

**FINAL
OE ENGINEERING DESIGN REPORT
FOR
ORDNANCE OPERABLE UNIT (OOU) 6
FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SOUTH CAROLINA**

VOLUME II

DACA87-95-D-0018

DELIVERY ORDER 0009

**PREPARED FOR
U.S. ARMY ENGINEERING AND SUPPORT CENTER
HUNTSVILLE, ALABAMA**

**PREPARED BY
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DECEMBER 1997

APPENDIX G
COST ESTIMATE

APPENDIX G COST ESTIMATE

G.1 INTRODUCTION

G.1.1 Detailed cost estimates are provided in this section. These cost estimates were prepared based on evaluation of cost for certain tasks that will be performed by a UXO contractor to implement the OE removal alternatives evaluated for each of the Ordnance Operable Unit 6 (OOU6) areas/sectors. These tasks are:

- Site Visit
- Preparation of Work plan (including SSHP)
- Site Management
- Land Survey
- Brush Clearance
- Surface OE Removal
- Scrap Turn-In
- Quality Control
- Preparation of Final Report
- Site Restoration

G.1.2 A summary of the cost estimate for each of the alternatives that were selected after initial screening of alternatives based on effectiveness and implementability in Section 2 (Volume I of the OE Engineering Design Report) is provided in Tables G-1 and G-2. Detailed cost estimates by task and other associated work elements are provided for each of the OOU6 Areas/Sectors in the following sections of this Appendix:

- Section G.2 - Pine Farm,
- Section G.3 - Landfill and Compost Areas
- Section G.4 - Pond Area
- Section G.5 - Natural Brush/Forest.

Each Section contains a summary of the estimated cost for all tasks and a detailed cost breakdown for each task identified above and as applicable to the removal alternative. The estimated cost for the selected removal alternative is provided at the beginning of each section.

**Table G.1
Cost Estimate Table**

Alternative	Roads/Ops Bldg.	Pine Farm	Landfill & Comp. Area	Pond Area	Natural Brush/ Forests A	Natural Brush/ Forest-B
Alt. One	X	80,611 ⁽¹⁾			101,480 ⁽¹⁾	X
Alt. Two						
Alt. Three		270,664		189,583	955,464	
Alt. Four						
Alt. Five						
Alt. Six			241,254			
Alt. Seven		292,565		204,972	1,082,229	
Alt. Eight				225,710		

Notes:

X Denotes no cost are associated

Alternative One - No Further Action

Alternative Two - Institutional Controls

Alternative Three - Surface Clearance of OE

Alternative Four - Surface Clearance of OE and Institutional Controls

Alternative Five - Surface Clearance of OE with Subsurface Clearance of Selected Areas to a Depth of One Foot

Alternative Six - Surface Clearance of OE with Subsurface Clearance of Selected Areas to a Depth of Four Feet

Alternative Seven - Surface Clearance of OE with Subsurface Clearance of Entire Area to a Depth of One Foot

Alternative Eight - Surface Clearance of OE with Subsurface Clearance of Entire Area to a Depth of Four Feet

(1) Alternative One - No Further Action Alternative with Limited Action

\$225,710 - Estimated Cost for the selected (per Corps of Engineers selection) removal alternative.

Table G.2

Cost by Task											
SECTORS	Site Visit	Work Plan	Site Management	Land Survey	Brush Clearance	OE Removal	Scrap Turn-in	Quality Control	Final Report	Site Remediation	Summary
Pine Farm - Alt 1 ⁽¹⁾	Not Req.	14,911	18,461	10,070	Not Req.	8,538	1,467	6,319	11,666	300	71,732
Pine Farm - Alt 1 ⁽²⁾	Not Req.	16,958	19,910	10,274	Not Req.	12,718	1,654	7,131	11,666	300	80,611
Pine Farm - Alt 3	9,208	18,522	85,109	25,134	51,181	50,168	2,533	13,466	14,843	500	270,664
Pine Farm - Alt 7	9,208	19,922	90,837	25,291	55,511	57,573	2,533	14,947	16,243	500	292,565
Landfill - Alt 6	Not Req.	14,911	27,672	10,574	17,008	16,206	1,484	12,009	11,666	Not Req.	111,530
Landfill ⁽³⁾	Not Req.	14,911	68,850	21,495	48,749	51,459	2,556	18,768	14,466	Not Req.	241,254
Pond Area - Alt 3	Not Req.	18,522	66,676	18,640	15,699	38,050	1,561	18,922	11,213	300	189,583
Pond Area - Alt 7	Not Req.	18,522	72,234	18,640	15,699	42,898	1,561	20,275	14,843	300	204,972
Pond Area - Alt 8	Not Req.	18,522	74,197	18,640	15,699	53,861	2,533	27,115	14,843	300	225,710
N Forests - Alt 1 ⁽⁴⁾	Not Req.	14,911	17,807	8,870	15,439	11,694	1,484	6,500	11,665	300	88,670
N Forests - Alt 1 ⁽⁵⁾	Not Req.	14,911	22,103	8,870	15,439	17,197	1,981	9,011	11,666	300	101,478
N Forests - Alt 3	9,208	18,522	120,717	111,654	373,237	272,997	2,533	31,253	14,843	500	955,464
N Forests - Alt 7	9,208	23,065	128,694	111,654	457,796	299,541	2,533	34,395	14,843	500	1,082,229

(1) No Further Action with Limited Action (Surface and Subsurface Clearance of OE Over a Selected Area to a Depth of One Foot).

(2) No Further Action with Limited Action (Surface and Subsurface Clearance of OE Over a Selected Area to a Depth of Four Feet). selected area is the future storage barn (<0.5 acres)

(3) Surface Clearance of OE and Subsurface Clearance of Selected Area to a Depth of Four Feet (includes Landfill 2).

(4) No Further Action with Limited Action (Surface clearance of OE).

(5) No Further Action with Limited Action (Surface clearance of OE and subsurface clearance to a depth of four feet) at Compost B.

* The selected removal alternatives are highlighted.

SECTION G-2
COST ESTIMATE FOR THE PINE FARM

SELECTED REMOVAL ALTERNATIVE

Pine Farm [Storage Barn Area]

Alternative 1 - No Further Action with Limited Action (Surface and Subsurface Clearance of OE Over a Selected Area to a Depth of Four Feet)

Alternative 1 provides for a complete OE surface and subsurface clearance of the 0.5 acre area (area designated for future construction of a storage barn within the Pine Farm) to a depth of four feet. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included in the subsurface costs. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. It is assumed that no brush clearance is required in this area because available information indicates the area has recently been cleared of brush. During the Engineering Design effort, a number of production rates have been proportionally increased to account for this effort. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation present in grids, the survey production rate was held to 14 grids per day. The work is to be performed on privately owned property. A site restoration line item has been included in this estimate to account for funds to return the site to near original condition. Due to limited field scope and duration, a site visit and site trailer/office will not be necessary and has therefore been eliminated from this cost estimate.

Total Acreage to Surface Clear:	0.5 acre/2 grids (100' x 100')
Total Acreage Previously Geophysically Investigated:	.20 acre
Adjusted acreage:	.30 acre
Adjusted number of grids	2
Grids Requiring Brush Clearance	0 grids
Search Grid Size: 100' X 100'	0.22 acres per grid
Number of Grids requiring brush clearance:	0

Production Rates:

Brush Clearance	(no brush clearance required)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	5 grids per workday (.5 acres) per 5 person team (1 team).

Duration:

Project Management	5 working days/1.25 weeks
Brush Clearance	None
Land Survey	3 working days/.75 week (one team)
Surface Clearance	5 working days/1.25 weeks (one five-person team)
Disposal	Effort included in Surface Clearance
Quality Control	4 working days/1 week (2-person team)
Total Project Duration	5 working days/1.25 weeks

NFA with Limited OE Surface & Subsurface Clearance of Selected Area to Four Feet - Alt 1

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Engineering Design Cost Estimate
Pine Farm - Clearance of OE
Future Storage Barn

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Summary	
						Estimated Hours	Amount
Program Management I		82.06				30.70	2,519.24
Project Manager III		78.92				50.40	3,878.77
Project Manager II		66.67				159.00	10,600.53
Certified Industrial Hygienist		74.81				14.00	1,047.34
Engineer II		78.92				51.70	3,976.76
Survey Manager		56.42				96.60	5,450.17
Surveyor V		48.16				31.50	1,454.04
Quality Control Specialist	Regular	47.04				40.00	1,881.60
Site Safety Officer	Regular	47.04				48.00	2,257.92
UXO Supervisor/Tech VI	Regular	53.29				96.00	5,115.84
UXO Supervisor/Tech V	Regular	47.04				50.00	2,352.00
UXO Technician IV	Regular	40.49				212.00	8,563.88
UXO Technician III	Regular	34.10				76.00	2,591.60
Laborer II	Regular	28.65				-	-
Subtotal - Labor						955.90	51,707.69
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					115.61
FM Radio Repeater/Base Station		44.97					1,169.22
Cellular Telephone and Service		64.24					417.56
Video Camera		32.12					208.78
Computer		96.36					794.97
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					51.39
Foester Feirex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					552.44
Explosive Storage magazine		44.97					876.92
Carrier Phase GPS		899.35					899.35
Surveyor's Kit		64.24					48.16
Total Station Survey Equipment		835.11					835.11
Ford Explorer		321.20					963.60
Pickup, 4x4, 3M Ton		449.67					112.42
Air Fare - Round Trip		1,220.54					9,764.32
Mileage		0.40					300.00
Fuel		1.74					318.42
Lodging		68.09					3,064.06
Meals and Incidentals		38.55					1,773.30
Project Consumables		192.72					2,457.18
Printing and Binding		205.56					1,438.92
Shipping		154.17					616.68
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					154.17
Site Remediation - Pine Farm		300.00					300.00
Subtotal - Other Direct Costs						28,902.81	
Total Estimated Costs						80,610.50	

NFA with Limited OE Surface & Subsurface CI

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 Engineering Design Cost Estimate
 Pine Farm - Clearance of OE
 Future Storage Barn

**Task 1
 Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.08	-	-	-	-	-
Project Manager III		78.92	-	-	-	-	-
Project Manager II		68.67	-	-	-	-	-
Certified Industrial Hygienist		74.81	-	-	-	-	-
Engineer II		76.92	-	-	-	-	-
Survey Manager		56.42	-	-	-	-	-
Surveyor V		48.16	-	-	-	-	-
Quality Control Specialist	Regular	47.04	-	-	-	-	-
Site Safety Officer	Regular	47.04	-	-	-	-	-
UXO Supervisor/Tech VI	Regular	53.29	-	-	-	-	-
UXO Supervisor/Tech V	Regular	47.04	-	-	-	-	-
UXO Technician IV	Regular	40.49	-	-	-	-	-
UXO Technician III	Regular	34.10	-	-	-	-	-
Laborer II	Regular	28.65	-	-	-	-	-
Subtotal - Labor							-
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		206.56					-
Shipping		154.17					-
Site Trailer		963.58					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.67					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							-
Total Estimated Costs							-

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Pine Farm - Clearance of OE
Future Storage Barn

**Task 2
Work Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.50	1.00	20.20	1,657.61
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	75.00	5,000.25
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	14.00	1,047.34
Engineer II		78.92	42.00	0.50	1.00	20.20	1,553.78
Survey Manager		58.42	42.00	0.60	1.00	25.20	1,421.78
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	36.00	1,918.44
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						190.60	12,599.20
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36	1.00	1.00		96.36	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
ECO Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20	1.00	1.00		321.20	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54	1.00	1.00		1,220.54	
Mileage		0.40	50.00	1.00		20.00	
Fuel		1.74	1.00	40.00		69.60	
Lodging		68.09	6.00	1.00		408.54	
Meals and Incidentals		38.55	7.00	1.00		269.85	
Project Consumables		192.72	8.00	1.00		1,541.76	
Printing and Binding		205.58	1.00	2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs						16,958.17	

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 Engineering Design Cost Estimate
 Pine Farm - Clearance of OE
 Future Storage Barn

**Task 3
 Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	41.00	1.25	1.00	50.40	3,876.77
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04	40.00	1.20	1.00	48.00	2,257.92
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.20	1.00	48.00	2,557.92
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						146.40	8,052.61
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97		6.50	4.00		1,169.22
Cellular Telephone and Service		64.24		6.50	1.00		417.56
Video Camera		32.12		6.50	1.00		208.78
Computer		96.36		6.50	1.00		626.34
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97		6.50	3.00		876.92
Carrier Phase GPS		699.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		635.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	3.00		3,661.62
Mileage		0.40		500.00	1.00		200.00
Fuel		1.74		35.00	1.00		60.50
Lodging		68.09		5.00	2.00		680.90
Meals and Incidentals		38.55		5.00	2.00		385.50
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.56		2.00	1.00		411.12
Shipping		154.17		1.00	3.00		462.51
Site Trailer		963.59		-	1.00		-
Electrical Hook Up		1,927.17		-	1.00		-
Magazine Fencing		699.35		1.00	1.00		699.35
Magazine Mobilization		770.87		1.00	1.00		770.87
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs						11,217.03	
Total Estimated Costs							19,909.64

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 Engineering Design Cost Estimate
 Pine Farm - Clearance of OE
 Future Storage Barn

**Task 4
 Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	0.70	1.00	29.40	1,658.75
Surveyor V		46.18	42.00	0.75	1.00	31.50	1,454.04
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	0.85	1.00	36.00	1,227.60
Laborer II	Regular	28.65				-	-
Subtotal - Labor						98.90	4,340.39
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		0.75	2.00		38.54
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36		0.75	1.00		72.27
Brushcutter, power		96.36					
Chainsaw		64.24					
EOD Demolition Kit		51.39					
Foester Ferrex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39		0.75	1.00		38.54
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35		0.50	2.00		899.35
Surveyor's Kit		64.24		0.75	1.00		48.18
Total Station Survey Equipment		835.11		1.00	1.00		835.11
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	1.00		55.68
Lodging		68.09		3.00	2.00		408.54
Meals and Incidentals		38.55		3.00	2.00		231.30
Project Consumables		192.72		0.75	1.00		144.54
Printing and Binding		205.56		1.00	1.00		205.56
Shipping		154.17		1.00	1.00		154.17
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.67					
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs						5,934.06	
Total Estimated Costs							10,274.45

NFA with Limited OE Surface & Subsurface CI

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pine Farm - Clearance of OE
 Future Storage Barn

**Task 5
 Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	-	-	-	-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	-	-	-	-	-
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Subtotal - Labor						-	-
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89				-	-
FM Radio Repeater/Base Station		44.97				-	-
Cellular Telephone and Service		64.24				-	-
Video Camera		32.12				-	-
Computer		96.36				-	-
Brushcutter, power		96.36				-	-
Chainsaw		64.24				-	-
EOD Demolition Kit		51.39				-	-
Foester Ferrex Ordnance Locator		385.43				-	-
Schonstedt Magnetic Locator		51.39				-	-
Explosive Storage magazine		44.97				-	-
Carrier Phase GPS		899.35				-	-
Surveyor's Kit		64.24				-	-
Total Station Survey Equipment		835.11				-	-
Ford Explorer		321.20				-	-
Pickup, 4x4, 3/4 Ton		449.67				-	-
Air Fare - Round Trip		1,220.54				-	-
Mileage		0.40				-	-
Fuel		1.74				-	-
Lodging		68.09				-	-
Meals and Incidentals		38.55				-	-
Project Consumables		192.72				-	-
Printing and Binding		205.56				-	-
Shipping		154.17				-	-
Site Trailer		963.59				-	-
Electrical Hook Up		1,927.17				-	-
Magazine Fencing		899.35				-	-
Magazine Mobilization		770.87				-	-
Donor Explosives		1,541.74				-	-
Site Remediation - Pine Farm		300.00				-	-
<hr/>							
Subtotal - Other Direct Costs						-	-
<hr/>							
Total Estimated Costs						-	-

NFA with Limited OE Surface & Subsurface CI

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**Task 6
 Surface OE Removal**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06					-
Project Manager III		76.92					-
Project Manager II		66.67					-
Certified Industrial Hygienist		74.81					-
Engineer II		76.92					-
Survey Manager		56.42					-
Surveyor V		46.16					-
Quality Control Specialist	Regular	47.04					-
Site Safety Officer	Regular	47.04					-
UXO Supervisor/Tech VI	Regular	53.29					-
UXO Supervisor/Tech V	Regular	47.04	40.00	1.25	1.00	50.00	2,352.00
UXO Technician IV	Regular	40.49	40.00	1.25	4.00	200.00	8,098.00
UXO Technician III	Regular	34.10					-
Laborer II	Regular	25.65					-
Subtotal - Labor						250.00	10,450.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	1.00	2.00	51.38
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39	1.00	1.00	51.39
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	1.00	8.00	411.12
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.57			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09	3.00	5.00	1,021.35
Meals and Incidentals	38.55	3.00	5.00	578.25
Project Consumables	192.72			-
Printing and Binding	205.58			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,827.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.67			-
Donor Explosives	1,541.74	0.50	0.20	154.17
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				2,267.66
Total Estimated Costs				12,717.66

NFA with Limited OE Surface & Subsurface CI

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**Task 7
 Scrap Turn-In**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.25	1.00	12.00	639.48
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.25	1.00	12.00	485.88
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						24.00	1,125.36

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, handheld w/ charger	25.69			
FM Radio Repeater/Base Station	44.97			
Cellular Telephone and Service	64.24			
Video Camera	32.12			
Computer	96.36			
Brushcutter, power	96.36			
Chainsaw	64.24			
EOD Demolition Kit	51.39			
Foester Ferrex Ordnance Locator	385.43			
Schonstedt Magnetic Locator	51.39			
Explosive Storage magazine	44.97			
Carrier Phase GPS	899.35			
Surveyor's Kit	64.24			
Total Station Survey Equipment	835.11			
Ford Explorer	321.20			
Pickup, 4x4, 3/4 Ton	449.67	1.00	0.25	112.42
Air Fare - Round Trip	1,220.54			
Mileage	0.40			
Fuel	1.74	6.00	1.00	10.44
Lodging	68.09	1.00	2.00	136.18
Meals and Incidentals	38.55	1.00	2.00	77.10
Project Consumables	192.72	1.00	1.00	192.72
Printing and Binding	205.56			
Shipping	154.17			
Site Trailer	963.59			
Electrical Hook Up	1,927.17			
Magazine Fencing	899.35			
Magazine Mobilization	770.87			
Donor Explosives	1,541.74			
Site Remediation - Pine Farm	300.00			
Subtotal - Other Direct Costs				528.86
Total Estimated Costs				1,654.22

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**Task 8
 Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04	40.00	1.00	1.00	40.00	1,881.60
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49					
UXO Technician III	Regular	34.10	40.00	1.00	1.00	40.00	1,364.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						80.00	3,245.60
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69	1.00	1.00		25.69	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36				-	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39	1.00	2.00		102.78	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20	1.00	1.00		321.20	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54	1.00	2.00		2,441.08	
Mileage		0.40	50.00	2.00		40.00	
Fuel		1.74	35.00	2.00		121.80	
Lodging		68.09	3.00	2.00		408.54	
Meals and Incidentals		38.55	3.00	2.00		231.30	
Project Consumables		182.72	1.00	1.00		182.72	
Printing and Binding		205.56				-	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,827.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.67				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						3,685.11	
Total Estimated Costs						7,130.71	

NFA with Limited OE Surface & Subsurface CI

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Task 9
 Final Report

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager		56.42	42.00	1.00	1.00	42.00	2,369.64
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						168.00	11,254.53
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		26.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		66.09					-
Meals and Incidentals		36.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							411.12
Total Estimated Costs							11,665.65

NFA with Limited OE Surface & Subsurface CI
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**Task 10
 Site Restoration**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		68.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor V		46.16				-	-	
Quality Control Specialist	Regular	47.04				-	-	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.49				-	-	
UXO Technician III	Regular	34.10				-	-	
Laborer II	Regular	28.65				-	-	
Subtotal - Labor							-	-
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69					-	
FM Radio Repeater/Base Station		44.97					-	
Cellular Telephone and Service		64.24					-	
Video Camera		32.12					-	
Computer		96.36					-	
Brushcutter, power		96.36					-	
Chainsaw		64.24					-	
EOD Demolition Kit		51.39					-	
Foster Ferret Ordnance Locator		385.43					-	
Schonstedt Magnetic Locator		51.39					-	
Explosive Storage magazine		44.97					-	
Carrier Phase GPS		699.35					-	
Surveyor's Kit		64.24					-	
Total Station Survey Equipment		835.11					-	
Ford Explorer		321.20					-	
Pickup, 4x4, 3/4 Ton		449.67					-	
Air Fare - Round Trip		1,220.54					-	
Mileage		0.40					-	
Fuel		1.74					-	
Lodging		68.09					-	
Meals and Incidentals		38.55					-	
Project Consumables		192.72					-	
Printing and Binding		205.56					-	
Shipping		154.17					-	
Site Trailer		963.59					-	
Electrical Hook Up		1,927.17					-	
Magazine Fencing		899.35					-	
Magazine Mobilization		770.87					-	
Donor Explosives		1,541.74					-	
Site Remediation - Pine Farm		300.00		1.00	1.00		300.00	
Subtotal - Other Direct Costs							300.00	
Total Estimated Costs							300.00	

EVALUATED REMOVAL ALTERNATIVES

Pine Farm [Storage Barn Area]

Alternative 1 - No Further Action with Limited Action (Surface and Subsurface Clearance of OE Over a Selected Area to a Depth of One Foot)

Alternative 1 provides for a complete OE surface and subsurface clearance of the 0.5 acre area (area designated for future construction of a storage barn within the Pine Farm) to a depth of one foot. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included in the subsurface costs. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. It is assumed that no brush clearance is required in this area because available information indicates the area has recently been cleared of brush. During the Engineering Design effort, a number of production rates have been proportionally increased to account for this effort. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation present in grids, the survey production rate was held to 14 grids per day. The work is to be performed on privately owned property. A site restoration line item has been included in this estimate to account for funds to return the site to near original condition. Due to limited field scope and duration, a site visit and site trailer/office will not be necessary and has therefore been eliminated from this cost estimate.

