD/RA Document Preparation		1 fte		260	260	75	19,500			19,500
	Reviews and Comment Resolution		1 fte		420	420	75	31,500			31,500
	RA Workplan Cost										63,000

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B1 - REMOVAL AND ISV OF THE ARA-16
TANK AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E.V. P.H.	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont)										
	Packaging, Shipping, Transportation Documentation										
	Sampling and Analysis		1 fte		240	240	75	18,000			18,000
	Hazard Classification		1 fte		200	200	75	15,000			15,000
	Selection and Procurement of Packaging		1 fte		200	200	75	15,000			15,000
	Packaging, Shipping, Transportation Documentation Cost										48,000
	Remedial Action Report										
	RA Report Preparation		1 fte		320	320	75	24,000			24,000
	Reviews and Comment Resolution		1 fte		320	320	75	24,000			24,000
	RA Report Cost										48,000
	WAG-Wide RA 5 Yr. Review - (Cost Includes (1) FTE For (1) yr for the Initial Review										
	RA Report Preparation		1 yr		1,440	1,440	75	108,000			108,000
	Reviews and Comment Resolution		1 yr		440	440	75	33,000			33,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										141,000
	RD Document Preparation										
	Safety Analysis Documentation (ASA & HSP)										
	Auditable Safety Analysis/Hazards Classification		2 fte		160	320	75	24,000			24,000
	Unresolved Safety Questions		2 fte		160	320	75	24,000			24,000
	Quality Assurance		1 fte		30	30	75	2,250			2,250
	Reviews and Comment Resolution		2 fte		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost										100,500
	Sampling and Analysis Plan										
	Preliminary Scoping		1 fte		320	320	75	24,000			24,000
	Field Sampling Plan Preparation		1 fte		400	400	75	30,000			30,000
	Reviews and Comment Resolution		1 fte		720	720	75	54,000			54,000
	Sampling and Analysis Plan Cost										108,000

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DETAILED COST ESTIMATE (CONT.SHEET)

Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B1 - REMOVAL AND ISV OF THE ARA-16
TANK AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E, V P, H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MATL COST	OTHER COST	TOTAL COST
	RD Document Preparation (continued)										
	Pre-Final Inspection Report										
	Checklist Preparation		1 fte		40	40	75	3,000			3,000
	Reviews and Comment Resolution		1 fte		60	60	75	4,500			4,500
	Pre-Final Inspection Report Cost										7,500
	Remedial Design										
	Initial Review of Deed Restrictions with Governing Bodies and Public Comment										
	Legal Attorney and Env. Affairs at \$32K ea.		1 ea	32,000					32,000		32,000
	Deed Restrictions Cost										32,000
	Title Design Construction Document Package - For Construction Subcontract										
	Remedial Design Workplan		1 fte		480	480	75	36,000			36,000
	Archeological Survey, Coordination, & RA Oversight		1 fte	8,400	640	640	65	41,600	8,400		50,000
	Siting and Surveying		1 site		80	80	40	3,200			3,200
	Procurement Document Package		40 dwgs	3,500					140,000		140,000
	Total Title Design Package										229,200
	Site Characterization - Including: Sample Collection Materials/Labor, Shipping, SMO TOS Preparation & Analysis Reporting, ERIS Quality Reporting									(Materials)	
	Assume 5 Samples for Tank Contents		5 smpls	3,500	6	30	75	2,250	17,500	500	20,250
	Soil Samples for Onsite Repository WAC and (2) Samples for Concrete Basin		3 smpls	3,500	6	18	75	1,350	10,500	500	12,350

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B1 - REMOVAL AND ISV OF THE ARA-16
TANK AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
Remedial Action - Construction Subcontract; Contaminated Soils & Tank Excavation, Handling, and On-Site Disposal											
	Mobilization to Job Site		1 crew		20	20	350	7,000			7,000
	Fence Demo and Site Prep		1 crew		20	20	350	7,000			7,000
	Temporary Utilities: Assume Power Within 250 lf		1 ls	15,000					15,000		15,000
	Equipment Decon Pad Area		2 ea	2,500					5,000		5,000
	Temporary Secondary Containment Structure		3,200 sf	90					288,000		288,000
	Machine Excavate Soils For Tank Removal		150 cy		0.13	20	350	6,825			6,825
	Hand Excavate Contaminated Soils at Tank Vault		67 cy		1.5	101	65	6,533			6,533
	Temporary Rad. Shielding Allowance		1 ls	50,000					50,000		50,000
	Remove, Decon Tank Exterior and Load on Flatbed		1 crew		40	40	400	16,000			16,000
	Flatbed Secondary Shipping Container Allow. For Tank		1 ls	50,000					50,000		50,000
	Excavate Tan Site For Disposal Near V-Tanks		100 cy		0.2	20	350	7,000		10,000	17,000
	Transport, Unload and Place in V-Tank Area at TAN		1 trip		20	20	350	7,000			7,000
	Backfill Tank at TAN Disposal Area with Native Soil		75 cy		0.13	10	350	3,413			3,413
	Decon Concrete Basin		250 sf		0.04	10	350	3,500			3,500
	Demolish Concrete Basin and Load		10 cy		1	10	350	3,500			3,500
	Backfill and Compact ARA-16 Site with Native Soil		217 cy		0.044	10	350	3,342			3,342
	Remove Exist. Underground Piping System and Box		1 ls	50,000					50,000		50,000
	Vegetate Area/Reclaimate Borrow Area		1 ls	2,000					2,000		2,000
	Decon and Remove Rad. Shielding & Secondary Struct.		1 ls	50,700					50,700		50,700
	Assumed at 15% of Capital Cost										
	Transport of Soils & Secondary Waste Materials		1 ls		40	40	350	14,000			14,000
	Shared ISV Costs With WAG-1		1 ls	200,000					200,000		200,000
	Site Cleanup and Demob.		1 ls		40	40	350	14,000			14,000
	Total Subcontractor Directs					32					819,812
	Subcontractor Overhead and Profit @ 30%										245,944
	Total Subcontractor Directs and Indirects										1,065,755
	Procurement Fees and G&A at Current Business Practices										383,672
	Total Subcontractor Costs										1,449,427
	Project/Construction Management; Contaminated Soils Excavation, Handling, and On-Site Disposal										319,727

