Lockheed Martin Idaho Technologies Co.

Rev 10-96

SUMMARY OF DETAILED COST ESTIMATE

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills

Location Idaho National Engineering & Environmental Laboratory (INEEL)

Requester J. F. Keck MS 3625 526-5458

Type of Estimate: Planning

File No: 3954 - D

Date: 01/28/99

Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	ALTERNATIVE #1 NO ACTION	ALTERNATIVE #2 INSTITUTIONAL CONTROLS	ALTERNATIVE #3A EXCAVATE TREAT & ON SITE DISPOSAL	ALTERNATIVE #3B EXCAVATE TREAT & OFF SITE DISPOSAL	ALTERNATIVE #4 CONTAINMENT w/ ET - TYPE COVER	
ER1220	**FFA/CO Management and Oversight**						
	Program Management	$125,000	$125,000	$219,000	$219,000	$219,000	
	RA Document Preparation						
	RD/RA SOW	$54,000	$54,000	$54,000	$54,000	$54,000	
	RA Workplan	$63,000	$63,000	$63,000	$63,000	$63,000	
	Packaging, Shipping, Trans. Documentation	N/A	N/A	N/A	$78,000	N/A	
	Remedial Action Report	$48,000	$48,000	$48,000	$48,000	$48,000	
	WAG-Wide RA - 5 Yr. Review For 100 Years	$811,000	$811,000	N/A	N/A	$811,000	
	RD Documentation Preparation						
	Safety Analysis Documentation (ASA & HSP)	N/A	$100,500	$100,500	$100,500	$100,500	
	Sampling and Analysis Plan	N/A	N/A	$108,000	$108,000	$108,000	
	Pre-Final Inspection Report	N/A	$7,500	$7,500	$7,500	$7,500	
ER1210	**Remedial Design**						
	Added Institutional Controls - 5 Yr. Review For 100 Years	N/A	$200,000	N/A	N/A	$200,000	
	Title Design Construction Document Package	N/A	$21,000	$85,000	$60,000	$60,000	
ER1230	**Remedial Action - Construction Subcontract**						
	Site Characterization	N/A	N/A	$76,000	$76,000	$31,000	
	Construction Subcontract/GFE	N/A	$64,000	$315,000	$322,000	$463,000	
	Project/Construction Management Allowance	N/A	$10,368	$44,000	$37,000	$75,000	
	TOTAL CAPITAL COST	**$1,101,000**	**$1,504,368**	**$1,120,000**	**$1,173,000**	**$2,240,000**	
ER1230	**Remedial Action - Operations (100 Year Duration)**						
	Program Management	N/A	$3,385,000	N/A	N/A	$3,385,000	
	Continued/New Construction CFA Caretaker/Maintenance	N/A	$1,495,000	N/A	N/A	$1,495,000	
	Operations, Maintenance, Materials, and Disposal	N/A	N/A	N/A	N/A	N/A	
ER2000	**D&D of Facilities**	N/A	N/A	N/A	N/A	N/A	
ER1310	**Surveillance and Monitoring**	N/A	N/A	N/A	N/A	N/A	
	TOTAL OPERATIONS COST (100 YEARS)	**N/A**	**$4,880,000**	**N/A**	**N/A**	**$4,880,000**	

DETAILED COST ESTIMATE (CONT.SHEET)

Project: OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #1
No Action

Type of Estimate: Planning File No: 3954 - D Date: 01/28/99
Prep'd By: J. R. Baker