Total Acreage to Surface Clear:	0.5 acre/2 grids (100' x 100')
Total Acreage Previously Geophysically Investigated:	.20 acre
Adjusted acreage:	.30 acre
Adjusted number of grids	2
Grids Requiring Brush Clearance	0 grids
Search Grid Size: 100' X 100'	0.22 acres per grid
Number of Grids requiring brush clearance:	0

Production Rates:

Brush Clearance	(no brush clearance required)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	5 grids per workday (.5 acres) per 5 person team (1 team).

Duration:

Project Management	4 working days/1 weeks
Brush Clearance	None
Land Survey	3 working days/.75 weeks (one team)
Surface Clearance	3 working days/.75 weeks (one five-person team)
Disposal	Effort included in Surface Clearance
Quality Control	3 working days/.75 week (2-person team)
Total Project Duration	4 working days/1 weeks

NFA with Limited OE Surface & Subsurface Clearance of Selected Area to 1 foot - Alt. 1

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Summary

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				27.30	2,240.24
Project Manager III		76.92				42.00	3,230.64
Project Manager II		66.67				147.00	9,800.49
Certified Industrial Hygienist		74.81				12.00	897.72
Engineer II		76.82				48.30	3,715.24
Survey Manager		56.42				92.40	5,213.21
Surveyor V		48.18				31.50	1,454.04
Quality Control Specialist	Regular	47.04				30.00	1,411.20
Site Safety Officer	Regular	47.04				40.00	1,881.60
UXO Supervisor/Tech VI	Regular	53.29				80.00	4,263.20
UXO Supervisor/Tech V	Regular	47.04				30.00	1,411.20
UXO Technician IV	Regular	40.49				130.00	5,263.70
UXO Technician III	Regular	34.10				60.00	2,046.00
Laborer II	Regular	28.65				-	-
						-	-
Subtotal - Labor						770.50	42,828.48

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			115.61
FM Radio Repeater/Base Station	44.97			1,169.22
Cellular Telephone and Service	64.24			417.56
Video Camera	32.12			203.78
Computer	96.36			794.97
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			51.39
Foetler Ferret Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			552.44
Explosive Storage magazine	44.97			876.92
Carrier Phase GPS	899.35			899.35
Surveyor's Kit	64.24			48.18
Total Station Survey Equipment	835.11			835.11
Ford Explorer	321.20			963.60
Pickup, 4x4, 3M Ton	449.67			112.42
Air Fare - Round Trip	1,220.54			9,764.32
Mileage	0.40			300.00
Fuel	1.74			318.42
Lodging	68.09			3,064.05
Meals and Incidentals	38.55			1,773.30
Project Consumables	192.72			2,457.18
Printing and Binding	205.56			1,438.92
Shipping	154.17			616.68
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			899.35
Magazine Mobilization	770.87			770.87
Donor Explosives	1,541.74			154.17
Site Remediation - Pine Farm	300.00			300.00
Subtotal - Other Direct Costs				28,902.81
Total Estimated Costs				71,731.29

NFA with Limited OE Surface & Subsurface

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**Task 1
 Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	-	-	-	-	-
Project Manager III		76.92	-	-	-	-	-
Project Manager II		66.67	-	-	-	-	-
Certified Industrial Hygienist		74.81	-	-	-	-	-
Engineer II		76.92	-	-	-	-	-
Survey Manager		56.42	-	-	-	-	-
Surveyor V		46.16	-	-	-	-	-
Quality Control Specialist	Regular	47.04	-	-	-	-	-
Site Safety Officer	Regular	47.04	-	-	-	-	-
UXO Supervisor/Tech VI	Regular	53.29	-	-	-	-	-
UXO Supervisor/Tech V	Regular	47.04	-	-	-	-	-
UXO Technician IV	Regular	40.49	-	-	-	-	-
UXO Technician III	Regular	34.10	-	-	-	-	-
Laborer II	Regular	28.65	-	-	-	-	-
Subtotal - Labor							

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.89	-	-	-
FM Radio Repeater/Base Station	44.97	-	-	-
Cellular Telephone and Service	64.24	-	-	-
Video Camera	32.12	-	-	-
Computer	96.36	-	-	-
Brushcutter, power	96.36	-	-	-
Chainsaw	64.24	-	-	-
EOD Demolition Kit	51.39	-	-	-
Foester Ferrex Ordnance Locator	385.43	-	-	-
Schonstedt Magnetic Locator	51.39	-	-	-
Explosive Storage magazine	44.97	-	-	-
Carrier Phase GPS	899.35	-	-	-
Surveyor's Kit	64.24	-	-	-
Total Station Survey Equipment	835.11	-	-	-
Ford Explorer	321.20	-	-	-
Pickup, 4x4, 3/4 Ton	449.67	-	-	-
Air Fare - Round Trip	1,220.54	-	-	-
Mileage	0.40	-	-	-
Fuel	1.74	-	-	-
Lodging	68.09	-	-	-
Meals and Incidentals	38.55	-	-	-
Project Consumables	192.72	-	-	-
Printing and Binding	205.56	-	-	-
Shipping	154.17	-	-	-
Site Trailer	963.59	-	-	-
Electrical Hook Up	1,927.17	-	-	-
Magazine Fencing	899.35	-	-	-
Magazine Mobilization	770.87	-	-	-
Donor Explosives	1,541.74	-	-	-
Site Remediation - Pine Farm	300.00	-	-	-
Subtotal - Other Direct Costs				
Total Estimated Costs				

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Task 2
Work Plan

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.40	1.00	16.80	1,378.61
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	12.00	897.72
Engineer II		76.92	42.00	0.40	1.00	16.80	1,292.26
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.75	1.00	30.00	1,598.70
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						159.60	10,552.32
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs							14,911.29

NFA with Limited OE Surface & Subsurface

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**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	1.00	1.00	42.00	3,230.64
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	1.00	1.00	40.00	1,881.60
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						122.00	7,243.84

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97	6.50	4.00	1,169.22
Cellular Telephone and Service	64.24	6.50	1.00	417.56
Video Camera	32.12	6.50	1.00	208.78
Computer	96.36	6.50	1.00	626.34
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schorstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	6.50	3.00	878.92
Carrier Phase GPS	899.35			-
Surveyor's Kit	84.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	3.00	3,661.62
Mileage	0.40	500.00	1.00	200.00
Fuel	1.74	35.00	1.00	60.90
Lodging	68.09	5.00	2.00	880.90
Meals and Incidentals	38.55	5.00	2.00	385.50
Project Consumables	192.72	2.00	1.00	385.44
Printing and Binding	205.58	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	963.59	-	1.00	-
Electrical Hook Up	1,927.17	-	1.00	-
Magazine Fencing	899.35	1.00	1.00	899.35
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				11,217.03
Total Estimated Costs				18,460.87

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**Task 4
 Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		68.87				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	0.70	1.00	29.40	1,658.75
Surveyor V		46.16	42.00	0.75	1.00	31.50	1,454.04
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	0.75	1.00	30.00	1,023.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
						90.90	4,135.79
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69	0.75	2.00		38.54	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36	0.75	1.00		72.27	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39	0.75	1.00		38.54	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35	0.50	2.00		899.35	
Surveyor's Kit		64.24	0.75	1.00		48.18	
Total Station Survey Equipment		835.11	1.00	1.00		835.11	
Ford Explorer		321.20	1.00	1.00		321.20	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54	1.00	2.00		2,441.08	
Mileage		0.40	50.00	2.00		40.00	
Fuel		1.74	32.00	1.00		55.68	
Lodging		68.09	3.00	2.00		408.54	
Meals and Incidentals		38.55	3.00	2.00		231.30	
Project Consumables		192.72	0.75	1.00		144.54	
Printing and Binding		205.56	1.00	1.00		205.56	
Shipping		154.17	1.00	1.00		154.17	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.67				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						5,934.06	
Total Estimated Costs						10,069.85	

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**Task 5
Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor V		48.16				-	-	
Quality Control Specialist	Regular	47.04				-	-	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.49	-	-	-	-	-	
UXO Technician III	Regular	34.10				-	-	
Laborer II	Regular	28.85	-	-	-	-	-	
Subtotal - Labor							-	-
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69		-	-		-	
FM Radio Repeater/Base Station		44.97		-	-		-	
Cellular Telephone and Service		64.24		-	-		-	
Video Camera		32.12		-	-		-	
Computer		96.36		-	-		-	
Brushcutter, power		96.36		-	-		-	
Chainsaw		64.24		-	-		-	
EOD Demolition Kit		51.39		-	-		-	
Foerster Ferrex Ordnance Locator		385.43		-	-		-	
Schonsledt Magnetic Locator		51.39		-	-		-	
Explosive Storage magazine		44.97		-	-		-	
Carrier Phase GPS		899.35		-	-		-	
Surveyor's Kit		64.24		-	-		-	
Total Station Survey Equipment		835.11		-	-		-	
Ford Explorer		321.20		-	-		-	
Pickup, 4x4, 3M Ton		449.67		-	-		-	
Air Fare - Round Trip		1,220.54		-	-		-	
Mileage		0.40		-	-		-	
Fuel		1.74		-	-		-	
Lodging		68.09		-	-		-	
Meals and Incidentals		38.55		-	-		-	
Project Consumables		192.72		-	-		-	
Printing and Binding		205.56		-	-		-	
Shipping		154.17		-	-		-	
Site Trailer		963.59		-	-		-	
Electrical Hook Up		1,827.17		-	-		-	
Magazine Fencing		899.35		-	-		-	
Magazine Mobilization		770.87		-	-		-	
Donor Explosives		1,541.74		-	-		-	
Site Remediation - Pine Farm		300.00		-	-		-	
Subtotal - Other Direct Costs							-	-
Total Estimated Costs							-	-

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**Task 6
Surface OE Removal**

Laber Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.18				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	0.75	1.00	30.00	1,411.20
UXO Technician IV	Regular	40.49	40.00	0.75	4.00	120.00	4,858.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						150.00	6,270.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	1.00	2.00	51.38
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39	1.00	1.00	51.39
Foester Fernex Ordnance Locator	385.43			-
Schorstedt Magnetic Locator	51.39	1.00	8.00	411.12
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09	3.00	5.00	1,021.35
Meals and Incidentals	38.55	3.00	5.00	578.25
Project Consumables	192.72			-
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74	0.50	0.20	154.17
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				2,267.66
Total Estimated Costs				8,537.66

NFA with Limited OE Surface & Subsurface

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**Task 7
 Scrap Turn-In**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.08				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.25	1.00	10.00	532.90
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49	40.00	0.25	1.00	10.00	404.90
UXO Technician III	Regular	34.10					
Laborer II	Regular	28.65				-	-
Subtotal - Labor						20.00	937.80

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			
FM Radio Repeater/Base Station	44.97			
Cellular Telephone and Service	64.24			
Video Camera	32.12			
Computer	96.36			
Brushcutter, power	96.36			
Chainsaw	64.24			
EOD Demolition Kit	51.39			
Foester Ferrex Ordnance Locator	385.43			
Schonstedt Magnetic Locator	51.39			
Explosive Storage magazine	44.97			
Carrier Phase GPS	899.35			
Surveyor's Kit	64.24			
Total Station Survey Equipment	836.11			
Ford Explorer	321.20			
Pickup, 4x4, 3/4 Ton	449.67	1.00	0.25	112.42
Air Fare - Round Trip	1,220.54			
Mileage	0.40			
Fuel	1.74	6.00	1.00	10.44
Lodging	68.09	1.00	2.00	136.18
Meals and Incidentals	38.55	1.00	2.00	77.10
Project Consumables	192.72	1.00	1.00	192.72
Printing and Binding	205.56			
Shipping	154.17			
Site Trailer	963.59			
Electrical Hook Up	1,827.17			
Magazine Fencing	899.35			
Magazine Mobilization	770.87			
Donor Explosives	1,541.74			
Site Remediation - Pine Farm	300.00			
Subtotal - Other Direct Costs				528.66
Total Estimated Costs				1,466.66

NFA with Limited OE Surface & Subsurface

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**Task 8
Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04	40.00	0.75	1.00	30.00	1,411.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	0.75	1.00	30.00	1,023.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						60.00	2,434.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	1.00	1.00	25.69
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonsted Magnetic Locator	51.39	1.00	2.00	102.78
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	50.00	2.00	40.00
Fuel	1.74	35.00	2.00	121.80
Lodging	68.09	3.00	2.00	408.54
Meals and Incidentals	38.55	3.00	2.00	231.30
Project Consumables	192.72	1.00	1.00	192.72
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				3,685.11
Total Estimated Costs				6,319.31

NFA with Limited OE Surface & Subsurface

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**Task 9
 Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager		56.42	42.00	1.00	1.00	42.00	2,369.64
Surveyor V		46.18				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						168.00	11,254.53

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09			-
Meals and Incidentals	38.55			-
Project Consumables	192.72			-
Printing and Binding	206.56	1.00	2.00	411.12
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				411.12
Total Estimated Costs				11,665.65

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**Task 10
 Site Restoration**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00		1.00	1.00		300.00
Subtotal - Other Direct Costs							300.00
Total Estimated Costs							300.00

Pine Farm

Alternative 3 - Surface Clearance of OE

Alternative 3 requires a complete OE surface clearance of 38.94 acres. Electronic detection instruments are necessary to detect OE hidden from view by high grasses and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are extensive and based solely on the production achieved during the Engineering Design effort. It is assumed that 80% of the total grids will require brush clearance. During the Engineering Design effort, 2.47 acres were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	38.94 acres/170 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	2.47
Adjusted acreage:	36.47 acres
Adjusted number of grids	136
Grids Requiring Brush Clearance	108 grids/24.79 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	3 grids per day per four man team (6 grids per day)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	8.71 grids per day (2 acres) per 5 person team (2 teams@17.42 grids per workday)

Duration:

Project Management	26 working days/6.5 weeks
Land Survey	13 working days/3.25 weeks (one team)
Brush Clearance	14 working days/3.5 weeks -- 4 grids per work day per four-person team (two teams @ 8 grids per workday)
Surface Clearance	7.81 (8) working days/2 weeks (two five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	8 working days/2 weeks (2 person team)
Total Duration	26 Working Days/6.5 weeks

Surface Clearance of OE - Alternative 3

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

Labor Category	Summary					Amount
	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	
Program Management I	82.06				39.90	3,274.19
Project Manager III	78.92				273.00	20,999.16
Project Manager II	66.67				201.60	13,440.67
Certified Industrial Hygienist	74.81				16.00	1,196.96
Engineer II	76.92				63.00	4,845.96
Survey Manager	56.42				159.60	9,004.63
Surveyor V	48.16				136.50	6,300.84
Quality Control Specialist	Regular 47.04				60.00	3,763.20
Site Safety Officer	Regular 47.04				260.00	12,230.40
UXO Supervisor/Tech VI	Regular 53.29				352.00	18,758.08
UXO Supervisor/Tech V	Regular 47.04				160.00	7,528.40
UXO Technician IV	Regular 40.49				940.00	38,060.60
UXO Technician III	Regular 34.10				210.00	7,161.00
Laborer II	Regular 28.65				840.00	24,066.00
Subtotal - Labor					3,731.60	170,628.09

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			500.96
FM Radio Repeater/Base Station	44.97			1,169.22
Cellular Telephone and Service	64.24			468.95
Video Camera	32.12			234.48
Computer	96.36			1,035.87
Brushcutter, power	96.36			1,349.04
Chainsaw	64.24			449.68
EOD Demolition Kit	51.39			102.78
Foester Ferrex Ordnance Locator	385.43			308.34
Schonstedt Magnetic Locator	51.39			1,554.55
Explosive Storage magazine	44.97			876.92
Carrier Phase GPS	899.35			899.35
Surveyor's Kit	64.24			208.78
Total Station Survey Equipment	835.11			626.33
Ford Explorer	321.20			8,784.82
Pickup, 4x4, 3/4 Ton	449.67			3,260.11
Air Fare - Round Trip	1,220.54			12,205.40
Mileage	0.40			980.00
Fuel	1.74			2,385.54
Lodging	68.09			29,585.11
Meals and Incidentals	38.55			17,019.83
Project Consumables	192.72			7,535.35
Printing and Binding	205.56			1,438.92
Shipping	154.17			616.68
Site Trailer	863.59			1,570.65
Electrical Hook Up	1,927.17			1,927.17
Magazine Fencing	899.35			899.35
Magazine Mobilization	770.87			770.87
Donor Explosives	1,541.74			770.87
Site Remediation - Pine Farm	500.00			500.00
Subtotal - Other Direct Costs				100,035.92
Total Estimated Costs				270,664.01

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 1
Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.20	1.00	8.40	689.30
Project Manager III		76.92				-	-
Project Manager II		66.87	42.00	0.80	1.00	33.60	2,240.11
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		45.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.80	1.00	32.00	1,705.28
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						74.00	4,634.69

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24	0.80	1.00	51.39
Video Camera	32.12	0.80	1.00	25.70
Computer	96.36			-
Brushcutter, power	98.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43	0.80	1.00	308.34
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	2.00	0.80	513.92
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	50.00	2.00	40.00
Fuel	1.74	5.00	8.00	69.60
Lodging	68.09	4.00	2.00	544.72
Meals and Incidentals	38.55	5.00	2.00	385.50
Project Consumables	192.72	1.00	1.00	192.72
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	500.00			-
Subtotal - Other Direct Costs				4,572.97
Total Estimated Costs				9,207.66

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 2
Work Plan**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		86.87	42.00	2.00	1.00	84.00	5,800.28
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
						215.60	14,163.13

Other Direct Costs		Loaded	Number	Number	Amount
		Rate			
FM Radio, Handheld w/ charger		25.89			-
FM Radio Repeater/Base Station		44.97			-
Cellular Telephone and Service		64.24			-
Video Camera		32.12			-
Computer		96.36	1.00	1.00	96.36
Brushcutter, power		96.36			-
Chainsaw		64.24			-
EOD Demolition Kit		51.39			-
Foester Ferrex Ordnance Locator		385.43			-
Schonstedt Magnetic Locator		51.39			-
Explosive Storage magazine		44.97			-
Carrier Phase GPS		899.35			-
Surveyor's Kit		64.24			-
Total Station Survey Equipment		835.11			-
Ford Explorer		321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton		449.67			-
Air Fare - Round Trip		1,220.54	1.00	1.00	1,220.54
Mileage		0.40	50.00	1.00	20.00
Fuel		1.74	1.00	40.00	69.60
Lodging		68.09	6.00	1.00	408.54
Meals and Incidentals		38.55	7.00	1.00	269.85
Project Consumables		192.72	8.00	1.00	1,541.76
Printing and Binding		205.56	1.00	2.00	411.12
Shipping		154.17			-
Site Trailer		963.59			-
Electrical Hook Up		1,927.17			-
Magazine Fencing		899.35			-
Magazine Mobilization		770.87			-
Donor Explosives		1,541.74			-
Site Remediation - Pine Farm		500.00			-
Subtotal - Other Direct Costs					4,358.97
Total Estimated Costs					18,522.10