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B2 - ISV OF THE ARA-16 TANK WASTE
AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E/V P.H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	FFA/CO Management and Oversight										
	Program Management										
	Coordination/Oversight of Technical Support		1 fte		640	640	75	48,000			48,000
	Coordination with Agency Participants		1 fte		320	320	75	24,000			24,000
	Cost and Schedule Control		1 fte		320	320	65	20,800			20,800
	Ensure Compliance of Gov't Regulation		1 fte		160	160	70	11,200			11,200
	Quarterly and Yearly Reviews		1 fte		160	160	65	10,400			10,400
	Audit Preparation and Coordination		1 fte		160	160	65	10,400			10,400
	Total Cost (Per Year)										124,800
	Total Cost (Per Year Rounded)										125,000
	Program Management - 3 Year Duration		3 yr	125,000					375,000		375,000
	RA Document Preparation										
	RD/RA SOW										
	PreDesign Studies/Preliminary Scoping		3 fte		80	240	75	18,000			18,000
	Design Criteria		1 fte		40	40	75	3,000			3,000
	RD/RA Document Preparation		1 fte		80	80	75	6,000			6,000
	Reviews and Comment Resolution		1 fte		360	360	75	27,000			27,000
	RD/RA SOW Cost										54,000
	RA Workplan										
	Preliminary Scoping		1 fte		160	160	75	12,000			12,000
	RD/RA Document Preparation		1 fte		260	260	75	19,500			19,500
	Reviews and Comment Resolution		1 fte		420	420	75	31,500			31,500
	RA Workplan Cost										63,000

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DETAILED COST ESTIMATE (CONT.SHEET)

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Project WAG 5 FS COST ESTIMATES
TANK SITE ARA-16
ALTERNATIVE 3B2 - ISV OF THE ARA-16 TANK WASTE
AT TEST AREA NORTH

Type of Est. Planning

File No. 4951-3

Date 01/06/99

ACCT. NO.	DESCRIPTION	E,V P,H	MAT'L UNIT	MAT'L UT. COST	UNIT LAB. HRS	TOTAL LAB. HRS.	LABOR RATE	LABOR COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont)										
	Packaging, Shipping, Transportation Documentation										
	Sampling and Analysis		1 fte		240	240	75	18,000			18,000
	Hazard Classification		1 fte		200	200	75	15,000			15,000
	Selection and Procurement of Packaging		1 fte		200	200	75	15,000			15,000
	Packaging, Shipping, Transportation Documentation Cost										48,000
	Remedial Action Report										
	RA Report Preparation		1 fte		320	320	75	24,000			24,000
	Reviews and Comment Resolution		1 fte		320	320	75	24,000			24,000
	RA Report Cost										48,000
	WAG-Wide RA 5 Yr. Review - (Cost Includes (1) FTE For (1) yr for the Initial Review										
	RA Report Preparation		1 yr		1,440	1,440	75	108,000			108,000
	Reviews and Comment Resolution		1 yr		440	440	75	33,000			33,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years										141,000
	RD Document Preparation										
	Safety Analysis Documentation (ASA & HSP)										
	Auditable Safety Analysis/Hazards Classification		2 fte		160	320	75	24,000			24,000
	Unresolved Safety Questions		2 fte		160	320	75	24,000			24,000
	Quality Assurance		1 fte		30	30	75	2,250			2,250
	Reviews and Comment Resolution		2 fte		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost										100,500
	Sampling and Analysis Plan										
	Preliminary Scoping		1 fte		320	320	75	24,000			24,000
	Field Sampling Plan Preparation		1 fte		400	400	75	30,000			30,000
	Reviews and Comment Resolution		1 fte		720	720	75	54,000			54,000
	Sampling and Analysis Plan Cost										108,000