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

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #1
No Action

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont.)									
	Packaging, Shipping, Transportation Documentation									
	Sampling and Analysis	N/A								N/A
	Hazard Classification	N/A								N/A
	Selection and Procurement of Packaging	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Packaging, Shipping, Transportation Documentation Cost									**N/A**
	Remedial Action Report									
	RA Report Preparation	1 person		320	320	75	24,000			24,000
	Reviews and Comment Resolution	1 person		320	320	75	24,000			24,000
	Remedial Action Report Cost									**48,000**
	WAG-Wide RA 5 Yr. Review - (Cost Per Each, Required (1/4) FTE For Years 1 thru 5; (1/4) FTE in (5) Yr. Increments for 6 thru 95)									
	5 Year Review Preparation	23 years		350	8,050	75	603,750			604,000
	Reviews and Comment Resolution	23 years		120	2,760	75	207,000			207,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years									**811,000**
	RD Document Preparation									
	Safety Analysis Documentation (ASA & HSP)									
	Auditable Safety Analysis/Hazards Classification	N/A								N/A
	Unresolved Safety Questions	N/A								N/A
	Quality Assurance	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Safety Analysis Documentation Cost									**N/A**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #1
No Action

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Sampling and Analysis Plan									
	Preliminary Scoping	N/A								N/A
	Field Sampling Plan Preparation	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Sampling and Analysis Plan Cost									N/A
	RD Document Preparation (cont.)									
	Pre-Final Inspection Report									
	Checklist Preparation	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Pre-Final Inspection Report Cost									N/A
	Remedial Design									
	Added Institutional Controls									
	Legal Attorney and Env. Affairs at $10K ea.	N/A								N/A
	Total Added Institutional Controls - 100 Year Duration									N/A
	Title Design Construction Document Package	N/A								N/A
	Remedial Action									
	Site Characterization	N/A								N/A
	Construction Subcontract	N/A								N/A
	Project/Construction Management Allowance	N/A								N/A

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #1
No Action

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Remedial Action - Operations (100 Year Duration)									
	Program Management									
	Coordination/Oversight of Technical Support	N/A								N/A
	Coordination with Agency Participants	N/A								N/A
	Cost and Schedule Control	N/A								N/A
	Ensure Compliance of Gov't Regulation	N/A								N/A
	Reviews	N/A								N/A
	Audit Preparation and Coordination	N/A								N/A
	Annual Operations and Maintenance Reports	N/A								N/A
	Total Cost (Per Year)									N/A
	Program Management Costs - 100 Year Duration	100 years	N/A							N/A
	Continued CFA Caretaker/Maintenance									
	Caretaker	N/A								N/A
	Fencing and Fence Maintenance	N/A								N/A
	Continued CFA Caretaker/Maintenance Cost Per Year									N/A
	Caretaker Cost - 100 Year Duration	100 years	N/A							N/A
	Operations, Maintenance, Materials and Disposal	N/A								N/A
	D&D of Facilities	N/A								N/A

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #1
No Action

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Surveillance and Monitoring (annual sampling & monitoring activities) - Assumes groundwater monitoring is not required.									
	Ground Water Sampling/Monitoring, Maint. Insp./Report	100 years								N/A
	5-Year Review Report	20 times								N/A
	Surveillance and Monitoring Costs - 100 Year Duration									N/A

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No: **Date:** 01/28/99
Prep'd By:

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

DETAILED COST ESTIMATE (CONT.SHEET)