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 3
Site Management**

Labour Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	6.50	1.00	273.00	20,999.16
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	6.50	1.00	260.00	12,230.40
UXO Supervisor/Tech VI	Regular	53.29	40.00	6.50	1.00	260.00	13,855.40
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						793.00	47,084.96

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97	6.50	4.00	1,169.22
Cellular Telephone and Service	64.24	6.50	1.00	417.56
Video Camera	32.12	6.50	1.00	208.78
Computer	96.36	6.50	1.00	626.34
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	6.50	3.00	876.92
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	6.50	3.00	6,263.40
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	3.00	3,661.62
Mileage	0.40	2,000.00	1.00	800.00
Fuel	1.74	820.00	1.00	1,426.80
Lodging	68.09	21.00	6.50	9,294.29
Meals and Incidentals	38.55	21.00	6.50	5,262.08
Project Consumables	192.72	10.25	1.00	1,975.38
Printing and Binding	205.56	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	963.59	1.83	1.00	1,570.65
Electrical Hook Up	1,927.17	1.00	1.00	1,927.17
Magazine Fencing	899.35	1.00	1.00	899.35
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	500.00			-
Subtotal - Other Direct Costs				38,024.06
Total Estimated Costs				85,109.02

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 4
Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42	42.00	1.00	1.00	42.00	2,369.64	
Surveyor V		46.16	42.00	3.25	1.00	136.50	6,300.84	
Subtotal - Labor							308.50	13,103.48

Other Direct Costs		Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger		25.89	3.25	2.00	166.89
FM Radio Repeater/Base Station		44.97			-
Cellular Telephone and Service		64.24			-
Video Camera		32.12			-
Computer		98.36	3.25	1.00	313.17
Brushcutter, power		98.36			-
Chainsaw		64.24			-
EOD Demolition Kit		51.39			-
Foester Ferrex Ordnance Locator		385.43			-
Schonstedt Magnetic Locator		51.39	3.25	1.00	167.02
Explosive Storage magazine		44.97			-
Carrier Phase GPS		899.35	0.50	2.00	899.35
Surveyor's Kit		64.24	3.25	1.00	208.78
Total Station Survey Equipment		835.11	0.75	1.00	626.33
Ford Explorer		321.20	3.25	1.00	1,043.90
Pickup, 4x4, 3/4 Ton		449.67			-
Air Fare - Round Trip		1,220.54	1.00	2.00	2,441.08
Mileage		0.40	50.00	2.00	40.00
Fuel		1.74	45.00	1.00	78.30
Lodging		68.09	23.00	2.00	3,132.14
Meals and Incidentals		38.55	25.00	2.00	1,927.50
Project Consumables		192.72	3.25	1.00	626.34
Printing and Binding		205.56	1.00	1.00	205.56
Shipping		154.17	1.00	1.00	154.17
Site Trailer		983.59			-
Electrical Hook Up		1,927.17			-
Magazine Fencing		899.35			-
Magazine Mobilization		770.87			-
Donor Explosives		1,541.74			-
Site Remediation - Pine Farm		500.00			-
Subtotal - Other Direct Costs					12,030.63
Total Estimated Costs					25,134.11

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 3
Brush Clearance**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	3.50	2.00	280.00	11,337.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	3.50	6.00	840.00	24,066.00
Subtotal - Labor						1,120.00	35,403.20
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69		3.50	2.00		179.83
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36		3.50	4.00		1,349.04
Chainsaw		64.24		3.50	2.00		449.68
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		3.50	2.00		359.73
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		3.50	2.00		3,147.69
Air Fare - Round Trip		1,220.54					-
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		109.00	2.00		379.32
Lodging		68.09		13.60	5.00		4,630.12
Meals and Incidentals		38.55		13.60	5.00		2,621.40
Project Consumables		192.72		13.60	1.00		2,620.99
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs						15,777.80	
Total Estimated Costs						51,181.00	

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 6
Surface OE Removal**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	2.00	2.00	160.00	7,526.40
UXO Technician IV	Regular	40.49	40.00	2.00	8.00	640.00	25,913.60
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
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Subtotal - Labor						800.00	33,440.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	2.00	2.00	102.76
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	95.36			-
Brushcutter, power	95.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39	2.00	1.00	102.78
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	2.00	8.00	822.24
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09	14.00	10.00	9,532.60
Meals and Incidentals	38.55	14.00	10.00	5,397.00
Project Consumables	192.72			-
Printing and Binding	205.66			-
Shipping	154.17			-
Site Trailer	963.69			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74	1.00	0.50	770.87
Site Remediation - Pine Farm	500.00			-
Subtotal - Other Direct Costs				16,728.25
Total Estimated Costs				50,168.25

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 7
Scrap Turn-In**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						40.00	1,875.60
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Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.64					-
Mileage		0.40					-
Fuel		1.74		80.00	1.00		138.20
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.66					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs						657.62	
Total Estimated Costs						2,533.22	

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

**Task 8
Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04	40.00	2.00	1.00	80.00	3,763.20
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49					
UXO Technician III	Regular	34.10	40.00	2.00	1.00	80.00	2,728.00
Laborer II	Regular	28.65					
Subtotal - Labor						160.00	6,491.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	2.00	1.00	51.38
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	2.00	2.00	205.56
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	2.00	1.00	642.40
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	50.00	2.00	40.00
Fuel	1.74	1.00	128.00	222.72
Lodging	68.09	14.00	2.00	1,906.52
Meals and Incidentals	38.55	14.00	2.00	1,079.40
Project Consumables	192.72	2.00	1.00	385.44
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	500.00			-
Subtotal - Other Direct Costs				8,974.50
Total Estimated Costs				13,465.70

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm - Surface Clearance of OE

Task 0
Final Report

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.83
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		48.16				-	-
Quality Control Specialist		Regular	47.04			-	-
Site Safety Officer		Regular	47.04			-	-
UXO Supervisor/Tech VI		Regular	53.29			-	-
UXO Supervisor/Tech V		Regular	47.04			-	-
UXO Technician IV		Regular	40.49			-	-
UXO Technician III		Regular	34.10			-	-
Laborer II		Regular	28.65			-	-
Subtotal - Labor						220.50	14,431.83
Other Direct Costs		Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36				-	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54				-	
Mileage		0.40				-	
Fuel		1.74				-	
Lodging		68.09				-	
Meals and Incidentals		38.55				-	
Project Consumables		192.72				-	
Printing and Binding		205.56	1.00	2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		500.00				-	
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						14,842.95	

Surface Clearance of

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pine Farm - Surface Clearance of OE

**Task 10
 Site Restoration**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor V		46.16				-	-	
Quality Control Specialist	Regular	47.04				-	-	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.49				-	-	
UXO Technician III	Regular	34.10				-	-	
Laborer II	Regular	28.65				-	-	
Subtotal - Labor							-	-
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69					-	
FM Radio Repeater/Base Station		44.97					-	
Cellular Telephone and Service		64.24					-	
Video Camera		32.12					-	
Computer		96.36					-	
Brushcutter, power		96.36					-	
Chainsaw		64.24					-	
EOD Demolition Kit		51.39					-	
Foester Ferrex Ordnance Locator		385.43					-	
Schonstedt Magnetic Locator		51.39					-	
Explosive Storage magazine		44.97					-	
Carrier Phase GPS		899.35					-	
Surveyor's Kit		64.24					-	
Total Station Survey Equipment		835.11					-	
Ford Explorer		321.20					-	
Pickup, 4x4, 3/4 Ton		449.67					-	
Air Fare - Round Trip		1,220.54					-	
Mileage		0.40					-	
Fuel		1.74					-	
Lodging		68.09					-	
Meals and Incidentals		38.55					-	
Project Consumables		192.72					-	
Printing and Binding		205.56					-	
Shipping		154.17					-	
Site Trailer		963.59					-	
Electrical Hook Up		1,927.17					-	
Magazine Fencing		899.35					-	
Magazine Mobilization		770.87					-	
Donor Explosives		1,541.74					-	
Site Remediation - Pine Farm		500.00		1.00	1.00		500.00	
Subtotal - Other Direct Costs							500.00	
Total Estimated Costs							500.00	

Pine Farm

Alternative 7 - Surface and Subsurface Clearance of OE Over Entire Area to a Depth of One Foot

Alternative 7 provides for a complete OE surface and subsurface clearance of the entire area (38.94 acres) to a depth of one foot. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included in the subsurface costs. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are extensive and based solely on the production achieved during the Engineering Design effort. It is assumed that 80% of the total grids will require brush clearance. During the Engineering Design effort, a number of production rates have been proportionally increased to account for this effort. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation present in grids, the survey production rate was held to 14 grids per day. The work is to be performed on privately owned property. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage to Surface Clear:	38.94 acres/170 (100' X 100') search grids
Total Acreage Previously Geophysically Investigated:	2.47
Adjusted acreage:	36.47 acres
Adjusted number of grids	136
Grids Requiring Brush Clearance	108
Search Grid Size: 100' X 100'	0.22 acres per grid
Number of Grids requiring brush clearance:	108.8

Production Rates:

Brush Clearance	4 grids per day per four man team (8 grids per day)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	7.62 grids per workday (1.75 acres) per 5 person team (2 teams @ 15.24 (3.5 acres) per workday .

Duration:

Project Management	27 working days/6.75 weeks
Brush Clearance	14 working days/3.5 weeks (2 teams)
Land Survey	13 working days/3.25 weeks (one team)
Surface Clearance	8.93 (9) working days/2.25 weeks (two teams)
Disposal	Effort included in Surface Clearance
Quality Control	9 working days/2.25 weeks (2-person team)
Total Project Duration	27 working days/6.75 weeks

Surface Clearance of OE - Alternative 7

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm

Summary

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per	Weeks	People	Hours	
		Rate	Week				
Program Management I		82.06				39.90	3,274.19
Project Manager III		76.92				283.50	21,806.82
Project Manager II		66.67				243.60	16,240.81
Certified Industrial Hygienist		74.81				16.00	1,196.96
Engineer II		76.92				63.00	4,845.96
Survey Manager		58.42				159.60	9,004.63
Surveyor V		46.16				136.50	6,300.84
Quality Control Specialist	Regular	47.04				90.00	4,233.60
Site Safety Officer	Regular	47.04				270.00	12,700.80
UXO Supervisor/Tech VI	Regular	53.29				362.00	19,290.98
UXO Supervisor/Tech V	Regular	47.04				180.00	8,467.20
UXO Technician IV	Regular	40.49				1,020.00	41,299.80
UXO Technician III	Regular	34.10				220.00	7,502.00
Laborer II	Regular	28.65				840.00	24,066.00
Subtotal - Labor						3,924.10	180,230.59

Other Direct Costs	Loaded	Number	Number	Amount
	Rate	Weeks	Units	
FM Radio, Handheld w/ charger	25.69			520.23
FM Radio Repeater/Base Station	44.97			1,214.19
Cellular Telephone and Service	64.24			485.01
Video Camera	32.12			242.51
Computer	96.36			1,059.96
Brushcutter, power	96.36			1,349.04
Chainsaw	64.24			449.68
EOD Demolition Kit	51.39			115.63
Foester Ferrex Ordnance Locator	385.43			308.34
Schonstedt Magnetic Locator	51.39			1,683.03
Explosive Storage magazine	44.97			910.64
Carrier Phase GPS	899.35			899.35
Surveyor's Kit	64.24			208.78
Total Station Survey Equipment	835.11			835.11
Ford Explorer	321.20			9,106.02
Pickup, 4x4, 3/4 Ton	449.67			3,260.11
Air Fare - Round Trip	1,220.54			12,205.40
Mileage	0.40			980.00
Fuel	1.74			5,600.19
Lodging	68.09			35,287.65
Meals and Incidentals	38.55			20,354.41
Project Consumables	192.72			5,444.34
Printing and Binding	206.66			1,438.92
Shipping	154.17			616.68
Site Trailer	963.69			1,927.18
Electrical Hook Up	1,927.17			1,927.17
Magazine Fencing	899.35			899.35
Magazine Mobilization	770.87			770.87
Donor Explosives	1,541.74			1,734.46
Site Remediation - Pine Farm	500.00			500.00
Subtotal - Other Direct Costs				112,334.25
Total Estimated Costs				292,564.84

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm

**Task 1
Site Visit**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	
Program Management I		82.06	42.00	0.20	1.00	8.40	689.30
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	0.80	1.00	33.60	2,240.11
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.80	1.00	32.00	1,705.28
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						74.00	4,834.89
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Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24		0.80	1.00		51.39
Video Camera		32.12		0.80	1.00		25.70
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43		0.80	1.00		308.34
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		2.00	0.80		613.92
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		5.00	8.00		69.60
Lodging		68.09		4.00	2.00		544.72
Meals and Incidentals		38.55		5.00	2.00		385.50
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		206.66					-
Shipping		164.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							4,572.87
Total Estimated Costs							9,207.66

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm

**Task 2
Work Plan**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly Rate	per Week	Weeks	People	Hours	
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		78.92				-	-
Project Manager II		66.67	42.00	2.50	1.00	105.00	7,000.35
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		58.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						236.60	15,563.20
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs						4,368.87	
Total Estimated Costs						18,922.17	

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm

**Task 3
Site Management**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per			Hours	
		Rate	Week	Weeks	People	Hours	
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	6.75	1.00	283.50	21,808.82
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		55.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	6.75	1.00	270.00	12,700.80
UXO Supervisor/Tech VI	Regular	53.29	40.00	6.75	1.00	270.00	14,388.30
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						823.50	48,896.92
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97		6.75	4.00		1,214.19
Cellular Telephone and Service		64.24		6.75	1.00		433.62
Video Camera		32.12		6.75	1.00		216.81
Computer		96.36		6.75	1.00		650.43
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97		6.75	3.00		910.64
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		6.75	3.00		6,504.30
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	3.00		3,661.62
Mileage		0.40		2,000.00	1.00		800.00
Fuel		1.74		857.00	3.00		4,473.54
Lodging		68.09		21.00	6.75		9,651.76
Meals and Incidentals		38.55		22.00	6.75		5,724.68
Project Consumables		192.72		1.00	6.75		1,300.86
Printing and Binding		206.66		2.00	1.00		411.12
Shipping		164.17		1.00	3.00		462.51
Site Trailer		963.59		2.00	1.00		1,927.18
Electrical Hook Up		1,927.17		1.00	1.00		1,927.17
Magazine Fencing		899.35		1.00	1.00		899.35
Magazine Mobilization		770.87		1.00	1.00		770.87
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs						41,940.65	
Total Estimated Costs						90,838.57	

Surface Clearance of

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Pine Farm

**Task A
Land Survey**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	1.00	1.00	42.00	2,369.64
Surveyor V		46.16	42.00	3.25	1.00	136.50	6,300.84
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	3.25	1.00	130.00	4,433.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
						308.50	13,103.48
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69		3.25	2.00		166.99
FM Radio Repeater/Base Station		44.87					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		3.25	1.00		313.17
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		3.25	1.00		167.02
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35		0.50	2.00		899.35
Surveyor's Kit		64.24		3.25	1.00		208.78
Total Station Survey Equipment		835.11		1.00	1.00		835.11
Ford Explorer		321.20		3.25	1.00		1,043.90
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.84		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		3.25	32.00		180.96
Lodging		68.09		23.00	2.00		3,132.14
Meals and Incidentals		38.55		23.00	2.00		1,773.30
Project Consumables		192.72		3.25	1.00		626.34
Printing and Binding		205.56		1.00	1.00		205.56
Shipping		154.17		1.00	1.00		154.17
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							12,187.67
Total Estimated Costs							25,291.35

Surface Clearance of
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Task 5
Brush Clearance

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		66.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	3.50	2.00	280.00	11,337.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.85	40.00	3.50	6.00	840.00	24,066.00
<hr/>							
Subtotal - Labor						1,120.00	35,403.20
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		3.50	2.00		179.83
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36		3.50	4.00		1,349.04
Chainsaw		64.24		3.50	2.00		449.68
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		3.50	2.00		359.73
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		3.50	2.00		3,147.69
Air Fare - Round Trip		1,220.54					-
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		3.25	64.00		361.92
Lodging		68.09		35.00	3.50		8,341.03
Meals and Incidentals		38.55		35.00	3.50		4,722.38
Project Consumables		192.72		6.00	1.00		1,156.32
Printing and Binding		205.58					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							20,107.82
Total Estimated Costs							55,510.82

Surface Clearance of

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**Task 6
Subsurface Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	2.25	2.00	180.00	8,467.20
UXO Technician IV	Regular	40.49	40.00	2.25	8.00	720.00	29,152.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						900.00	37,620.00
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		2.25	2.00		115.61
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		98.36					-
Brushcutter, power		98.36					-
Chainsaw		64.24					-
EOB Demolition Kit		51.39		2.25	1.00		115.63
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		2.25	8.00		925.02
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09		16.00	10.00		10,894.40
Meals and Incidentals		38.55		16.00	10.00		6,168.00
Project Consumables		192.72					-
Printing and Binding		205.58					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74		1.50	0.75		1,734.46
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							19,953.12
Total Estimated Costs							57,573.12

Surface Clearance of

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**Task 7
Scrap Turn-In**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
						40.00	1,875.60
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		80.00	1.00		138.20
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							657.62
Total Estimated Costs							2,533.22

Surface Clearance of

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**Task 8
Quality Control**

Label Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04	40.00	2.25	1.00	90.00	4,233.60
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	63.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	2.25	1.00	90.00	3,069.00
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						180.00	7,302.60
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		2.25	1.00		57.80
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		2.25	2.00		231.26
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		2.25	1.00		722.70
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		60.00	2.00		40.00
Fuel		1.74		2.25	78.00		305.37
Lodging		88.09		16.00	2.00		2,178.88
Meals and Incidentals		38.55		16.00	2.00		1,233.60
Project Consumables		182.72		2.25	1.00		433.62
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs							7,644.31
Total Estimated Costs							14,946.91

Surface Clearance of

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**Task 9
Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.50	1.00	105.00	7,000.35
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						241.50	15,831.90
Other Direct Costs		Loaded Rate	Number Weeks	Number Units			Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		953.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		500.00					-
Subtotal - Other Direct Costs						411.12	411.12
Total Estimated Costs						16,243.02	16,243.02

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Pine Farm

**Task 10
Site Remediation**

Label Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor Y		46.16				-	-	
Quality Control Specialist	Regular	47.04				-	-	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.49				-	-	
UXO Technician III	Regular	34.10				-	-	
Laborer II	Regular	28.65				-	-	
Subtotal - Labor							-	-
Other Direct Costs								
		Loaded Rate		Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.89					-	
FM Radio Repeater/Base Station		44.97					-	
Cellular Telephone and Service		64.24					-	
Video Camera		32.12					-	
Computer		96.36					-	
Brushcutter, power		96.36					-	
Chainsaw		64.24					-	
EOD Demolition Kit		51.39					-	
Foester Ferrex Ordnance Locator		385.43					-	
Schonstedt Magnetic Locator		51.39					-	
Explosive Storage magazine		44.97					-	
Carrier Phase GPS		899.35					-	
Surveyor's Kit		64.24					-	
Total Station Survey Equipment		835.11					-	
Ford Explorer		321.20					-	
Pickup, 4x4, 3/4 Ton		449.67					-	
Air Fare - Round Trip		1,220.54					-	
Mileage		0.40					-	
Fuel		1.74					-	
Lodging		68.09					-	
Meals and Incidentals		38.55					-	
Project Consumables		192.72					-	
Printing and Binding		205.56					-	
Shipping		154.17					-	
Site Trailer		963.59					-	
Electrical Hook Up		1,927.17					-	
Magazine Fencing		899.35					-	
Magazine Mobilization		770.87					-	
Donor Explosives		1,541.74					-	
Site Remediation - Pine Farm		500.00		1.00	1.00		500.00	
Subtotal - Other Direct Costs							500.00	
Total Estimated Costs							500.00	

**SECTION G-3
COST ESTIMATE FOR THE LANDFILL AND
COMPOST A AREAS**

SELECTED REMOVAL ALTERNATIVE

Landfill and Compost A Areas

Alternative 6 - Surface and Subsurface Clearance of OE Over Selected Areas to a Depth of Four Feet (Compost A and Landfill 2 Areas)

Alternative 6 provides for OE surface and subsurface clearance over 15 acres of the area to a depth of 4 feet. The landfill and composting areas consist of 21.31 acres. Approximately 6.31 acres were previously cleared. Electronic detection instruments are necessary to detect OE hidden from view by high grasses, brush, and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are moderate in the Compost A area but heavy at Landfill 2. Production effort is established at 4 grids per day per team. It is assumed that approximately 60% of the total grids will require moderate brush clearance efforts. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. The production rate for OE removal was reduced to one acre per workday due to its proximity to the landfill. Site restoration line item has been deleted given the end use of this area as a landfill. Due to the limited scope and duration of this clearance effort, a site visit and site trailer/office will not be necessary and have been excluded from this cost estimate.

Total Acreage/grids to Surface Clear:	21.31 acres
Total Acreage Previously Cleared of UXO	6.31 acres
Adjusted acreage:	15 acres
Adjusted number of grids	68 grids
Grids Requiring Brush Clearance	42 grids
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	4 grids per day per four man team (one team)
Land Survey	10 grids per day per two person team (one team)
Surface Clearance	4.36 grids per workday (1 acres) per 5 person team (1 team);

Duration:

Project Management	20 working days/5 weeks
Land Survey	11 working days/2.75 weeks (one team)
Brush Clearance	7 working days/1.75 weeks (one team)
Surface Clearance	16 working days/4 weeks (one five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	10 working days/2.5 weeks (2 person team)
Total Duration	20 Working Days/5 weeks

Surface and Subsurface Clearance of OE in Selected Areas to a depth of 4 ft - Alt 6

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Landfill and Compost A Areas
Clearance of Compost Area - B & Landfill 2

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Summary		
					Number People	Estimated Hours	Amount
Program Management I		82.06				27.30	2,240.24
Project Manager III		76.92				210.00	16,153.20
Project Manager II		66.67				168.00	11,200.56
Certified Industrial Hygienist		74.81				12.00	897.72
Engineer II		76.92				58.80	4,522.90
Survey Manager		56.42				147.00	8,293.74
Surveyor V		46.16				73.50	3,392.76
Quality Control Specialist	Regular	47.04				120.00	5,644.80
Site Safety Officer	Regular	47.04				200.00	9,408.00
UXO Supervisor/Tech VI	Regular	53.29				250.00	13,322.50
UXO Supervisor/Tech V	Regular	47.04				180.00	7,526.40
UXO Technician IV	Regular	40.49				880.00	35,631.20
UXO Technician III	Regular	34.10				190.00	6,479.00
Laborer II	Regular	28.65				660.00	18,909.00
Subtotal - Labor						3,156.60	143,622.02
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					513.81
FM Radio Repeater/Base Station		44.97					899.40
Cellular Telephone and Service		64.24					321.20
Video Camera		32.12					160.60
Computer		96.36					746.79
Brushcutter, power		96.36					1,059.96
Chainsaw		64.24					353.32
EOD Demolition Kit		51.39					205.56
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					2,325.40
Explosive Storage magazine		44.97					449.70
Carrier Phase GPS		899.35					2,248.38
Surveyor's Kit		64.24					112.42
Total Station Survey Equipment		835.11					1,670.22
Ford Explorer		321.20					1,927.20
Pickup, 4x4, 3/4 Ton		449.67					2,585.61
Air Fare - Round Trip		1,220.54					9,764.32
Mileage		0.40					2,420.00
Fuel		1.74					1,186.65
Lodging		68.09					34,589.72
Meals and Incidentals		38.55					20,739.90
Project Consumables		182.72					3,420.78
Printing and Binding		205.56					2,055.60
Shipping		154.17					1,079.19
Site Trailer		963.59					4,817.95
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					308.35
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs						97,632.28	
Total Estimated Costs							241,254.30

Surface and Subsurface Clearance of OE in

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**Task 1
Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	-	-	-	-	-
Project Manager III		76.92					
Project Manager II		66.67					
Certified Industrial Hygienist		74.81					
Engineer II		76.92					
Survey Manager		56.42					
Surveyor V		48.16					
Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49					
UXO Technician III	Regular	34.10					
Laborer II	Regular	25.65					
Subtotal - Labor							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24		-	-		-
Video Camera		32.12		-	-		-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrer Ordnance Locator		385.43		-	-		-
Schonstedt Magnetic Locator		51.39		-	-		-
Explosive Storage magazine		44.97		-	-		-
Carrier Phase GPS		899.35		-	-		-
Surveyor's Kit		64.24		-	-		-
Total Station Survey Equipment		835.11		-	-		-
Ford Explorer		321.20		-	-		-
Pickup, 4x4, 3/4 Ton		449.67		-	-		-
Air Fare - Round Trip		1,220.54		-	-		-
Mileage		0.40		-	-		-
Fuel		1.74		-	-		-
Lodging		68.09		-	-		-
Meals and Incidentals		38.55		-	-		-
Project Consumables		192.72		-	-		-
Printing and Binding		205.56		-	-		-
Shipping		154.17		-	-		-
Site Trailer		983.59		-	-		-
Electrical Hook Up		1,927.17		-	-		-
Magazine Fencing		899.35		-	-		-
Magazine Mobilization		770.87		-	-		-
Donor Explosives		1,541.74		-	-		-
Site Remediation - Pine Farm		300.00		-	-		-
Subtotal - Other Direct Costs							
Total Estimated Costs							

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**Task 2
Work Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.40	1.00	16.80	1,378.61
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	12.00	897.72
Engineer II		76.92	42.00	0.40	1.00	16.80	1,292.26
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.75	1.00	30.00	1,598.70
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	25.65				-	-
Subtotal - Labor						159.60	10,552.32
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36	1.00	1.00		96.36	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20	1.00	1.00		321.20	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54	1.00	1.00		1,220.54	
Mileage		0.40	50.00	1.00		20.00	
Fuel		1.74	1.00	40.00		69.60	
Lodging		68.09	6.00	1.00		408.54	
Meals and Incidentals		38.55	7.00	1.00		269.85	
Project Consumables		192.72	8.00	1.00		1,541.76	
Printing and Binding		205.56	1.00	2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.67				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs						14,911.29	

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**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager II		76.92	42.00	5.00	1.00	210.00	16,153.20
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.18				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	5.00	1.00	200.00	9,408.00
UXO Supervisor/Tech VI	Regular	53.29	40.00	5.00	1.00	200.00	10,658.00
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						610.00	36,219.20
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					
FM Radio Repeater/Base Station		44.97		5.00	4.00		899.40
Cellular Telephone and Service		64.24		5.00	1.00		321.20
Video Camera		32.12		5.00	1.00		160.60
Computer		96.36		5.00	1.00		481.80
Brushcutter, power		96.36					
Chainsaw		84.24					
ECD Demolition Kit		51.39					
Foerster Ferrex Ordnance Locator		385.43					
Schrodt Magnetic Locator		51.39					
Explosive Storage magazine		44.97		5.00	2.00		449.70
Carrier Phase GPS		899.35					
Surveyor's Kit		84.24					
Total Station Survey Equipment		835.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67					
Air Fare - Round Trip		1,220.54		1.00	3.00		3,661.62
Mileage		0.40		5,000.00	1.00		2,000.00
Fuel		1.74		185.00	1.00		321.90
Lodging		88.09		70.00	2.00		9,532.60
Meals and Incidentals		38.55		70.00	2.00		5,397.00
Project Consumables		192.72		5.00	1.00		963.60
Printing and Binding		205.58		5.00	1.00		1,027.80
Shipping		154.17		2.00	3.00		925.02
Site Trailer		963.59		5.00	1.00		4,817.95
Electrical Hook Up		1,927.17			1.00		
Magazine Fencing		899.35		1.00	1.00		899.35
Magazine Mobilization		770.87		1.00	1.00		770.87
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs						32,630.41	
Total Estimated Costs							68,849.61

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**Task 4
Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		56.42	42.00	1.75	1.00	73.50	4,146.87
Surveyor V		48.15	42.00	1.75	1.00	73.50	3,392.76
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Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49					
UXO Technician III	Regular	34.10	40.00	1.75	1.00	70.00	2,387.00
Laborer II	Regular	28.65					
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Subtotal - Labor						217.00	8,926.63

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	1.75	2.00	89.92
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36	1.75	1.00	168.63
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	1.75	1.00	89.93
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35	1.25	2.00	2,248.38
Surveyor's Kit	64.24	1.75	1.00	112.42
Total Station Survey Equipment	835.11	2.00	1.00	1,670.22
Ford Explorer	321.20	2.00	1.00	642.40
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	150.00	2.00	120.00
Fuel	1.74	85.00	1.00	147.90
Lodging	68.09	14.00	2.00	1,908.52
Meals and Incidentals	38.55	16.00	2.00	1,233.60
Project Consumables	192.72	1.75	1.00	337.26
Printing and Binding	205.56	1.00	1.00	205.56
Shipping	154.17	1.00	1.00	154.17
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				11,667.99
Total Estimated Costs				21,494.62

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Task 5 Brush Clearance

Labor Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	2.75	2.00	220.00	8,907.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	60.00	2.75	6.00	660.00	18,909.00
Subtotal - Labor						880.00	27,818.80
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		26.68		2.75	2.00		141.30
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36					
Brushcutter, power		96.36		2.75	4.00		1,059.96
Chainsaw		64.24		2.75	2.00		353.32
EOD Demolition Kit		51.39					
Foester Ferrex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39		2.75	2.00		282.65
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35					
Surveyor's Kit		64.24					
Total Station Survey Equipment		835.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67		2.75	2.00		2,473.19
Air Fare - Round Trip		1,220.54					
Mileage		0.40		200.00	2.00		160.00
Fuel		1.74		85.00	2.00		295.80
Lodging		68.09		18.00	8.00		9,804.96
Meals and Incidentals		38.55		20.00	8.00		6,168.00
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					
Shipping		154.17					
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.87					
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs							20,931.90
Total Estimated Costs							48,748.70

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Task 6
Subsurface OE Removal

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		62.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	4.00	1.00	160.00	7,526.40
UXO Technician IV	Regular	40.49	40.00	4.00	4.00	640.00	25,913.60
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						800.00	33,440.00
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		4.00	2.00		205.52
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
ECO Demolition Kit		51.39		4.00	1.00		205.56
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		4.00	8.00		1,644.48
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09		29.00	5.00		9,873.05
Meals and Incidentals		38.55		30.00	5.00		5,782.50
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74		1.00	0.20		308.35
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							18,019.48
Total Estimated Costs							51,459.48

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Task 7
Scrap Turn-In

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		48.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						40.00	1,875.60
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foerster Ferret Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		32.00	1.00		55.68
Lodging		68.09		1.50	2.00		204.27
Meals and Incidentals		38.55		1.50	2.00		115.65
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							680.74
Total Estimated Costs							2,556.34

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Task 8 Quality Control

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04	40.00	3.00	1.00	120.00	5,644.80
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	3.00	1.00	120.00	4,092.00
Laborer II	Regular	28.65				-	-
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Subtotal - Labor						240.00	9,736.80
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		3.00	1.00		77.07
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		3.00	2.00		308.34
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		3.00	1.00		963.60
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		150.00	2.00		120.00
Fuel		1.74		85.00	2.00		295.80
Lodging		68.09		21.00	2.00		2,659.78
Meals and Incidentals		38.55		23.00	2.00		1,773.30
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,827.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							9,031.69
Total Estimated Costs							18,768.49

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Task 9
Final Report

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.50	1.00	105.00	7,000.35
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	1.25	1.00	52.50	2,962.05
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						210.00	14,054.67
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36				-	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EGD Demolition Kit		51.39				-	
Foerster Farrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54				-	
Mileage		0.40				-	
Fuel		1.74				-	
Lodging		68.09				-	
Meals and Incidentals		38.55				-	
Project Consumables		192.72				-	
Printing and Binding		205.58	1.00	2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						14,465.79	

Surface and Subsurface Clearance of OE in
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Landfill and Compost A Areas
 Clearance of Compost Area - B & Landfill 2

Task 10
Site Restoration

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor							-
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,827.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.67					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							-
Total Estimated Costs							-

EVALUATED REMOVAL ALTERNATIVES

Landfill and Composting Areas

Alternative 6 - Surface and Subsurface Clearance of OE Over Selected Areas to a Depth of Four Feet

Alternative 6 provides for OE surface and subsurface clearance over 5 acres of the area to a depth of four feet. The landfill and composting area consist of 21.31 acres; however, 16.31 acres were previously cleared through other COE OE actions, leaving 5 acres remaining to be cleared. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included the subsurface costs. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are moderate in the landfill area and the production rate for this effort has been adjusted accordingly. It is assumed that 60% of the total grids will require moderate brush clearance. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. The production rate for OE removal was reduced to one acre per workday due to its proximity to the landfill. Though work is to be performed on privately owned property site restoration will not be necessary given the end use of the property as a landfill. Due to the limited scope and duration, a site visit and site trailer/office will not be necessary and has been eliminated from the cost estimate.

Total Acreage involved:	21.31 acres
Total Acreage Previously Cleared of UXO:	16.31 of the 21.31 acres
Adjusted acreage to be cleared of UXO:	5 acres
Adjusted number of search grids	22 grids
Grids Requiring Brush Clearance	14 grids
Search Grid Size: 100' X 100'	0.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (1 team)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	4.36 grids per workday (1 acre) per 5 person team (1 team)

Duration:

Project Management	8 working days/2 weeks
Brush Clearance	3 working days/.75 weeks (1 team)
Land Survey	3 working days/.75 week (one team)
Subsurface Clearance	5 working days/ 1.25 weeks (1 team)
Disposal	Effort included in Surface Clearance
Quality Control	3 working days/.75 week (2-person team)
Total Project Duration	8 working days/2 weeks

OE Surface Clearance/Four Foot in Selected Areas - Alternative 6

Corps of Engineers
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Landfill and Composting Area

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Summary	
					Estimated Hours	Amount
Program Management I	82.06				27.30	2,240.24
Project Manager III	76.92				84.00	6,461.28
Project Manager II	66.67				147.00	9,800.49
Certified Industrial Hygienist	74.81				12.00	897.72
Engineer II	76.92				48.30	3,715.24
Survey Manager	56.42				92.40	5,213.21
Surveyor V	46.16				31.50	1,454.04
Subtotal - Labor						
Quality Control Specialist	Regular 47.04				80.00	3,763.20
Site Safety Officer	Regular 47.04				80.00	3,763.20
UXO Supervisor/Tech VI	Regular 53.29				120.00	6,394.80
UXO Supervisor/Tech V	Regular 47.04				50.00	2,352.00
UXO Technician IV	Regular 40.49				270.00	10,932.30
UXO Technician III	Regular 34.10				110.00	3,751.00
Laborer II	Regular 28.65				180.00	5,157.00
Subtotal - Labor						
					1,332.50	66,896.72
Other Direct Costs						
FM Radio, Handheld w/ charger	25.69					160.57
FM Radio Repeater/Base Station	44.97					359.76
Cellular Telephone and Service	64.24					128.48
Video Camera	32.12					64.24
Computer	96.36					361.35
Brushcutter, power	96.36					289.08
Chainsaw	64.24					64.24
EOD Demolition Kit	51.39					84.24
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39					835.09
Explosive Storage magazine	44.97					289.82
Carrier Phase GPS	899.35					899.35
Surveyor's Kit	64.24					48.18
Total Station Survey Equipment	835.11					835.11
Ford Explorer	321.20					963.60
Pickup, 4x4, 3/4 Ton	449.67					786.93
Air Fare - Round Trip	1,220.54					9,764.32
Mileage	0.40					940.00
Fuel	1.74					542.88
Lodging	68.09					8,511.25
Meals and Incidentals	38.55					6,630.60
Project Consumables	192.72					9,202.38
Printing and Binding	205.56					1,438.92
Shipping	154.17					616.68
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Fencing	899.35					899.35
Magazine Mobilization	770.87					770.87
Donor Explosives	1,541.74					154.17
Subtotal - Other Direct Costs						45,633.58
Total Estimated Costs						111,529.30

OE Surface Clearance/Four Foot

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Landfill and Composting Area

**Task 1
Site Visit**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						-	-
<hr/>							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		95.36					-
Brushcutter, power		95.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
<hr/>							
Subtotal - Other Direct Costs							-
<hr/>							
Total Estimated Costs							-

OE Surface Clearance/Four Foot

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Landfill and Composting Area

**Task 2
Work Plan**

Labor Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06	42.00	0.40	1.00	16.80	1,378.61
Project Manager III		76.92				-	-
Project Manager II		68.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	12.00	897.72
Engineer II		76.92	42.00	0.40	1.00	16.80	1,292.26
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.75	1.00	30.00	1,598.70
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						159.80	10,552.32
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.67					-
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs							14,911.29

OE Surface Clearance/Four Foot

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Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Landfill and Composting Area

**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	2.00	1.00	84.00	6,461.28
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	2.00	1.00	80.00	3,763.20
UXO Supervisor/Tech VI	Regular	53.29	40.00	2.00	1.00	80.00	4,263.20
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						244.00	14,487.68
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97		2.00	4.00		359.76
Cellular Telephone and Service		64.24		2.00	1.00		128.48
Video Camera		32.12		2.00	1.00		64.24
Computer		96.36		2.00	1.00		192.72
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97		2.00	3.00		269.82
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	3.00		3,661.62
Mileage		0.40		2,000.00	1.00		800.00
Fuel		1.74		64.00	2.00		222.72
Lodging		68.09		21.00	2.00		2,859.78
Meals and Incidentals		38.55		22.00	2.00		1,696.20
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.56		2.00	1.00		411.12
Shipping		154.17		1.00	3.00		462.51
Site Trailer		963.59			1.00		-
Electrical Hook Up		1,927.17			1.00		-
Magazine Fencing		899.35		1.00	1.00		899.35
Magazine Mobilization		770.87		1.00	1.00		770.87
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs						13,184.63	
Total Estimated Costs						27,672.31	

OE Surface Clearance/Four Foot

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Camp Croft, Spartanburg, S.C.
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Landfill and Composting Area

**Task 4
Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		56.42	42.00	0.70	1.00	29.40	1,658.75
Surveyor V		46.16	42.00	0.75	1.00	31.50	1,454.04
Quality Control Specialist		Regular 47.04					
Site Safety Officer		Regular 47.04					
UXO Supervisor/Tech VI		Regular 53.29					
UXO Supervisor/Tech V		Regular 47.04					
UXO Technician IV		Regular 40.49					
UXO Technician III		Regular 34.10	40.00	0.75	1.00	30.00	1,023.00
Laborer II		Regular 28.65					
Subtotal - Labor						90.90	4,135.79
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69	0.75	2.00		38.54	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36	0.75	1.00		72.27	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39	0.75	1.00		38.54	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35	0.50	2.00		899.35	
Surveyor's Kit		64.24	0.75	1.00		48.18	
Total Station Survey Equipment		835.11	1.00	1.00		835.11	
Ford Explorer		321.20	1.00	1.00		321.20	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54	1.00	2.00		2,441.08	
Mileage		0.40	50.00	2.00		40.00	
Fuel		1.74	32.00	1.00		55.68	
Lodging		68.09	5.00	2.00		680.90	
Meals and Incidentals		38.55	6.00	2.00		462.60	
Project Consumables		192.72	0.75	1.00		144.54	
Printing and Binding		205.56	1.00	1.00		205.56	
Shipping		154.17	1.00	1.00		154.17	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Subtotal - Other Direct Costs						6,437.72	
Total Estimated Costs						10,573.51	

OE Surface Clearance/Four Foot

Corps of Engineers

Camp Croft, Spartanburg, S.C.