Project: OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning File No: File No: Date: 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont.)									
	Packaging, Shipping, Transportation Documentation									
	Sampling and Analysis	N/A								N/A
	Hazard Classification	N/A								N/A
	Selection and Procurement of Packaging	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Packaging, Shipping, Transportation Documentation Cost									**N/A**
	Remedial Action Report									
	RA Report Preparation	1 person		320	320	75	24,000			24,000
	Reviews and Comment Resolution	1 person		320	320	75	24,000			24,000
	Remedial Action Report Cost									**48,000**
	WAG-Wide RA 5 Yr. Review - (Cost Per Each, Required 1/4) FTE For Years 1 thru 5; 1/4) FTE in (5) Yr. Increments for 6 thru 95)									
	5 Year Review Preparation	23 years		350	8,050	75	603,750			604,000
	Reviews and Comment Resolution	23 years		120	2,760	75	207,000			207,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years									**811,000**
	RD Document Preparation									
	Safety Analysis Documentation (ASA & HSP)									
	Auditable Safety Analysis/Hazards Classification	2 person		160	320	75	24,000			24,000
	Unresolved Safety Questions	2 person		160	320	75	24,000			24,000
	Quality Assurance	1 person		30	30	75	2,250			2,250
	Reviews and Comment Resolution	2 person		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost									**100,500**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No: **Date:** 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Sampling and Analysis Plan									
	Preliminary Scoping	N/A								N/A
	Field Sampling Plan Preparation	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Sampling and Analysis Plan Cost									**N/A**
	RD Document Preparation (cont.)									
	Pre-Final Inspection Report									
	Checklist Preparation	1 person		40	40	75	3,000			3,000
	Reviews and Comment Resolution	1 person		60	60	75	4,500			4,500
	Pre-Final Inspection Report Cost									**7,500**
	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 $10K ea.	20 each	10,000					200,000		200,000
	Total Added Institutional Controls - 100 Year Duration									**200,000**
	Title Design Construction Document Package									
	Remedial Design and Work Plan	1 person		40	40	75	3,000			3,000
	Siting and Surveying	1 lot		20	20	75	1,500			1,500
	Review and Revise Final Design	3 drwngs	2000					6,000		6,000
	Final Design of Construction Package	3 drwngs	3500					10,500		10,500
	Title Design Construction Document Package									**21,000**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No:_ **Date:** 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Remedial Action									
	Site Characterization	N/A								N/A
	Construction Subcontract - (to begin in the year 2000)									
	Install Perimeter Fencing w/ Gates and Signage	500 lnft	20					10,000		10,000
	Mobilization/Demobilization @ 3% of above construction cost	10,000 const$	0.03					300		300
	Training's	5 person		24	120	35	4,200			4,200
	Project Supervision	1 months		170	170	40	6,800			6,800
	Project Support Personnel - Safety & IH	1 months		340	340	35	11,900			11,900
	Project Booties, Gloves, Masks, Signage, etc..	1 lot	2500					2,500		2,500
	Construction Subcontract Subtotal this page									35,700

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No: **Date:** 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Construction Subcontract Subtotal previous page									35,700
	Total Construction Subcontract Direct Cost									36,000
	Construction Subcontract Overhead and Profit @ 30%									10,800
	Total Construction Subcontract Direct and Indirect Cost									*47,000*
	Procurement Fees @ 2.5%									*1,175*
	G&A and PIF Fee Allowance @ 33%									*15,510*
	Construction Subcontract & GFE - Total Amount									**64,000**
	Project/Construction Management Allowance									
	Project/Construction Management @ 22.06% of Const. Subcontract Cost									10,368
	Project/Construction Management Allowance									**10,368**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No: **Date:** 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Remedial Action - Operations (100 Year Duration)									
	Program Management									
	Coordination/Oversight of Technical Support	1 person		200	200	75	15,000			15,000
	Coordination with Agency Participants	1 person		80	80	75	6,000			6,000
	Cost and Schedule Control	1 person		59	59	65	3,848			3,848
	Ensure Compliance of Gov't Regulation	1 person		32	32	70	2,240			2,240
	Reviews	1 person		32	32	65	2,080			2,080
	Audit Preparation and Coordination	1 person		32	32	65	2,080			2,080
	Annual Operations and Maintenance Reports	1 person		40	40	65	2,600			2,600
	Total Cost (Per Year)									33,850
	Program Management Costs - 100 Year Duration	100 years	33,850					3,385,000		**3,385,000**
	Continued CFA Caretaker/Maintenance									
	Caretaker	1 person		188	188	75	14,100			14,100
	Fencing Maintenance	500 lnft	1					500		500
	Surface Drainage Maintenance	8,700 sqft	0.04					348		348
	Continued CFA Caretaker/Maintenance Cost Per Year									14,950
	Caretaker Cost - 100 Year Duration	100 years	14,950					1,495,000		**1,495,000**
	Operations, Maintenance, Materials and Disposal	N/A								N/A
	D&D of Facilities	N/A								N/A