Engineering Design Cost Estimate

Landfill and Composting Area

**Task 5
Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.75	2.00	60.00	2,429.40
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	0.75	6.00	180.00	5,157.00
Subtotal - Labor						240.00	7,588.40
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		0.75	2.00		38.54
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36		0.75	4.00		289.08
Chainsaw		64.24		0.75	2.00		96.36
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		0.75	2.00		77.09
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		0.75	2.00		674.51
Air Fare - Round Trip		1,220.54					-
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	2.00		111.36
Lodging		68.09			1.00		-
Meals and Incidentals		38.55		35.00	1.00		1,349.25
Project Consumables		192.72		35.00	1.00		6,745.20
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs						9,421.39	
Total Estimated Costs							17,007.79

OE Surface Clearance/Four Foot

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**Task 6
Subsurface OE Removal**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.08				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		66.42				-	-
Surveyor V		48.18				-	-
Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04	40.00	1.25	1.00	50.00	2,352.00
UXO Technician IV	Regular	40.49	40.00	1.25	4.00	200.00	8,098.00
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						250.00	10,450.00
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69	1.25	1.00		32.11	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.38				-	
Brushcutter, power		96.38				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39	1.25	1.00		64.24	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39	1.25	8.00		513.90	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54				-	
Mileage		0.40				-	
Fuel		1.74				-	
Lodging		68.09	9.00	5.00		3,064.05	
Meals and incidentals		38.55	10.00	5.00		1,927.50	
Project Consumables		192.72	1.25			-	
Printing and Binding		205.56				-	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74	0.50	0.20		154.17	
Subtotal - Other Direct Costs						5,755.97	
Total Estimated Costs						16,205.97	

OE Surface Clearance/Four Foot

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**Task 7
Scrap Turn-In**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.25	1.00	10.00	532.90
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.25	1.00	10.00	404.90
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						20.00	937.80
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		16.00	1.00		27.84
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs							546.26
Total Estimated Costs							1,484.06

OE Surface Clearance/Four Foot

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**Task 8
Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04	40.00	2.00	1.00	80.00	3,763.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	2.00	1.00	80.00	2,728.00
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						160.00	6,491.20
<hr/>							
Other Direct Costs		Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger		25.69	2.00	1.00			51.38
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.38					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39	2.00	2.00			205.56
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20	1.00	1.00			321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54	1.00	2.00			2,441.08
Mileage		0.40	50.00	2.00			40.00
Fuel		1.74	1.00	32.00			55.68
Lodging		68.09	10.00	2.00			1,361.80
Meals and Incidentals		38.55	11.00	2.00			848.10
Project Consumables		192.72	1.00	1.00			192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs						5,517.52	
Total Estimated Costs							12,008.72

OE Surface Clearance/Four Foot
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 Landfill and Composting Area

Task 0
Final Report

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.83
Project Manager III		78.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager		66.42	42.00	1.00	1.00	42.00	2,369.84
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						188.00	11,254.53
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Subtotal - Other Direct Costs						411.12	411.12
Total Estimated Costs							11,665.65

OE Surface Clearance/Four Foot

Corps of Engineers
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Engineering Design Cost Estimate
Landfill and Composting Area

Task 10

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						-	-
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69				-	-
FM Radio Repeater/Base Station		44.97				-	-
Cellular Telephone and Service		64.24				-	-
Video Camera		32.12				-	-
Computer		96.36				-	-
Brushcutter, power		96.36				-	-
Chainsaw		64.24				-	-
EOD Demolition Kit		51.39				-	-
Foester Ferrex Ordnance Locator		385.43				-	-
Schonstedt Magnetic Locator		51.39				-	-
Explosive Storage magazine		44.97				-	-
Carrier Phase GPS		899.35				-	-
Surveyor's Kit		64.24				-	-
Total Station Survey Equipment		835.11				-	-
Ford Explorer		321.20				-	-
Pickup, 4x4, 3/4 Ton		449.67				-	-
Air Fare - Round Trip		1,220.54				-	-
Mileage		0.40				-	-
Fuel		1.74				-	-
Lodging		68.09				-	-
Meals and Incidentals		38.55				-	-
Project Consumables		192.72				-	-
Printing and Binding		205.56				-	-
Shipping		154.17				-	-
Site Trailer		963.69				-	-
Electrical Hook Up		1,927.17				-	-
Magazine Fencing		899.35				-	-
Magazine Mobilization		770.87				-	-
Donor Explosives		1,541.74				-	-
Subtotal - Other Direct Costs						-	-
Total Estimated Costs						-	-

SECTION G-4
COST ESTIMATE FOR THE POND AREA

SELECTED REMOVAL ALTERNATIVE

Pond Area

Alternative 8 - Surface and Subsurface OE Clearance of Entire Area to a Depth of Four Feet

Alternative 8 requires a complete OE surface and subsurface clearance of 25.23 acres to a depth of four feet. The work schedule is based on working four 10-hour days per work week. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included in the subsurface costs. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are considered moderate in the pond area. It is assumed that 40% of the total grids will require brush clearance. During the Engineering Design effort, 2.47 acres of the pond area were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for this effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. Because of the limited effort required to conduct OE removal at this site, a site visit has been determined unnecessary and is omitted from this cost estimate. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	25.23 acres/110 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	2.47/11 grids
Adjusted acreage:	22.76 acres
Adjusted number of grids	99 grids
Grids Requiring Brush Clearance	40 grids/9.18 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (one team)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	5.45 grids per day (1.25 acres) per 5 person team (two teams @ 10.9 grids per workday)

Duration:

Project Management	20 working days/4.5 weeks
Land Survey	8 working days/2 weeks (one team)
Brush Clearance	8 working days/2 weeks -- 5 grids per work day per four-person team (one team)
Subsurface Clearance	10 working days/2.5 weeks (two teams)
Disposal	Effort included in Surface Clearance
Quality Control	10 working days/2.5 weeks (2 person team)
Total Duration	20 Working Days/ 4.5 weeks

OE Surface Clearance/Subsurface Clearance To A Depth of Four Feet - Alternative 8

Corps of Engineers
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Pond Area

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Summary	
						Estimated Hours	Amount
Program Management I		82.06				31.50	2,584.89
Project Manager III		76.92				189.00	14,537.88
Project Manager II		66.67				168.00	11,200.56
Certified Industrial Hygienist		74.81				16.00	1,196.96
Engineer II		76.92				63.00	4,845.96
Survey Manager		66.42				151.20	8,530.70
Surveyor V		46.16				84.00	3,877.44
Quality Control Specialist	Regular	47.04				180.00	8,467.20
Site Safety Officer	Regular	47.04				180.00	8,467.20
UXO Supervisor/Tech VI	Regular	53.29				240.00	12,789.60
UXO Supervisor/Tech V	Regular	47.04				200.00	9,408.00
UXO Technician IV	Regular	40.49				900.00	36,441.00
UXO Technician III	Regular	34.10				260.00	8,866.00
Laborer II	Regular	28.65				240.00	6,876.00
Subtotal - Labor						2,902.70	138,089.39

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			398.20
FM Radio Repeater/Base Station	44.97			809.46
Cellular Telephone and Service	64.24			289.08
Video Camera	32.12			144.54
Computer	96.36			722.70
Brushcutter, power	96.36			385.44
Chainsaw	64.24			266.96
EOD Demolition Kit	51.39			128.48
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			2,004.21
Explosive Storage magazine	44.97			607.10
Carrier Phase GPS	899.35			899.35
Surveyor's Kit	64.24			128.48
Total Station Survey Equipment	835.11			1,670.22
Ford Explorer	321.20			6,745.20
Pickup, 4x4, 3/4 Ton	449.67			1,011.76
Air Fare - Round Trip	1,220.64			22,579.99
Mileage	0.40			943.00
Fuel	1.74			1,322.40
Lodging	68.09			21,039.82
Meals and Incidentals	38.55			12,548.03
Project Consumables	192.72			4,239.84
Printing and Binding	205.66			1,438.92
Shipping	154.17			616.68
Site Trailer	963.59			1,445.39
Electrical Hook Up	1,927.17			1,927.17
Magazine Fencing	899.35			899.35
Magazine Mobilization	770.87			770.87
Donor Explosives	1,541.74			1,349.02
Site Remediation	300.00			300.00
Subtotal - Other Direct Costs				87,621.66
Total Estimated Costs				225,711.05

OE Surface Clearance/Subsurface Clearance

Corps of Engineers
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Engineering Design Cost Estimate
Pond Area

**Task 1
Site Visit**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.28				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69				-	-
FM Radio Repeater/Base Station		44.97				-	-
Cellular Telephone and Service		64.24				-	-
Video Camera		32.12				-	-
Computer		96.36				-	-
Brushcutter, power		96.36				-	-
Chainsaw		64.24				-	-
EOD Demolition Kit		51.39				-	-
Foester Ferrex Ordnance Locator		385.43				-	-
Schonstedt Magnetic Locator		51.39				-	-
Explosive Storage magazine		44.97				-	-
Carrier Phase GPS		899.35				-	-
Surveyor's Kit		64.24				-	-
Total Station Survey Equipment		835.11				-	-
Ford Explorer		321.20				-	-
Pickup, 4x4, 3/4 Ton		449.67				-	-
Air Fare - Round Trip		1,220.64				-	-
Mileage		0.40				-	-
Fuel		1.74				-	-
Lodging		68.09				-	-
Meals and Incidentals		38.55				-	-
Project Consumables		192.72				-	-
Printing and Binding		205.56				-	-
Shipping		154.17				-	-
Site Trailer		963.59				-	-
Electrical Hook Up		1,927.17				-	-
Magazine Fencing		899.35				-	-
Magazine Mobilization		770.87				-	-
Donor Explosives		1,541.74				-	-
Site Remediation		300.00				-	-
Subtotal - Other Direct Costs							
Total Estimated Costs							

OE Surface Clearance/Subsurface Clearance

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Pond Area

**Task 2
Week Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						215.60	14,163.13
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs						18,522.10	

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Task 3
Site Management

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	4.50	1.00	189.00	14,537.88
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	4.50	1.00	180.00	8,467.20
UXO Supervisor/Tech VI	Regular	53.29	40.00	4.50	1.00	180.00	9,592.20
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						549.00	32,597.28

Other Direct Costs	Loaded	Number	Number	Amount
	Rate	Weeks	Units	
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97	4.50	4.00	809.46
Cellular Telephone and Service	64.24	4.50	1.00	289.08
Video Camera	32.12	4.50	1.00	144.54
Computer	96.36	4.50	1.00	433.62
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	4.50	3.00	607.10
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	4.50	3.00	4,336.20
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	4.50	3.00	16,477.29
Mileage	0.40	2,000.00	1.00	800.00
Fuel	1.74	384.00	1.00	668.16
Lodging	68.09	21.00	4.50	6,434.51
Meals and Incidentals	38.55	22.00	4.50	3,816.45
Project Consumables	192.72	4.50	1.00	867.24
Printing and Binding	205.56	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	983.59	1.50	1.00	1,445.39
Electrical Hook Up	1,927.17	1.00	1.00	1,927.17
Magazine Fencing	899.35	1.00	1.00	899.35
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation	300.00			-
Subtotal - Other Direct Costs				41,600.06
Total Estimated Costs				74,197.34

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Task A
Lead Survey

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		88.87				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16	42.00	2.00	1.00	84.00	3,877.44
Subtotal - Labor							
						197.60	8,501.15
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69		2.00	2.00		102.76
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		2.00	1.00		192.72
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		2.00	1.00		102.78
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35		0.50	2.00		899.35
Surveyor's Kit		64.24		2.00	1.00		128.48
Total Station Survey Equipment		835.11		2.00	1.00		1,670.22
Ford Explorer		321.20		2.00	1.00		642.40
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	2.00		111.36
Lodging		68.09		14.00	2.00		1,908.52
Meals and Incidentals		38.55		15.00	2.00		1,156.50
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.56		1.00	1.00		205.56
Shipping		154.17		1.00	1.00		154.17
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs							10,139.34
Total Estimated Costs							18,640.49

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**Task 5
 Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	2.00	1.00	80.00	3,239.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	2.00	3.00	240.00	6,876.00
Subtotal - Labor						320.00	10,115.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	2.00	1.00	51.38
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36	2.00	2.00	385.44
Chainsaw	64.24	2.00	2.00	256.96
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	2.00	4.00	411.12
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67	2.00	1.00	899.34
Air Fare - Round Trip	1,220.54			-
Mileage	0.40	50.00	1.00	20.00
Fuel	1.74	32.00	2.00	111.36
Lodging	68.09	14.00	2.00	1,906.52
Meals and Incidentals	38.55	15.00	2.00	1,156.50
Project Consumables	192.72	2.00	1.00	385.44
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation	300.00			-
Subtotal - Other Direct Costs				5,584.06
Total Estimated Costs				15,699.26

OE Surface Clearance/Subsurface Clearance

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**Task 6
Surface/Subsurface OE Removal - 4 Feet**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	2.50	2.00	200.00	9,408.00
UXO Technician IV	Regular	40.49	40.00	2.50	8.00	800.00	32,392.00
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
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Subtotal - Labor						1,000.00	41,800.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	2.50	2.00	128.45
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39	2.50	1.00	128.48
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	2.50	8.00	1,027.80
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09	35.00	2.50	5,957.88
Meals and Incidentals	38.55	36.00	2.50	3,469.50
Project Consumables	192.72			-
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74	1.25	0.70	1,349.02
Site Remediation	300.00			-
Subtotal - Other Direct Costs				12,061.13
Total Estimated Costs				53,861.13

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**Task 7
 Scrap Turn-In**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10					
Laborer II	Regular	28.65				-	-
Subtotal - Labor						40.00	1,875.60
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Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		80.00	1.00		139.20
Lodging		68.09		1.00	2.00		136.16
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.66					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs							657.62
Total Estimated Costs							2,533.22

OE Surface Clearance/Subsurface Clearance

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**Task 8
Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		88.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist							
Quality Control Specialist	Regular	47.04	40.00	4.50	1.00	180.00	8,487.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	4.50	1.00	180.00	6,138.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						360.00	14,805.20
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		4.50	1.00		115.61
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		4.50	2.00		482.51
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		4.50	1.00		1,445.40
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		35.00	4.50		63.00
Fuel		1.74		1.00	128.00		222.72
Lodging		68.09		14.00	4.50		4,289.67
Meals and Incidentals		38.55		15.00	4.50		2,602.13
Project Consumables		192.72		1.00	4.50		867.24
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						12,509.38	
Total Estimated Costs							27,114.58

OE Surface Clearance/Subsurface Clearance

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**Task 9
Final Report**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly Rate	per Week	Weeks	People	Hours	
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		78.92				-	-
Project Manager II		88.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.18				-	-
Quality Control Specialist Regular 47.04 - -							
Site Safety Officer Regular 47.04 - -							
UXO Supervisor/Tech VI Regular 53.29 - -							
UXO Supervisor/Tech V Regular 47.04 - -							
UXO Technician IV Regular 40.49 - -							
UXO Technician III Regular 34.10 - -							
Laborer II Regular 28.65 - -							
Subtotal - Labor						220.50	14,431.83
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						14,842.95	

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Task 10
Site Remediation

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer III		76.92				-	-
Survey Manager		66.42				-	-
Surveyor V		46.16				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Fooster Ferrex Ordinance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00		1.00	1.00		300.00
Subtotal - Other Direct Costs							300.00
Total Estimated Costs							300.00

EVALUATED REMOVAL ALTERNATIVES

Pond Area

Alternative 3 - Surface Clearance of OE

Alternative 3 requires a complete OE surface clearance of 25.23 acres. Electronic detection instruments are necessary to detect OE hidden from view by high grasses and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are considered moderate in the pond area. It is assumed that 40% of the total grids will require brush clearance. During the Engineering Design effort, 2.47 acres of the pond area were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for this effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. Because of the limited effort required to conduct OE removal at this site, a site visit has been determined unnecessary and had been omitted from this cost estimate. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	25.23 acres/110 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	2.47/11 grids
Adjusted acreage:	22.76 acres
Adjusted number of grids	99 grids
Grids Requiring Brush Clearance	40 grids/9.18 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (one team)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	8.71 grids per day (2 acres) per 5 person team (one team)

Duration:

Project Management	20 working days/5 weeks
Land Survey	8 working days/2 weeks (one team)
Brush Clearance	8 working days/2 weeks -- 5 grids per work day per four-person team (one team)
Surface Clearance	12 working days/3 weeks (one team)
Disposal	Effort included in Surface Clearance
Quality Control	12 working days/3 weeks (2 person team)
Total Duration	20 Working Days/5 weeks

Surface Clearance of OE - Alternative 3

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Labor Category		Summary					
		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				31.50	2,584.89
Project Manager III		76.92				210.00	16,153.20
Project Manager II		66.67				147.00	9,800.49
Certified Industrial Hygienist		74.81				16.00	1,196.96
Engineer II		76.92				52.50	4,038.30
Survey Manager		56.42				126.00	7,108.92
Surveyor V		46.16				84.00	3,877.44
Quality Control Specialist	Regular	47.04				120.00	5,644.80
Site Safety Officer	Regular	47.04				200.00	9,408.00
UXO Supervisor/Tech VI	Regular	53.29				250.00	13,322.50
UXO Supervisor/Tech V	Regular	47.04				120.00	5,644.80
UXO Technician IV	Regular	40.49				570.00	23,079.30
UXO Technician III	Regular	34.10				200.00	6,820.00
Laborer II	Regular	28.65				240.00	6,876.00
						-	-
Subtotal - Labor						2,367.00	115,555.60

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			308.28
FM Radio Repeater/Base Station	44.97			674.55
Cellular Telephone and Service	64.24			321.20
Video Camera	32.12			160.60
Computer	96.36			770.88
Brushcutter, power	96.36			385.44
Chainsaw	64.24			266.96
EOD Demolition Kit	51.39			154.17
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			1,593.09
Explosive Storage magazine	44.97			674.55
Carrier Phase GPS	899.35			899.35
Surveyor's Kit	64.24			128.48
Total Station Survey Equipment	835.11			1,670.22
Ford Explorer	321.20			6,745.20
Pickup, 4x4, 3/4 Ton	449.67			1,011.76
Air Fare - Round Trip	1,220.54			9,764.32
Mileage	0.40			920.00
Fuel	1.74			1,338.06
Lodging	68.09			21,516.44
Meals and Incidentals	38.55			12,760.05
Project Consumables	192.72			4,047.12
Printing and Binding	205.56			1,438.92
Shipping	154.17			616.68
Site Trailer	963.59			1,204.49
Electrical Hook Up	1,927.17			1,927.17
Magazine Mobilization	770.87			770.87
Donor Explosives	1,541.74			770.87
Site Remediation	300.00			300.00
Subtotal - Other Direct Costs				74,029.07
Total Estimated Costs				189,584.67

Surface Clearance of

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**Task 1
Site Visit**

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	76.92				-	-
Project Manager II	88.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	66.42				-	-
Surveyor V	46.16				-	-
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04				-	-
UXO Technician IV	Regular 40.49				-	-
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65				-	-
Subtotal - Labor						-
Other Direct Costs						
	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69					-
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	84.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordinance Locator	385.43					-
Schonstedt Magnetic Locator	51.39					-
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20					-
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.64					-
Mileage	0.40					-
Fuel	1.74					-
Lodging	68.09					-
Meals and Incidentals	38.55					-
Project Consumables	192.72					-
Printing and Binding	205.56					-
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74					-
Site Remediation	300.00					-
Subtotal - Other Direct Costs						-
Total Estimated Costs						-

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**Task 2
Work Plan**

Labor Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	6,600.28
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		66.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.18				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						215.60	14,163.13
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.87					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.66		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs						18,522.10	

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**Task 3
Site Management**

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.08				-	-
Project Manager III	76.92	42.00	5.00	1.00	210.00	16,153.20
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42				-	-
Surveyor V	46.16				-	-
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04	40.00	5.00	1.00	200.00	9,408.00
UXO Supervisor/Tech VI	Regular 53.29	40.00	5.00	1.00	200.00	10,658.00
UXO Supervisor/Tech V	Regular 47.04				-	-
UXO Technician IV	Regular 40.49				-	-
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65				-	-
Subtotal - Labor					610.00	36,219.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.89			-
FM Radio Repeater/Base Station	44.97	5.00	3.00	674.55
Cellular Telephone and Service	64.24	5.00	1.00	321.20
Video Camera	32.12	5.00	1.00	160.60
Computer	96.36	5.00	1.00	481.80
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	5.00	3.00	674.55
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	5.00	3.00	4,818.00
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	3.00	3,661.62
Mileage	0.40	2,000.00	1.00	800.00
Fuel	1.74	96.00	5.00	835.20
Lodging	68.09	21.00	5.00	7,149.45
Meals and Incidentals	38.55	22.00	5.00	4,240.50
Project Consumables	192.72	5.00	1.00	963.60
Printing and Binding	205.56	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	983.59	1.25	1.00	1,204.49
Electrical Hook Up	1,927.17	1.00	1.00	1,927.17
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation	300.00			-
Subtotal - Other Direct Costs				30,456.58
Total Estimated Costs				66,675.78

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Task 4

Land Survey

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	76.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V	46.16	42.00	2.00	1.00	84.00	3,877.44
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04				-	-
UXO Technician IV	Regular 40.49				-	-
UXO Technician III	Regular 34.10	40.00	2.00	1.00	80.00	2,728.00
Laborer II	Regular 28.65				-	-
Subtotal - Labor						197.60 8,501.15
Other Direct Costs						
	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69		2.00	2.00		102.76
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36		2.00	1.00		192.72
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39		2.00	1.00		102.78
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35		0.50	2.00		899.35
Surveyor's Kit	64.24		2.00	1.00		128.48
Total Station Survey Equipment	835.11		2.00	1.00		1,670.22
Ford Explorer	321.20		2.00	1.00		642.40
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.54		1.00	2.00		2,441.08
Mileage	0.40		60.00	2.00		40.00
Fuel	1.74		32.00	2.00		111.36
Lodging	98.09		14.00	2.00		1,908.52
Meals and Incidentals	38.55		15.00	2.00		1,156.50
Project Consumables	192.72		2.00	1.00		385.44
Printing and Binding	205.56		1.00	1.00		205.56
Shipping	154.17		1.00	1.00		154.17
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74					-
Site Remediation	300.00					-
Subtotal - Other Direct Costs						10,139.34
Total Estimated Costs						18,640.49

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Task 5 Brush Clearance

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.08				-	-
Project Manager III	76.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	66.42				-	-
Surveyor V	48.18				-	-
Quality Control Specialist	Regular 47.04					
Site Safety Officer	Regular 47.04					
UXO Supervisor/Tech VI	Regular 53.29					
UXO Supervisor/Tech V	Regular 47.04					
UXO Technician IV	Regular 40.49	40.00	2.00	1.00	80.00	3,239.20
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65	40.00	2.00	3.00	240.00	6,876.00
					-	-
					-	-
Subtotal - Labor					320.00	10,115.20
Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger	25.69		2.00 1.00	51.38		
FM Radio Repeater/Base Station	44.97			-		
Cellular Telephone and Service	64.24			-		
Video Camera	32.12			-		
Computer	96.36			-		
Brushcutter, power	96.36	2.00	2.00	385.44		
Chainsaw	94.24	2.00	2.00	256.96		
EOD Demolition Kit	51.39			-		
Foester Ferrex Ordnance Locator	385.43			-		
Schonstedt Magnetic Locator	51.39	2.00	4.00	411.12		
Explosive Storage magazine	44.87			-		
Carrier Phase GPS	899.35			-		
Surveyor's Kit	64.24			-		
Total Station Survey Equipment	835.11			-		
Ford Explorer	321.20			-		
Pickup, 4x4, 3/4 Ton	449.67	2.00	1.00	899.34		
Air Fare - Round Trip	1,220.54			-		
Mileage	0.40	50.00	1.00	20.00		
Fuel	1.74	32.00	2.00	111.36		
Lodging	68.09	14.00	2.00	1,906.52		
Meals and Incidentals	38.55	15.00	2.00	1,156.50		
Project Consumables	192.72	2.00	1.00	385.44		
Printing and Binding	205.56			-		
Shipping	154.17			-		
Site Trailer	983.59			-		
Electrical Hook Up	1,927.17			-		
Magazine Mobilization	770.87			-		
Donor Explosives	1,541.74			-		
Site Remediation	300.00			-		
Subtotal - Other Direct Costs				5,584.08		
Total Estimated Costs				15,699.28		

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**Task 6
Surface OE Removal**

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	76.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.61				-	-
Engineer II	76.92				-	-
Survey Manager	66.42				-	-
Surveyor V	46.16				-	-
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04	40.00	3.00	1.00	120.00	5,644.80
UXO Technician IV	Regular 40.49	40.00	3.00	4.00	480.00	19,435.20
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65				-	-
Subtotal - Labor					600.00	25,080.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	3.00	1.00	77.07
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	84.24			-
EOD Demolition Kit	51.39	3.00	1.00	154.17
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	3.00	5.00	770.85
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54			-
Mileage	0.40			-
Fuel	1.74			-
Lodging	68.09	35.00	3.00	7,149.45
Meals and Incidentals	38.55	35.00	3.00	4,047.75
Project Consumables	192.72			-
Printing and Binding	205.66			-
Shipping	154.17			-
Site Trailer	983.59			-
Electrical Hook Up	1,927.17			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74	1.00	0.50	770.87
Site Remediation	300.00			-
Subtotal - Other Direct Costs				12,970.16
Total Estimated Costs				38,050.18

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**Task 7
Scrap Turn-In**

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	76.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42				-	-
Surveyor V	46.16				-	-
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29	40.00	0.25	1.00	10.00	532.90
UXO Supervisor/Tech V	Regular 47.04				-	-
UXO Technician IV	Regular 40.49	40.00	0.25	1.00	10.00	404.80
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 26.65				-	-
Subtotal - Labor					20.00	937.80
Other Direct Costs	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69					-
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39					-
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20					-
Pickup, 4x4, 3/4 Ton	449.67		1.00	0.25		112.42
Air Fare - Round Trip	1,220.54					-
Mileage	0.40					-
Fuel	1.74		8.00	2.00		27.84
Lodging	68.09		1.00	2.00		136.18
Meals and Incidentals	38.55		2.00	2.00		154.20
Project Consumables	192.72		1.00	1.00		192.72
Printing and Binding	205.56					-
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74					-
Site Remediation	300.00					-
Subtotal - Other Direct Costs						623.36
Total Estimated Costs						1,561.16

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**Task 8
Quality Control**

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.08				-	-
Project Manager III	76.92				-	-
Project Manager II	68.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42				-	-
Surveyor V	46.16				-	-
Quality Control Specialist	Regular 47.04	40.00	3.00	1.00	120.00	5,644.80
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04				-	-
UXO Technician IV	Regular 40.49				-	-
UXO Technician III	Regular 34.10	40.00	3.00	1.00	120.00	4,092.00
Laborer II	Regular 28.65				-	-
Subtotal - Labor					240.00	9,736.80
Other Direct Costs	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69		3.00	1.00		77.07
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39		3.00	2.00		308.34
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20		3.00	1.00		963.60
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.54		1.00	2.00		2,441.08
Mileage	0.40		50.00	2.00		40.00
Fuel	1.74		35.00	3.00		182.70
Lodging	68.09		14.00	3.00		2,859.78
Meals and Incidentals	38.55		15.00	3.00		1,734.75
Project Consumables	192.72		3.00	1.00		578.16
Printing and Binding	205.66					-
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74					-
Site Remediation	300.00					-
Subtotal - Other Direct Costs						9,185.48
Total Estimated Costs						18,922.28

Surface Clearance of

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**Task 9
Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager		56.42	42.00	1.40	1.00	58.80	3,317.50
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						163.80	10,802.32
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.87					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.87					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						11,213.44	

Surface Clearance of

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**Task 10
Site Remediation**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount	
		Hourly	per					Weeks
		Rate	Week					
Program Management I		82.06				-	-	
Project Manager III		78.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor V		48.16				-	-	
Quality Control Specialist	Regular	47.04				-	-	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.49				-	-	
UXO Technician III	Regular	34.10				-	-	
Laborer II	Regular	28.65				-	-	
Subtotal - Labor							-	-
<hr/>								
Other Direct Costs		Loaded		Number	Number		Amount	
		Rate		Weeks	Units			
FM Radio, Handheld w/ charger		25.69					-	
FM Radio Repeater/Base Station		44.97					-	
Cellular Telephone and Service		64.24					-	
Video Camera		32.12					-	
Computer		96.36					-	
Brushcutter, power		96.36					-	
Chainsaw		64.24					-	
EOD Demolition Kit		51.39					-	
Foester Ferrex Ordnance Locator		385.43					-	
Schonstedt Magnetic Locator		51.39					-	
Explosive Storage magazine		44.97					-	
Carrier Phase GPS		899.35					-	
Surveyor's Kit		64.24					-	
Total Station Survey Equipment		835.11					-	
Ford Explorer		321.20					-	
Pickup, 4x4, 3/4 Ton		449.67					-	
Air Fare - Round Trip		1,220.54					-	
Mileage		0.40					-	
Fuel		1.74					-	
Lodging		68.09					-	
Meals and Incidentals		38.55					-	
Project Consumables		192.72					-	
Printing and Binding		205.56					-	
Shipping		154.17					-	
Site Trailer		963.59					-	
Electrical Hook Up		1,927.17					-	
Magazine Mobilization		770.87					-	
Donor Explosives		1,541.74					-	
Site Remediation		300.00		1.00	1.00		300.00	
Subtotal - Other Direct Costs							300.00	
Total Estimated Costs							300.00	

Pond Area

Alternative 7 - Surface and Subsurface OE Clearance of Entire Area to a Depth of One Foot

Alternative 7 requires a complete OE surface and subsurface clearance of 25.23 acres to a depth of one foot. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for laborers is assumed to be one-half the JTR rate. Brush clearing efforts are considered moderate in the pond area. It is assumed that 40% of the total grids will require brush clearance. During the Engineering Design effort, 2.47 acres of the pond area were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for this effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. Because of the limited effort required to conduct OE removal at this site, a site visit has been determined unnecessary and is omitted from this cost estimate. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	25.23 acres/110 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	2.47/11 grids
Adjusted acreage:	22.76 acres
Adjusted number of grids	99 grids
Grids Requiring Brush Clearance	40 grids/9.18 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (one team)
Land Survey	14 grids per day per two person team (1 team)
Surface Clearance	7.62 grids per day (1.75 acres) per 5 person team (one team)

Duration:

Project Management	22 working days/5.5 weeks
Land Survey	8 working days/2 weeks (one team)
Brush Clearance	8 working days/2 weeks -- 5 grids per work day per four-person team (one team)
Subsurface Clearance	13 working days/3.25 weeks (one team)
Disposal	Effort included in Surface Clearance
Quality Control	13 working days/3.25 weeks (2 person team)
Total Duration	18 Working Days/ 4.5 weeks

OE Surface Clearance/Subsurface Clearance To A Depth of One Foot - Alternative 7

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Labor Category		Summary					
		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				31.50	2,584.89
Project Manager III		76.92				231.00	17,768.52
Project Manager II		66.67				168.00	11,200.56
Certified Industrial Hygienist		74.81				18.00	1,196.96
Engineer II		76.92				83.00	4,845.96
Survey Manager		66.42				151.20	8,530.70
Surveyor V		48.16				84.00	3,877.44
Quality Control Specialist	Regular	47.04				130.00	6,115.20
Site Safety Officer	Regular	47.04				220.00	10,348.80
UXO Supervisor/Tech VI	Regular	53.29				270.00	14,388.30
UXO Supervisor/Tech V	Regular	47.04				130.00	6,115.20
UXO Technician IV	Regular	40.49				610.00	24,698.90
UXO Technician III	Regular	34.10				210.00	7,161.00
Laborer II	Regular	28.66				240.00	6,876.00
Subtotal - Labor						2,554.70	125,708.43
Other Direct Costs		Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger		25.69				321.12	
FM Radio Repeater/Base Station		44.97				989.34	
Cellular Telephone and Service		64.24				353.32	
Video Camera		32.12				176.66	
Computer		96.36				819.06	
Brushcutter, power		96.36				385.44	
Chainsaw		64.24				256.96	
EOD Demolition Kit		51.39				167.02	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				1,683.03	
Explosive Storage magazine		44.97				742.01	
Carrier Phase GPS		899.35				899.35	
Surveyor's Kit		64.24				128.48	
Total Station Survey Equipment		835.11				1,670.22	
Ford Explorer		321.20				7,307.30	
Pickup, 4x4, 3/4 Ton		449.67				2,473.19	
Air Fare - Round Trip		1,220.54				9,764.32	
Mileage		0.40				920.00	
Fuel		1.74				836.07	
Lodging		68.09				23,065.50	
Meals and Incidentals		38.55				13,791.26	
Project Consumables		192.72				4,191.66	
Printing and Binding		205.56				1,438.92	
Shipping		154.17				616.68	
Site Trailer		963.59				1,445.39	
Electrical Hook Up		1,927.17				1,927.17	
Magazine Fencing		899.35				899.35	
Magazine Mobilization		770.87				770.87	
Donor Explosives		1,541.74				925.04	
Site Remediation		300.00				300.00	
Subtotal - Other Direct Costs						79,264.73	
Total Estimated Costs						204,973.16	

OE Surface Clearance/Subsurface Clearance
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**Task 1
 Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						-	-
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.66					-
Shipping		154.17					-
Site Trailer		963.69					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
<hr/>							
Subtotal - Other Direct Costs							-
<hr/>							
Total Estimated Costs							-

OE Surface Clearance/Subsurface Clearance
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**Task 2
 Work Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.60	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						215.60	14,163.13

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36	1.00	1.00	96.36
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	1.00	1,220.54
Mileage	0.40	80.00	1.00	20.00
Fuel	1.74	1.00	40.00	69.60
Lodging	68.09	6.00	1.00	408.54
Meals and Incidentals	38.55	7.00	1.00	269.85
Project Consumables	192.72	8.00	1.00	1,541.76
Printing and Binding	205.56	1.00	2.00	411.12
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation	300.00			-
Subtotal - Other Direct Costs				4,358.97
Total Estimated Costs				18,522.10

OE Surface Clearance/Subsurface Clean

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**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.08				-	-
Project Manager III		76.92	42.00	5.50	1.00	231.00	17,768.52
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.18				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	5.50	1.00	220.00	10,348.80
UXO Supervisor/Tech VI	Regular	53.29	40.00	5.50	1.00	220.00	11,723.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.85				-	-
Subtotal - Labor							
Other Direct Costs							
FM Radio, Handheld w/ charger		25.69				-	-
FM Radio Repeater/Base Station		44.97		5.50	4.00	-	989.34
Cellular Telephone and Service		64.24		5.50	1.00	-	353.32
Video Camera		32.12		5.50	1.00	-	176.66
Computer		96.36		5.50	1.00	-	529.98
Brushcutter, power		96.36				-	-
Chainsaw		64.24				-	-
EOD Demolition Kit		51.39				-	-
Foester Ferrex Ordnance Locator		385.43				-	-
Schonstedt Magnetic Locator		51.39				-	-
Explosive Storage magazine		44.97		5.50	3.00	-	742.01
Carrier Phase GPS		899.35				-	-
Surveyor's Kit		64.24				-	-
Total Station Survey Equipment		836.11				-	-
Ford Explorer		321.20		5.50	3.00	-	5,299.80
Pickup, 4x4, 3/4 Ton		449.67				-	-
Air Fare - Round Trip		1,220.54		1.00	3.00	-	3,661.62
Mileage		0.40		2,000.00	1.00	-	800.00
Fuel		1.74		35.00	5.50	-	334.95
Lodging		68.09		21.00	5.50	-	7,864.40
Meals and Incidentals		38.55		22.00	5.50	-	4,664.55
Project Consumables		192.72		5.50	1.00	-	1,059.96
Printing and Binding		205.56		2.00	1.00	-	411.12
Shipping		154.17		1.00	3.00	-	462.51
Site Trailer		963.59		1.50	1.00	-	1,445.39
Electrical Hook Up		1,927.17		1.00	1.00	-	1,927.17
Magazine Fencing		899.35		1.00	1.00	-	899.35
Magazine Mobilization		770.87		1.00	1.00	-	770.87
Donor Explosives		1,541.74				-	-
Site Remediation		300.00				-	-
Subtotal - Other Direct Costs							
Total Estimated Costs							

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**Task 4
 Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16	42.00	2.00	1.00	84.00	3,877.44
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	2.00	1.00	80.00	2,728.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
197.60 8,501.15							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		2.00	2.00		102.76
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		2.00	1.00		192.72
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		2.00	1.00		102.78
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35		0.50	2.00		899.35
Surveyor's Kit		64.24		2.00	1.00		128.48
Total Station Survey Equipment		835.11		2.00	1.00		1,670.22
Ford Explorer		321.20		2.00	1.00		642.40
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	2.00		111.36
Lodging		68.09		14.00	2.00		1,906.52
Meals and Incidentals		38.55		15.00	2.00		1,156.50
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.56		1.00	1.00		205.56
Shipping		154.17		1.00	1.00		154.17
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs							10,139.34
Total Estimated Costs							18,640.49

OE Surface Clearance/Subsurface Clearance
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**Task 5
 Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	2.00	1.00	80.00	3,239.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	2.00	3.00	240.00	6,876.00
Subtotal - Labor						320.00	10,115.20
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		2.00	1.00		51.38
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36		2.00	2.00		385.44
Chainsaw		64.24		2.00	2.00		256.96
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		2.00	4.00		411.12
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		2.00	1.00		899.34
Air Fare - Round Trip		1,220.54					-
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		32.00	2.00		111.36
Lodging		68.09		14.00	2.00		1,906.52
Meals and Incidentals		38.55		15.00	2.00		1,156.50
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.66					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs							5,584.06
Total Estimated Costs							15,699.26

OE Surface Clearance/Subsurface Clearance
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pond Area

Task 6
Surface/Subsurface OE Removal - 1 Foot

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	78.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42				-	-
Surveyor V	48.16				-	-
Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04	40.00	3.25	1.00	130.00	6,115.20
UXO Technician IV	Regular 40.49	40.00	3.25	4.00	520.00	21,054.80
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65				-	-
Subtotal - Labor						650.00 27,170.00
Other Direct Costs	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69		3.25	1.00		83.49
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39		3.25	1.00		167.02
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39		3.25	5.00		835.09
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20					-
Pickup, 4x4, 3/4 Ton	449.67		3.25	1.00		1,461.43
Air Fare - Round Trip	1,220.54					-
Mileage	0.40					-
Fuel	1.74					-
Lodging	68.09		35.00	3.25		7,745.24
Meals and Incidentals	38.55		36.00	3.25		4,510.35
Project Consumables	192.72					-
Printing and Binding	205.58					-
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Fencing	899.35					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74		1.00	0.60		926.04
Site Remediation	300.00					-
Subtotal - Other Direct Costs						15,727.66
Total Estimated Costs						42,897.66

OE Surface Clearance/Subsurface Clearance
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pond Area

Task 7
Scrap Turn-In

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer III		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.25	1.00	10.00	532.90
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.25	1.00	10.00	404.90
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						20.00	937.80
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		16.00	1.00		27.84
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		2.00	2.00		154.20
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						623.36	
Total Estimated Costs						1,561.16	

OE Surface Clearance/Subsurface Clean-
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pond Area

**Task 8
 Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		88.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist							
Quality Control Specialist	Regular	47.04	40.00	3.25	1.00	130.00	6,115.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	3.25	1.00	130.00	4,433.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						260.00	10,548.20

Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69	3.25	1.00		83.49
FM Radio Repeater/Base Station		44.97				-
Cellular Telephone and Service		64.24				-
Video Camera		32.12				-
Computer		96.36				-
Brushcutter, power		96.36				-
Chainsaw		64.24				-
EOD Demolition Kit		51.39				-
Foester Ferrex Ordnance Locator		385.43				-
Schonstedt Magnetic Locator		51.39	3.25	2.00		334.04
Explosive Storage magazine		44.97				-
Carrier Phase GPS		899.35				-
Surveyor's Kit		64.24				-
Total Station Survey Equipment		835.11				-
Ford Explorer		321.20	3.25	1.00		1,043.90
Pickup, 4x4, 3/4 Ton		449.67				-
Air Fare - Round Trip		1,220.54	1.00	2.00		2,441.08
Mileage		0.40	50.00	2.00		40.00
Fuel		1.74	32.00	3.25		180.96
Lodging		68.09	14.00	3.25		3,098.10
Meals and Incidentals		38.55	15.00	3.25		1,879.31
Project Consumables		192.72	3.25	1.00		626.34
Printing and Binding		205.56				-
Shipping		154.17				-
Site Trailer		963.59				-
Electrical Hook Up		1,927.17				-
Magazine Fencing		899.35				-
Magazine Mobilization		770.87				-
Donor Explosives		1,541.74				-
Site Remediation		300.00				-
Subtotal - Other Direct Costs						9,727.22
Total Estimated Costs						20,275.42

OE Surface Clearance/Subsurface Clearance
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pond Area

**Task 9
 Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		66.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						220.50	14,431.83
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.66		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.69					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00					-
Subtotal - Other Direct Costs						411.12	411.12
Total Estimated Costs						14,842.95	14,842.95

OE Surface Clearance/Subsurface Clearance
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Pond Area

Task 10
Site Remediation

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						-	-
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		88.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		300.00		1.00	1.00		300.00
Subtotal - Other Direct Costs							300.00
Total Estimated Costs							300.00

**SECTION G-5
COST ESTIMATE FOR THE NATURAL BRUSH/
FOREST AREA**

SELECTED REMOVAL ALTERNATIVE

Natural Brush/Forests - A [Compost Area B]

Alternative 1 - No Further Action with Limited Action (Surface and Subsurface Clearance of OE over a Selected Area to a Depth of Four Feet)

Alternative 1 requires a complete OE surface clearance of a 5 acre area (area planned for future Compost Area B within the Natural Brush/Forest Area - A). Electronic detection instruments are necessary to detect OE hidden from view by high grasses, brush, and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are less intensive than brush clearance for subsurface clearance; therefore, the production effort is established at 5 grids per day per team. It is assumed that approximately 50% of the total grids will require moderate brush clearance efforts. During the Engineering Design effort 0.23 acres were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition. Due to the limited scope and duration of this clearance effort, a site visit and site trailer/office will not be necessary and have been excluded from this cost estimate.