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #2
Institutional Controls

Type of Estimate: Planning **File No:** File No: **Date:** 01/28/99
Prep'd By:

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Surveillance and Monitoring (annual sampling & monitoring activities) - Assumes groundwater monitoring is not required.									
	Ground Water Sampling/Monitoring, Maint. Insp./Report	100 years								N/A
	5-Year Review Report	20 times								N/A
	Surveillance and Monitoring Costs - 100 Year Duration									**N/A**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #3A
Excavate, Cement Stabilization Treatment & On Site Disposal

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	FFA/CO Management and Oversight									
	Program Management									
	Coordination/Oversight of Technical Support	1 person		640	640	75	48,000			48,000
	Coordination with Agency Participants	1 person		320	320	75	24,000			24,000
	Cost and Schedule Control	1 person		320	320	65	20,800			20,800
	Ensure Compliance of Gov't Regulation	1 person		160	160	70	11,200			11,200
	Quarterly and Yearly Reviews	1 person		160	160	65	10,400			10,400
	Audit Preparation and Coordination	1 person		160	160	65	10,400			10,400
	Total Cost (Per Year)									124,800
	Total Cost (Per Year Rounded)									125,000
	Program Management - .25 year duration during the design stages,	1.75 year	125,000					218,750		**219,000**
	.5 year duration during the construction period and a 1 year duration after.									
	RA Document Preparation									
	RD/RA SOW									
	PreDesign Studies/Preliminary Scoping	3 person		80	240	75	18,000			18,000
	Design Criteria	1 person		40	40	75	3,000			3,000
	RD/RA SOW Preparation	1 person		80	80	75	6,000			6,000
	Reviews and Comment Resolution	1 person		360	360	75	27,000			27,000
	RD/RA SOW Cost									**54,000**
	RA Workplan									
	Preliminary Scoping	*1 person*		*160*	*160*	*75*	*12,000*			*12,000*
	RD/RA SOW Work Plan	1 person		260	260	75	19,500			19,500
	Reviews and Comment Resolution	1 person		420	420	75	31,500			31,500
	RA Workplan Cost									**63,000**

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #3A
Excavate, Cement Stabilization Treatment & On Site Disposal

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	RA Document Preparation (cont.)									
	Packaging, Shipping, Transportation Documentation Cost									
	Sampling and Analysis	N/A								N/A
	Hazard Classification	N/A								N/A
	Selection and Procurement of Packaging	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	Packaging, Shipping, Transportation Documentation Cost									**N/A**
	Remedial Action Report									
	RA Report Preparation	1 person		320	320	75	24,000			24,000
	Reviews and Comment Resolution	1 person		320	320	75	24,000			24,000
	Remedial Action Report Cost									**48,000**
	WAG-Wide RA 5 Yr. Review									
	5 Year Review Preparation	N/A								N/A
	Reviews and Comment Resolution	N/A								N/A
	WAG-Wide RA 5 Yr. Reviews									**N/A**
	RD Document Preparation									
	Safety Analysis Documentation (ASA & HSP)									
	Auditable Safety Analysis/Hazards Classification	2 person		160	320	75	24,000			24,000
	Unresolved Safety Questions	2 person		160	320	75	24,000			24,000
	Quality Assurance	1 person		30	30	75	2,250			2,250
	Reviews and Comment Resolution	2 person		335	670	75	50,250			50,250
	Safety Analysis Documentation Cost									***100,500***

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
Alternative #3A
Excavate, Cement Stabilization Treatment & On Site Disposal

Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT. COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Sampling and Analysis Plan									
	Preliminary Scoping	1 person		320	320	75	24,000			24,000
	Field Sampling Plan Preparation	1 person		400	400	75	30,000			30,000
	Reviews and Comment Resolution	1 person		720	720	75	54,000			54,000
	Sampling and Analysis Plan Cost									**108,000**
	RD Document Preparation (cont.)									
	Pre-Final Inspection Report									
	Checklist Preparation	1 person		40	40	75	3,000			3,000
	Reviews and Comment Resolution	1 person		60	60	75	4,500			4,500
	Pre-Final Inspection Report Cost									**7,500**
	Remedial Design									
	Added Institutional Controls - 5 Yr. Review of Deed Restrictions with Governing Bodies and Public Comment									
	Legal Attorney and Env. Affairs at $10K ea.									N/A
	Total Added Institutional Controls									**N/A**
	Title Design Construction Document Package									
	Remedial Design and Work Plan	1 person		40	40	75	3,000			3,000
	Siting and Surveying	1 lot		20	20	75	1,500			1,500
	Treatment Research and Specification Requirements	1 person		340	340	75	25,500			25,500
	Review and Revise Final Design	10 drwngs	2000					20,000		20,000
	Final Design of Construction Package	10 drwngs	3500					35,000		35,000
	Title Design Construction Document Package									**85,000**

DETAILED COST ESTIMATE (CONT.SHEET)

Project: OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
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Excavate, Cement Stabilization Treatment & On Site Disposal

Type of Estimate: Planning File No: 3954 - D Date: 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Remedial Action -									
	Site Characterization - Sampling and Analysis									
	note: excavation volume = 8,700 sqft of site area x .5 ft of excavation depth/27 cuft/cuyd = 161 cuyds.									
	assuming excavation equals 30 cuyds per hour then 161 cuyds/30 cuyds per hour = 6 crew hours									
	Site Area	8,700 sqft								for information only
	Soil Volume	161 cuyd								for information only
	Excavation Duration	0.10 months								for information only
	SMO - Sample Prep, SOW, Analysis of Data, Tracking, etc.	1 year		120	120	100	12,000			12,000
	Characterization of extent: assume min. of 10 samples per site; max of 1 sample per 100 sqft of site area.									
	Total Pb	87 samples	63					5,481		5,481
	Sample Collection - includes labels, shipping, documentation, etc.	87 samples		0.50	44	50	2,175			2,175
	ICDF Waste Acceptance Criteria (WAC) - 4 samples per site									
	Organic Sampling:									
	VOC 's	4 samples	160					640		640
	SVOC's	4 samples	320					1,280		1,280
	Pesticides	4 samples	120					480		480
	TCLP Metals	4 samples	925					3,700		3,700
	TCLP VOC's	4 samples	150					600		600
	TCLP SVOC's	4 samples	200					800		800
	TCLP Pesticides	4 samples	120					480		480
	PCB's	4 samples	500					2,000		2,000
	Total TPH	4 samples	235					940		940
	RAD Sampling:									
	Gamma Spec.	4 samples	63					252		252
	Gross Alpha	4 samples	32					128		128
	Site Characterization - Sampling and Analysis subtotal this page									30,956