Total Acreage/grids to Surface Clear:	5 acres/22 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	0.23 acres
Adjusted acreage:	4.77 acres (approximately 5 acres)
Adjusted number of grids	21 grids
Grids Requiring Brush Clearance	10.5grids/2.3 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (one team @ 5 grids per day)
Land Survey	14 grids per day per two person team (one team @ 14 grids per day)
Surface Clearance	4.5 grids per day (1 acres) per 5 person team (1 team);

Duration:

Project Management	7 working days/1.75 weeks
Land Survey	2 working days/0.5 week (one team)
Brush Clearance	4 working days/1 week -- 5 grids per work day per four-person team (one team @ 5 grids per workday)
Surface Clearance	6 working days/ 1.5 week (one five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	5 working days/1.25 weeks (2 person team)
Total Duration	7 Working Days/1.75 weeks

NFA with Limited Surface & Subsurface Clearance of OE to 4 ft - Alternative 1

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Summary	
						Estimated Hours	Amount
Program Management I		82.06				27.30	2,240.24
Project Manager III		76.92				73.50	5,653.62
Project Manager II		66.67				147.00	9,800.49
Certified Industrial Hygienist		74.81				12.00	897.72
Engineer II		76.92				48.30	3,715.24
Survey Manager		56.42				84.00	4,739.28
Surveyor V		46.16				21.00	969.36
Quality Control Specialist	Regular	47.04				50.00	2,352.00
Site Safety Officer	Regular	47.04				70.00	3,292.80
UXO Supervisor/Tech VI	Regular	53.29				114.00	6,075.06
UXO Supervisor/Tech V	Regular	47.04				60.00	2,822.40
UXO Technician IV	Regular	40.49				334.00	13,523.66
UXO Technician III	Regular	34.10				70.00	2,387.00
Laborer II	Regular	28.65				240.00	6,876.00
						-	-
Subtotal - Labor						1,351.10	65,344.87
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					186.25
FM Radio Repeater/Base Station		44.97					359.76
Cellular Telephone and Service		64.24					128.48
Video Camera		32.12					64.24
Computer		96.36					337.26
Brushcutter, power		96.36					385.44
Chainsaw		64.24					128.48
EOD Demolition Kit		51.39					77.09
Foerster Ferret Ordnance Locator		385.43					-
Schonsted Magnetic Locator		51.39					873.64
Explosive Storage magazine		44.97					179.88
Carrier Phase GPS		899.35					899.35
Surveyor's Kit		64.24					32.12
Total Station Survey Equipment		835.11					835.11
Ford Explorer		321.20					1,043.90
Pickup, 4x4, 3/4 Ton		449.67					1,011.76
Air Fare - Round Trip		1,220.54					9,764.32
Mileage		0.40					552.00
Fuel		1.74					532.44
Lodging		68.09					7,489.90
Meals and Incidentals		38.55					4,279.05
Project Consumables		192.72					2,794.44
Printing and Binding		205.56					1,438.92
Shipping		154.17					616.68
Site Trailer		953.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					154.17
Site Remediation - Pine Farm		300.00					300.00
Subtotal - Other Direct Costs							35,134.90
Total Estimated Costs							101,479.77

NFA with Limited Surface & Subsurface

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

**Task 1
 Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	-	-	-	-	-
Project Manager III		76.92	-	-	-	-	-
Project Manager II		66.67	-	-	-	-	-
Certified Industrial Hygienist		74.81	-	-	-	-	-
Engineer II		76.92	-	-	-	-	-
Survey Manager		56.42	-	-	-	-	-
Surveyor V		46.16	-	-	-	-	-
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Quality Control Specialist	Regular	47.04	-	-	-	-	-
Site Safety Officer	Regular	47.04	-	-	-	-	-
UXO Supervisor/Tech VI	Regular	53.29	-	-	-	-	-
UXO Supervisor/Tech V	Regular	47.04	-	-	-	-	-
UXO Technician IV	Regular	40.49	-	-	-	-	-
UXO Technician III	Regular	34.10	-	-	-	-	-
Laborer II	Regular	29.65	-	-	-	-	-
<hr/>							
Subtotal - Labor							
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.09					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24		-	-		-
Video Camera		32.12		-	-		-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43		-	-		-
Schonstedt Magnetic Locator		51.39		-	-		-
Explosive Storage magazine		44.97		-	-		-
Carrier Phase GPS		899.35		-	-		-
Surveyor's Kit		64.24		-	-		-
Total Station Survey Equipment		835.11		-	-		-
Ford Explorer		321.20		-	-		-
Pickup, 4x4, 3/4 Ton		449.67		-	-		-
Air Fare - Round Trip		1,220.54		-	-		-
Mileage		0.40		-	-		-
Fuel		1.74		-	-		-
Lodging		68.09		-	-		-
Meals and Incidentals		38.55		-	-		-
Project Consumables		192.72		-	-		-
Printing and Binding		205.56		-	-		-
Shipping		154.17		-	-		-
Site Trailer		963.59		-	-		-
Electrical Hook Up		1,927.17		-	-		-
Magazine Fencing		899.35		-	-		-
Magazine Mobilization		770.87		-	-		-
Donor Explosives		1,541.74		-	-		-
Site Remediation - Pine Farm		300.00		-	-		-
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Subtotal - Other Direct Costs							
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Total Estimated Costs							

NFA with Limited Surface & Subsurface

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

**Task 2
 Work Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.40	1.00	16.80	1,378.61
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	12.00	897.72
Engineer II		76.92	42.00	0.40	1.00	16.80	1,292.26
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.75	1.00	30.00	1,598.70
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						159.60	10,552.32

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			
FM Radio Repeater/Base Station	44.97			
Cellular Telephone and Service	64.24			
Video Camera	32.12			
Computer	96.36	1.00	1.00	96.36
Brushcutter, power	96.36			
Chainsaw	64.24			
EOD Demolition Kit	51.39			
Foester Ferrex Ordnance Locator	385.43			
Schonstedt Magnetic Locator	51.39			
Explosive Storage Magazine	44.97			
Carrier Phase GPS	899.35			
Surveyor's Kit	64.24			
Total Station Survey Equipment	835.11			
Ford Explorer	321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton	449.67			
Air Fare - Round Trip	1,220.54	1.00	1.00	1,220.54
Mileage	0.40	50.00	1.00	20.00
Fuel	1.74	1.00	40.00	69.60
Lodging	68.09	6.00	1.00	408.54
Meals and Incidentals	38.55	7.00	1.00	269.85
Project Consumables	192.72	8.00	1.00	1,541.76
Printing and Binding	205.56	1.00	2.00	411.12
Shipping	154.17			
Site Trailer	963.59			
Electrical Hook Up	1,927.17			
Magazine Fencing	899.35			
Magazine Mobilization	770.67			
Donor Explosives	1,541.74			
Site Remediation - Pine Farm	300.00			
Subtotal - Other Direct Costs				4,358.97
Total Estimated Costs				14,911.29

NFA with Limited Surface & Subsurface

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**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92	42.00	1.75	1.00	73.50	5,653.62
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist		Regular 47.04					
Site Safety Officer		Regular 47.04	40.00	1.75	1.00	70.00	3,292.80
UXO Supervisor/Tech VI		Regular 53.29	40.00	1.75	1.00	70.00	3,730.30
UXO Supervisor/Tech V		Regular 47.04					
UXO Technician IV		Regular 40.49					
UXO Technician III		Regular 34.10					
Laborer II		Regular 28.65					
Subtotal - Labor						213.50	12,676.72
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97		2.00	4.00	359.76	
Cellular Telephone and Service		64.24		2.00	1.00	128.48	
Video Camera		32.12		2.00	1.00	64.24	
Computer		96.36		2.00	1.00	192.72	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97		2.00	2.00	179.88	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54		1.00	3.00	3,661.62	
Mileage		0.40		850.00	1.00	340.00	
Fuel		1.74		45.00	1.00	78.30	
Lodging		68.09		7.00	2.00	953.26	
Meals and Incidentals		38.55		7.00	2.00	539.70	
Project Consumables		192.72		2.00	1.00	385.44	
Printing and Binding		205.56		2.00	1.00	411.12	
Shipping		154.17		1.00	3.00	462.51	
Site Trailer		963.59		-	1.00	-	
Electrical Hook Up		1,927.17		-	1.00	-	
Magazine Fencing		899.35		1.00	1.00	899.35	
Magazine Mobilization		770.87		1.00	1.00	770.87	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						9,427.25	
Total Estimated Costs						22,103.97	

NFA with Limited Surface & Subsurface

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**Task 4
 Land Survey**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager II		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		46.16	42.00	0.50	1.00	21.00	969.36
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	0.50	1.00	20.00	682.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						62.00	2,836.18
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		0.50	2.00		25.69
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36		0.50	1.00		48.18
Brushcutter, power		96.36					
Chainsaw		64.24					
EOD Demolition Kit		51.39					
Foester Fernex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39		0.50	1.00		25.70
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35		0.50	2.00		899.35
Surveyor's Kit		64.24		0.50	1.00		32.12
Total Station Survey Equipment		835.11		1.00	1.00		835.11
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	1.00		55.68
Lodging		68.09		4.00	2.00		544.72
Meals and Incidentals		38.55		4.00	2.00		308.40
Project Consumables		192.72		0.50	1.00		96.36
Printing and Binding		205.56		1.00	1.00		205.56
Shipping		154.17		1.00	1.00		154.17
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.87					
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs						6,033.32	
Total Estimated Costs							8,869.50

NFA with Limited Surface & Subsurface

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**Task 5
Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	1.00	2.00	80.00	3,239.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	1.00	6.00	240.00	6,876.00
Subtotal - Labor						320.00	10,115.20
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		1.00	2.00		51.38
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		93.36					-
Brushcutter, power		93.36		1.00	4.00		385.44
Chainsaw		64.24		1.00	2.00		128.48
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		1.00	2.00		102.78
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	2.00		899.34
Air Fare - Round Trip		1,220.54					-
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	2.00		111.36
Lodging		68.09		4.00	8.00		2,178.88
Meals and Incidentals		38.55		4.00	8.00		1,233.60
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs						5,323.99	
Total Estimated Costs							15,439.18

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Task 6
Surface OE Removal

Labor Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	1.50	1.00	60.00	2,822.40
UXO Technician IV	Regular	40.49	40.00	1.50	4.00	240.00	9,717.60
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						300.00	12,540.00
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.68		1.50	2.00		77.07
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36					
Brushcutter, power		96.36					
Chainsaw		64.24					
EOD Demolition Kit		51.39		1.50	1.00		77.09
Foerster Ferret Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		1.50	8.00		616.68
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35					
Surveyor's Kit		64.24					
Total Station Survey Equipment		835.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67					
Air Fare - Round Trip		1,220.54					
Mileage		0.40					
Fuel		1.74					
Lodging		68.09		7.00	5.00		2,383.15
Meals and Incidentals		38.55		7.00	5.00		1,349.25
Project Consumables		192.72					
Printing and Binding		205.56					
Shipping		154.17					
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.67					
Donor Explosives		1,541.74		0.50	0.20		154.17
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs						4,657.41	
Total Estimated Costs							17,197.41

NFA with Limited Surface & Subsurface

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**Task 7
Scrap Turn-In**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		62.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.35	1.00	14.00	748.08
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.35	1.00	14.00	566.86
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						28.00	1,312.92
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foster Ferrex Ordnance Locator		385.43					-
Schroterd Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		25.00	1.00		43.50
Lodging		88.09		1.50	2.00		204.27
Meals and Incidentals		38.55		1.50	2.00		115.65
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00					-
Subtotal - Other Direct Costs							668.56
Total Estimated Costs							1,981.48

NFA with Limited Surface & Subsurface

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**Task 8
 Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04	40.00	1.25	1.00	50.00	2,352.00
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	1.25	1.00	50.00	1,705.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						100.00	4,057.00

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	1.25	1.00	32.11
FM Radio Repeater/Base Station	44.67			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	1.25	2.00	128.48
Explosive Storage magazine	44.67			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	1.25	1.00	401.50
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	140.00	2.00	112.00
Fuel	1.74	50.00	2.00	174.00
Lodging	68.09	6.00	2.00	817.08
Meals and Incidentals	38.55	6.00	2.00	482.60
Project Consumables	192.72	2.00	1.00	385.44
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				4,954.29
Total Estimated Costs				9,011.29

NFA with Limited Surface & Subsurface

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**Task 9
 Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager		56.42	42.00	1.00	1.00	42.00	2,369.64
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04					
Site Safety Officer	Regular	47.04					
UXO Supervisor/Tech VI	Regular	53.29					
UXO Supervisor/Tech V	Regular	47.04					
UXO Technician IV	Regular	40.49					
UXO Technician III	Regular	34.10					
Laborer II	Regular	28.65					
Subtotal - Labor						168.00	11,254.53
Other Direct Costs		Loaded Rate	Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36				-	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54				-	
Mileage		0.40				-	
Fuel		1.74				-	
Lodging		68.09				-	
Meals and Incidentals		38.55				-	
Project Consumables		192.72				-	
Printing and Binding		205.56	1.00	2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Site Remediation - Pine Farm		300.00				-	
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						11,665.65	

NFA with Limited Surface & Subsurface

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**Task 10
 Site Restoration**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06					.
Project Manager III		76.92					.
Project Manager II		66.67					.
Certified Industrial Hygienist		74.81					.
Engineer II		76.92					.
Survey Manager		56.42					.
Surveyor V		48.16					.
Quality Control Specialist	Regular	47.04					.
Site Safety Officer	Regular	47.04					.
UXO Supervisor/Tech VI	Regular	53.29					.
UXO Supervisor/Tech V	Regular	47.04					.
UXO Technician IV	Regular	40.49					.
UXO Technician III	Regular	34.10					.
Laborer II	Regular	28.65					.
Subtotal - Labor							

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			.
FM Radio Repeater/Base Station	44.97			.
Cellular Telephone and Service	64.24			.
Video Camera	32.12			.
Computer	96.36			.
Brushcutter, power	96.36			.
Chainsaw	64.24			.
EOD Demolition Kit	51.39			.
Foester Ferrex Ordnance Locator	385.43			.
Schonstedt Magnetic Locator	51.39			.
Explosive Storage magazine	44.97			.
Carrier Phase GPS	890.35			.
Surveyor's Kit	64.24			.
Total Station Survey Equipment	835.11			.
Ford Explorer	321.20			.
Pickup, 4x4, 3/4 Ton	449.67			.
Air Fare - Round Trip	1,220.54			.
Mileage	0.40			.
Fuel	1.74			.
Lodging	68.09			.
Meals and Incidentals	38.55			.
Project Consumables	192.72			.
Printing and Binding	205.56			.
Shipping	154.17			.
Site Trailer	963.59			.
Electrical Hook Up	1,927.17			.
Magazine Fencing	890.35			.
Magazine Mobilization	770.67			.
Donor Explosives	1,541.74			.
Site Remediation - Pine Farm	300.00	1.00	1.00	300.00
Subtotal - Other Direct Costs				300.00
Total Estimated Costs				300.00

EVALUATED REMOVAL ALTERNATIVES

Natural Brush/Forests - A [Compost Area B]

Alternative 1 - No Further Action with Limited Action (Surface Clearance of OE)

Alternative 1 requires a complete OE surface clearance of a 5 acre area (area planned for future Compost Area B within the Natural Brush/Forest Area - A). Electronic detection instruments are necessary to detect OE hidden from view by high grasses, brush, and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for laborers is assumed to be one-half the JTR rate. Brush clearing efforts are less intensive than brush clearance for subsurface clearance; therefore, the production effort is established at 5 grids per day per team. It is assumed that approximately 50% of the total grids will require moderate brush clearance efforts. During the Engineering Design effort 0.23 acres were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition. Due to the limited scope and duration of this clearance effort, a site visit and site trailer/office will not be necessary and have been excluded from this cost estimate.

Total Acreage/grids to Surface Clear:	5 acres/22 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	0.23 acres
Adjusted acreage:	4.77 acres (approximately 5 acres)
Adjusted number of grids	22 grids
Grids Requiring Brush Clearance	10.5grids/2.3 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (one team @ 5 grids per day)
Land Survey	14 grids per day per two person team (one team @ 14 grids per day)
Surface Clearance	8.71 grids per day (2 acres) per 5 person team (1 team);

Duration:

Project Management	5 working days/1.25 weeks
Land Survey	2 working days/0.5 week (one team)
Brush Clearance	4 working days/1 week -- 5 grids per work day per four-person team (one team @ 5 grids per workday)
Surface Clearance	4 working days/1 week (one five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	3 working days/0.75 week (2 person team)
Total Duration	5 Working Days/1.25 weeks

Surface Clearance of OE

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Summary	
						Estimated Hours	Amount
Program Management I		62.06				27.30	2,240.24
Project Manager III		76.92				52.50	4,038.30
Project Manager II		66.67				147.00	9,800.49
Certified Industrial Hygienist		74.81				12.00	897.72
Engineer II		76.92				48.30	3,715.24
Survey Manager		56.42				84.00	4,739.28
Surveyor V		46.16				21.00	969.36
Quality Control Specialist	Regular	47.04				30.00	1,411.20
Site Safety Officer	Regular	47.04				50.00	2,352.00
UXO Supervisor/Tech VI	Regular	53.29				90.00	4,796.10
UXO Supervisor/Tech V	Regular	47.04				40.00	1,881.60
UXO Technician IV	Regular	40.49				250.00	10,122.50
UXO Technician II	Regular	34.10				50.00	1,705.00
Laborer II	Regular	28.85				240.00	6,876.00
						-	-
Subtotal - Labor						1,142.10	55,545.03
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89					147.72
FM Radio Repeater/Base Station		44.97					269.82
Cellular Telephone and Service		64.24					96.36
Video Camera		32.12					48.18
Computer		96.36					289.08
Brushcutter, power		96.36					385.44
Chainsaw		64.24					128.48
EOD Demolition Kit		51.39					51.39
Foester Ferret Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					618.69
Explosive Storage magazine		44.97					179.88
Carrier Phase GPS		899.35					899.35
Surveyor's Kit		64.24					32.12
Total Station Survey Equipment		835.11					835.11
Ford Explorer		321.20					963.60
Pickup, 4x4, 3/4 Ton		449.67					1,011.76
Air Fare - Round Trip		1,220.54					9,764.32
Mileage		0.40					440.00
Fuel		1.74					441.96
Lodging		68.09					6,196.19
Meals and Incidentals		38.55					3,546.60
Project Consumables		192.72					2,601.72
Printing and Binding		205.56					1,438.92
Shipping		154.17					618.68
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					154.17
Site Remediation - Pine Farm		300.00					300.00
Subtotal - Other Direct Costs							33,125.76
Total Estimated Costs							88,670.79

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 1 Site Visit

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06	-	-	-	-	-
Project Manager III	76.92	-	-	-	-	-
Project Manager II	66.67	-	-	-	-	-
Certified Industrial Hygienist	74.81	-	-	-	-	-
Engineer II	76.92	-	-	-	-	-
Survey Manager	56.42	-	-	-	-	-
Surveyor V	48.18	-	-	-	-	-
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Quality Control Specialist	Regular 47.04	-	-	-	-	-
Site Safety Officer	Regular 47.04	-	-	-	-	-
UXO Supervisor/Tech VI	Regular 53.29	-	-	-	-	-
UXO Supervisor/Tech V	Regular 47.04	-	-	-	-	-
UXO Technician IV	Regular 40.49	-	-	-	-	-
UXO Technician III	Regular 34.10	-	-	-	-	-
Laborer II	Regular 28.65	-	-	-	-	-
<hr/>						
Subtotal - Labor						
<hr/>						
Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger	25.69	-	-	-		
FM Radio Repeater/Base Station	44.97	-	-	-		
Cellular Telephone and Service	84.24	-	-	-		
Video Camera	32.12	-	-	-		
Computer	96.36	-	-	-		
Brushcutter, power	96.36	-	-	-		
Chainsaw	64.24	-	-	-		
EOD Demolition Kit	51.39	-	-	-		
Foester Ferrex Ordnance Locator	385.43	-	-	-		
Schonstedt Magnetic Locator	51.39	-	-	-		
Explosive Storage magazine	44.97	-	-	-		
Carrier Phase GPS	699.35	-	-	-		
Surveyor's Kit	84.24	-	-	-		
Total Station Survey Equipment	635.11	-	-	-		
Ford Explorer	321.20	-	-	-		
Pickup, 4x4, 3/4 Ton	449.67	-	-	-		
Air Fare - Round Trip	1,220.54	-	-	-		
Mileage	0.40	-	-	-		
Fuel	1.74	-	-	-		
Lodging	68.09	-	-	-		
Meals and Incidentals	38.55	-	-	-		
Project Consumables	192.72	-	-	-		
Printing and Binding	205.58	-	-	-		
Shipping	154.17	-	-	-		
Site Trailer	963.59	-	-	-		
Electrical Hook Up	1,927.17	-	-	-		
Magazine Fencing	699.35	-	-	-		
Magazine Mobilization	770.87	-	-	-		
Donor Explosives	1,541.74	-	-	-		
Site Remediation - Pine Farm	300.00	-	-	-		
Subtotal - Other Direct Costs						
Total Estimated Costs						