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
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Type of Estimate: Planning **File No:** 3954 - D **Date:** 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Site Characterization - Sampling and Analysis subtotal previous page									30,956
	RAD Sampling cont..									
	Alpha Spec.	4 samples	652					2,608		2,608
	Beta Analysis	4 samples	85					340		340
	Inorganic Sampling:									
	Cyanides	4 samples	30					120		120
	Total Metals	4 samples	925					3,700		3,700
	Prep for Total Metals	4 samples	66					264		264
	Anions	4 samples	105					420		420
	Prep for Anions	4 samples	50					200		200
	pH	4 samples	18					72		72
	Total Pb w/ Prep	4 samples	63					252		252
	Sample Collection During Excavation -	0.10 months		172.00	17	50	860			860
	includes labels, shipping, documentation, etc.									
	Soil Characterization @ 1 per 10 cuyd									
	Total Pb	16 samples	63					1,008		1,008
	Site Verification Sampling: assume min. of 3 samples per site; max of 1 sample per 100 sqft of site area.									
	Total Pb	87 samples	63					5,481		5,481
	Sample Collection - includes labels, shipping, documentation, etc.	87 samples		0.50	44	50	2,175			2,175
	Data Validation Based Upon 10% of the Sampling Cost	48,456 sample$	0.1					4,846		4,846
	Handling (5%), G&A(27%), PIF (4.5%) & Procurment (2.5%)	53,302 total$	0.4283					22,829		22,829
	Site Characterization - Sampling and Analysis									**76,000**

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
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Excavate, Cement Stabilization Treatment & On Site Disposal

Type of Estimate: Planning File No: 3954 - D Date: 01/28/99
Prep'd By: J. R. Baker

ACCT. NO.	DESCRIPTION	QUANTITY UNIT	MAT'L UT COST	LBR/EQP UNIT HRS	LBR/EQP TOTAL HRS	LBR/EQP RATE	LBR/EQP COST	MAT'L COST	OTHER COST	TOTAL COST
	Construction Subcontract - (to begin in the year 2000)									
	Excavation of Soils	161 cuyd		0.035	5.64	150	845			845
	Cement Stabilization - for small vol. Use max. number	161 cuyd	128					20,608		20,608
	Disposal of Treated Materials in ICDF	27 truckload		3	81	55	4,428			4,428
	note: treated materials assume a volume increase of 2x									
	Disposal Cost for Stabilized Mat'ls @ the IDCF - see GFE costs	322 cuyd	GFE							
	Note: ref. WAG 3 FS Appendix E									
	Unit prices for the cement stabilization include the loader and forklift equipment, stainless steel above ground waste water holding tank, open top steel tank, cement and admixture products,									
	mixer, belt feeder, 50 cuyd per hour batch plant, dust collection, pumps, waste mixer, washer, screens and labor. Using the 1998 Means Remediation Cost Data									
	an average price range would be between $58 and $128 per cuyd.									
	Import & Place .5' avg. Fill to Level Site - imported mat'ls on INEEL	161 cuyd	10					1,610		1,610
	Revegetate Site	8,700 sqft	0.04					348		348
	Mobilization/Demobilization @ 3% of above construction cost	27,839 const$	0.03					835		835
	Training's	8 person		24	192	35	6,720			6,720
	Project Supervision	6 months		170	1,020	40	40,800			40,800
	Project Support Personnel - Safety & IH	6 months		340	2,040	35	71,400			71,400
	Construction Subcontract Subtotal this page									147,594

DETAILED COST ESTIMATE (CONT.SHEET)

Project OU 4 - 13 Waste Area Group (WAG) 4 FS Cost Estimates
Central Facilities Area (CFA) - 10: Transformer Yard Oil Spills
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Type of Estimate: Planning **File No:** 3954 - D

Date: 01/28/99
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	Construction Subcontract Subtotal previous page									147,594
	Project Booties, Gloves, Masks, Signage, etc..	1 lot	5000					5,000		5,000
	Total Construction Subcontract Direct Cost									153,000
	Construction Subcontract Overhead and Profit @ 30%									45,900
	Total Construction Subcontract Direct and Indirect Cost									199,000
	GFE Disposal Cost of Materials @ the ICDF	322 cuyd	104					33,488		33,488
	Procurement Fees @ 2.5%									5,812
	G&A and PIF Fee Allowance @ 33%									76,721
	Construction Subcontract & GFE - Total Amount									**315,000**
	Project/Construction Management Allowance									
	Project/Construction Management @ 22.06% of Const. Subcontract Cost									44,000
	Project/Construction Management Allowance									**44,000**