Surface Clear

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

**Task 2
 Work Plan**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.40	1.00	16.80	1,378.61
Project Manager III		78.92				-	-
Project Manager II		66.67	42.00	1.50	1.00	63.00	4,200.21
Certified Industrial Hygienist		74.81	40.00	0.30	1.00	12.00	897.72
Engineer II		78.92	42.00	0.40	1.00	16.80	1,292.26
Survey Manager		56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.75	1.00	30.00	1,598.70
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						158.60	10,552.32

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36	1.00	1.00	96.36
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	1.00	1,220.54
Mileage	0.40	50.00	1.00	20.00
Fuel	1.74	1.00	40.00	69.60
Lodging	68.09	6.00	1.00	408.54
Meals and Incidentals	38.55	7.00	1.00	269.85
Project Consumables	192.72	8.00	1.00	1,541.76
Printing and Binding	205.56	1.00	2.00	411.12
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.67			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				4,358.97
Total Estimated Costs				14,911.29

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 3 Site Management

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	1.25	1.00	52.50	4,038.30
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	1.25	1.00	50.00	2,352.00
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.25	1.00	50.00	2,664.50
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
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Subtotal - Labor						152.50	9,054.80
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					
FM Radio Repeater/Base Station		44.97		1.50	4.00		269.82
Cellular Telephone and Service		64.24		1.50	1.00		96.36
Video Camera		32.12		1.50	1.00		48.18
Computer		96.36		1.50	1.00		144.54
Brushcutter, power		96.36					
Chainsaw		64.24					
EOD Demolition Kit		51.39					
Foester Ferrex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39					
Explosive Storage magazine		44.97		2.00	2.00		179.88
Carrier Phase GPS		899.35					
Surveyor's Kit		64.24					
Total Station Survey Equipment		635.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67					
Air Fare - Round Trip		1,220.54		1.00	3.00		3,661.62
Mileage		0.40		750.00	1.00		300.00
Fuel		1.74		32.00	1.00		55.68
Lodging		68.09		5.00	2.00		680.90
Meals and Incidentals		38.55		5.00	2.00		385.50
Project Consumables		192.72		2.00	1.00		385.44
Printing and Binding		205.56		2.00	1.00		411.12
Shipping		154.17		1.00	3.00		462.51
Site Trailer		963.59			1.00		
Electrical Hook Up		1,927.17			1.00		
Magazine Fencing		899.35		1.00	1.00		899.35
Magazine Mobilization		770.67		1.00	1.00		770.87
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs							8,751.77
Total Estimated Costs							17,806.57

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 4 Land Survey

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	62.06				-	-
Project Manager II	76.92				-	-
Project Manager II	66.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42	42.00	0.50	1.00	21.00	1,184.82
Surveyor V	46.16	42.00	0.50	1.00	21.00	869.36
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Quality Control Specialist	47.04				-	-
Site Safety Officer	47.04				-	-
UXO Supervisor/Tech VI	53.29				-	-
UXO Supervisor/Tech V	47.04				-	-
UXO Technician IV	40.49				-	-
UXO Technician III	34.10	40.00	0.50	1.00	20.00	682.00
Laborer II	28.65				-	-
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Subtotal - Labor					62.00	2,836.18
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Other Direct Costs	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69		0.50	2.00		25.69
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36		0.50	1.00		48.18
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39		0.50	1.00		25.70
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35		0.50	2.00		899.35
Surveyor's Kit	64.24		0.50	1.00		32.12
Total Station Survey Equipment	835.11		1.00	1.00		835.11
Ford Explorer	321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.54		1.00	2.00		2,441.08
Mileage	0.40		50.00	2.00		40.00
Fuel	1.74		32.00	1.00		55.68
Lodging	68.09		4.00	2.00		544.72
Meals and Incidentals	38.55		4.00	2.00		308.40
Project Consumables	192.72		0.50	1.00		96.36
Printing and Binding	205.56		1.00	1.00		205.56
Shipping	154.17		1.00	1.00		154.17
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Fencing	899.35					-
Magazine Mobilization	770.67					-
Donor Explosives	1,541.74					-
Site Remediation - Pine Farm	300.00					-
Subtotal - Other Direct Costs						6,033.32
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Total Estimated Costs						8,869.50

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

**Task 5
Brush Clearance**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	1.00	2.00	80.00	3,239.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	1.00	6.00	240.00	6,876.00
Subtotal - Labor						320.00	10,115.20
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Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		1.00	2.00		51.38
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36					
Brushcutter, power		96.36		1.00	4.00		385.44
Chainsaw		64.24		1.00	2.00		128.48
EOD Demolition Kit		51.39					
Foester Ferrex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39		1.00	2.00		102.78
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35					
Surveyor's Kit		64.24					
Total Station Survey Equipment		835.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67		1.00	2.00		899.34
Air Fare - Round Trip		1,220.54					
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		32.00	2.00		111.36
Lodging		88.09		4.00	8.00		2,178.88
Meals and Incidentals		38.55		4.00	8.00		1,233.60
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					
Shipping		154.17					
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.67					
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs						5,323.88	
Total Estimated Costs							15,439.18

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 6 Surface OE Removal

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06				-	-
Project Manager III	78.92				-	-
Project Manager II	68.67				-	-
Certified Industrial Hygienist	74.81				-	-
Engineer II	76.92				-	-
Survey Manager	56.42				-	-
Surveyor V	48.16				-	-
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Quality Control Specialist	Regular 47.04				-	-
Site Safety Officer	Regular 47.04				-	-
UXO Supervisor/Tech VI	Regular 53.29				-	-
UXO Supervisor/Tech V	Regular 47.04	40.00	1.00	1.00	40.00	1,881.60
UXO Technician IV	Regular 40.49	40.00	1.00	4.00	160.00	6,478.40
UXO Technician III	Regular 34.10				-	-
Laborer II	Regular 28.65				-	-
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Subtotal - Labor					200.00	8,360.00
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Other Direct Costs	Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger	25.69		1.00	2.00		51.38
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39		1.00	1.00		51.39
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39		1.00	8.00		411.12
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20					-
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.54					-
Mileage	0.40					-
Fuel	1.74					-
Lodging	66.09		5.00	5.00		1,702.25
Meals and Incidentals	38.55		5.00	5.00		963.75
Project Consumables	192.72					-
Printing and Binding	205.56					-
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Fencing	869.35					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74		0.50	0.20		154.17
Site Remediation - Pine Farm	900.00					-
Subtotal - Other Direct Costs						3,334.06
Total Estimated Costs						11,694.06

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 7 Scrap Turn-In

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.08				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.25	1.00	10.00	532.90
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.25	1.00	10.00	404.90
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						20.00	937.80
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					
FM Radio Repeater/Base Station		44.97					
Cellular Telephone and Service		64.24					
Video Camera		32.12					
Computer		96.36					
Brushcutter, power		96.36					
Chainsaw		64.24					
EOD Demolition Kit		51.39					
Foester Ferrex Ordnance Locator		385.43					
Schonstedt Magnetic Locator		51.39					
Explosive Storage magazine		44.97					
Carrier Phase GPS		899.35					
Surveyor's Kit		64.24					
Total Station Survey Equipment		835.11					
Ford Explorer		321.20					
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					
Mileage		0.40					
Fuel		1.74		16.00	1.00		27.84
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					
Shipping		154.17					
Site Trailer		963.59					
Electrical Hook Up		1,927.17					
Magazine Fencing		899.35					
Magazine Mobilization		770.87					
Donor Explosives		1,541.74					
Site Remediation - Pine Farm		300.00					
Subtotal - Other Direct Costs							548.28
Total Estimated Costs							1,484.08

Surface Clear

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

**Task 8
 Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04	40.00	0.75	1.00	30.00	1,411.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	0.75	1.00	30.00	1,023.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						60.00	2,434.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	0.75	1.00	18.27
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	0.75	2.00	77.09
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20	1.00	1.00	321.20
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	2.00	2,441.08
Mileage	0.40	50.00	2.00	40.00
Fuel	1.74	35.00	2.00	121.80
Lodging	68.09	4.00	2.00	544.72
Meals and Incidentals	38.55	4.00	2.00	308.40
Project Consumables	192.72	1.00	1.00	192.72
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation - Pine Farm	300.00			-
Subtotal - Other Direct Costs				4,066.28
Total Estimated Costs				6,500.48

Surface Clear

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forest Area - A
Clearance of Compost Area - B

Task 9 Final Report

Labor Category	Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I	82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III	76.92				-	-
Project Manager II	66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist	74.61				-	-
Engineer II	76.92	42.00	0.75	1.00	31.50	2,422.98
Survey Manager	56.42	42.00	1.00	1.00	42.00	2,389.64
Surveyor V	46.16				-	-
Subtotal - Labor						168.00 11,254.53
<hr/>						
Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger	25.69					-
FM Radio Repeater/Base Station	44.97					-
Cellular Telephone and Service	64.24					-
Video Camera	32.12					-
Computer	96.36					-
Brushcutter, power	96.36					-
Chainsaw	64.24					-
EOD Demolition Kit	51.39					-
Foester Ferrex Ordnance Locator	385.43					-
Schonstedt Magnetic Locator	51.39					-
Explosive Storage magazine	44.97					-
Carrier Phase GPS	899.35					-
Surveyor's Kit	64.24					-
Total Station Survey Equipment	835.11					-
Ford Explorer	321.20					-
Pickup, 4x4, 3/4 Ton	449.67					-
Air Fare - Round Trip	1,220.54					-
Mileage	0.40					-
Fuel	1.74					-
Lodging	68.09					-
Meals and Incidentals	38.55					-
Project Consumables	192.72					-
Printing and Binding	206.56		1.00	2.00		411.12
Shipping	154.17					-
Site Trailer	963.59					-
Electrical Hook Up	1,927.17					-
Magazine Fencing	899.35					-
Magazine Mobilization	770.87					-
Donor Explosives	1,541.74					-
Site Remediation - Pine Farm	300.00					-
Subtotal - Other Direct Costs						411.12
Total Estimated Costs						11,665.65

Surface Clear

Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forest Area - A
 Clearance of Compost Area - B

**Task 10
 Site Restoration**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		68.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						-	-
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.68					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.58					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.67					-
Donor Explosives		1,541.74					-
Site Remediation - Pine Farm		300.00		1.00	1.00		300.00
Subtotal - Other Direct Costs							300.00
Total Estimated Costs							300.00

Natural Brush/Forests - A

Alternative 3 - Surface Clearance of OE

Alternative 3 requires a complete OE surface clearance of 169.05 acres. Electronic detection instruments are necessary to detect OE hidden from view by high grasses and terrain. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for labors is assumed to be one-half the JTR rate. Brush clearing efforts are less intensive than brush clearance for subsurface clearance; therefore, the production effort is established at 5 grids per day per team. It is assumed that 80% of the total grids will require moderate brush clearance efforts. During the Engineering Design effort 8.61 acres were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	169.05 acres/736 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	8.61 acres
Adjusted acreage:	160.44 acres
Adjusted number of grids	698 grids
Grids Requiring Brush Clearance	588 grids/135.17 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	5 grids per day per four man team (four teams @ 20 grids per day)
Land Survey	14 grids per day per two person team (three teams @ 42 grids per day)
Surface Clearance	8.71 grids per day (2 acres) per 5 person team (4 teams@ 34.84 grids per workday)

Duration:

Project Management	42 working days/10.5 weeks
Land Survey	20 working days/5 weeks (three teams)
Brush Clearance	30 working days/7.5 weeks -- 5 grids per work day per four-person team (four teams @ 20 grids per workday)
Surface Clearance	21 working days/5.25 weeks (four five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	21 working days/5.25 weeks (2 person team)
Total Duration	42 Working Days/10.5 weeks

Surface Clearance of OE - Alternative 3

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

Labor Category		Summary					
		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.05				39.90	3,274.19
Project Manager III		76.92				441.00	33,921.72
Project Manager II		66.67				201.60	13,440.67
Certified Industrial Hygienist		74.81				16.00	1,196.96
Engineer II		76.92				63.00	4,845.96
Survey Manager		56.42				180.60	10,189.45
Surveyor V		46.16				630.00	29,080.80
Quality Control Specialist	Regular	47.04				210.00	9,878.40
Site Safety Officer	Regular	47.04				420.00	19,766.80
UXO Supervisor/Tech VI	Regular	53.29				512.00	27,284.48
UXO Supervisor/Tech V	Regular	47.04				840.00	39,513.60
UXO Technician IV	Regular	40.49				4,580.00	185,444.20
UXO Technician III	Regular	34.10				810.00	27,621.00
Laborer II	Regular	26.65				7,200.00	206,280.00
Subtotal - Labor						16,144.10	611,728.23
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89					2,215.76
FM Radio Repeater/Base Station		44.97					1,888.74
Cellular Telephone and Service		64.24					725.91
Video Camera		32.12					362.96
Computer		96.36					2,553.54
Brushcutter, power		96.36					5,781.60
Chainsaw		64.24					3,854.40
EOD Demolition Kit		51.39					269.80
Foester Ferrex Ordnance Locator		385.43					308.34
Schonstedt Magnetic Locator		51.39					8,248.10
Explosive Storage magazine		44.97					1,416.56
Carrier Phase GPS		899.35					3,597.40
Surveyor's Kit		64.24					963.60
Total Station Survey Equipment		835.11					12,526.65
Ford Explorer		321.20					7,339.42
Pickup, 4x4, 3/4 Ton		449.67					23,045.59
Air Fare - Round Trip		1,220.54					17,087.56
Mileage		0.40					1,100.00
Fuel		1.74					6,457.58
Lodging		68.09					142,648.56
Meals and Incidentals		38.55					81,880.20
Project Consumables		192.72					8,335.14
Printing and Binding		205.56					1,644.48
Shipping		154.17					925.02
Site Trailer		983.59					2,534.24
Electrical Hook Up		1,927.17					1,927.17
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					1,927.18
Site Remediation		500.00					500.00
Subtotal - Other Direct Costs						343,735.72	
Total Estimated Costs						955,463.95	

Surface Clearance

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

**Task 1
Site Visit**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.20	1.00	8.40	689.30
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	0.80	1.00	33.60	2,240.11
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.80	1.00	32.00	1,705.28
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						74.00	4,634.69
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24		0.80	1.00		51.39
Video Camera		32.12		0.80	1.00		25.70
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		84.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43		0.80	1.00		308.34
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		2.00	0.80		513.92
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		5.00	8.00		69.60
Lodging		68.09		4.00	2.00		544.72
Meals and Incidentals		38.55		5.00	2.00		385.50
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		983.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						4,572.97	4,572.97
Total Estimated Costs						9,207.66	9,207.66

Surface Clearance

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

**Task 2
Work Plan**

Labor Category		Loaded	Hours	Number Weeks	Number People	Estimated Hours	Amount
		Hourly Rate	per Week				
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81	40.00	0.40	1.00	16.00	1,196.96
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		56.42	42.00	0.80	1.00	33.60	1,895.71
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						215.60	14,163.13
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						4,356.97	
Total Estimated Costs						18,522.10	

Surface Clearance o

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

**Task 3
Site Management**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92	42.00	10.50	1.00	441.00	33,921.72
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04	40.00	10.50	1.00	420.00	19,756.80
UXO Supervisor/Tech VI	Regular	53.29	40.00	10.50	1.00	420.00	22,381.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						1,281.00	76,060.32

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97	10.50	4.00	1,888.74
Cellular Telephone and Service	64.24	10.50	1.00	674.52
Video Camera	32.12	10.50	1.00	337.26
Computer	96.36	10.50	1.00	1,011.78
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	10.50	3.00	1,416.56
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	3.00	3,661.62
Mileage	0.40	2,000.00	1.00	800.00
Fuel	1.74	105.00	10.50	1,918.35
Lodging	88.09	21.00	10.50	15,013.85
Meals and Incidentals	38.55	22.00	10.50	8,905.05
Project Consumables	192.72	10.50	1.00	2,023.56
Printing and Binding	205.56	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	993.59	2.63	1.00	2,534.24
Electrical Hook Up	1,927.17	1.00	1.00	1,927.17
Magazine Fencing	899.35	1.00	1.00	899.35
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation	500.00			-
Subtotal - Other Direct Costs				44,658.55
Total Estimated Costs				120,716.87

Surface Clearance

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

**Task 4
Land Survey**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.08				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer III		76.92				-	-
Survey Manager		56.42	42.00	1.50	1.00	63.00	3,554.46
Surveyor V		46.18	42.00	5.00	3.00	630.00	28,080.80
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	5.00	3.00	600.00	20,460.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
1,293.00 53,095.26							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69		5.00	6.00		770.70
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		5.00	3.00		1,445.40
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		5.00	3.00		770.85
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35		2.00	2.00		3,597.40
Surveyor's Kit		64.24		5.00	3.00		963.60
Total Station Survey Equipment		835.11		5.00	3.00		12,526.66
Ford Explorer		321.20		5.00	3.00		4,818.00
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	6.00		7,323.24
Mileage		0.40		50.00	6.00		120.00
Fuel		1.74		96.00	5.00		835.20
Lodging		68.09		42.00	5.00		14,298.90
Meals and Incidentals		38.55		43.00	5.00		8,288.25
Project Consumables		192.72		5.00	2.00		1,927.20
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17		3.00	1.00		462.51
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs							
58,559.02							
Total Estimated Costs							
111,654.28							

Surface Clearance o

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Engineering Design Cost Estimate
Natural Brush/Forests--A

**Task 6
Surface OE Removal**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week				
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.87				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
<hr/>							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	5.25	4.00	840.00	39,513.60
UXO Technician IV	Regular	40.49	40.00	5.25	16.00	3,360.00	136,046.40
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						4,200.00	175,560.00
<hr/>							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69		5.25	4.00		539.49
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39		5.25	1.00		269.80
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		5.25	20.00		5,385.95
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		5.25	4.00		9,443.07
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		140.00	5.25		1,278.90
Lodging		68.09		140.00	5.25		60,046.15
Meals and Incidentals		38.55		141.00	5.25		28,536.64
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74		1.25	1.00		1,927.18
Site Remediation		500.00					-
Subtotal - Other Direct Costs							97,437.18
Total Estimated Costs							272,997.18

Surface Clearance

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**Task 7
Scrap Turn-In**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						40.00	1,875.60
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		80.00	1.00		139.20
Lodging		68.09		1.00	2.00		136.18
Meals and Incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		863.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						857.62	
Total Estimated Costs						2,533.22	

Surface Clearance

Corps of Engineers
Camp Croft, Spartanburg, S.C.
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**Task 8
Quality Control**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.06				-	-	
Project Manager III		76.92				-	-	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		56.42				-	-	
Surveyor V		48.16				-	-	
Subtotal - Labor							420.00	17,039.40
Quality Control Specialist	Regular	47.04	40.00	5.25	1.00	210.00	9,878.40	
Site Safety Officer	Regular	47.04				-	-	
UXO Supervisor/Tech VI	Regular	53.29				-	-	
UXO Supervisor/Tech V	Regular	47.04				-	-	
UXO Technician IV	Regular	40.48				-	-	
UXO Technician III	Regular	34.10	40.00	5.25	1.00	210.00	7,161.00	
Laborer II	Regular	28.65				-	-	
Subtotal - Labor							420.00	17,039.40
Other Direct Costs								
		Loaded Rate		Number Weeks	Number Units		Amount	
FM Radio, Handheld w/ charger		25.69		5.25	1.00		134.87	
FM Radio Repeater/Base Station		44.97					-	
Cellular Telephone and Service		64.24					-	
Video Camera		32.12					-	
Computer		96.36					-	
Brushcutter, power		96.36					-	
Chainsaw		64.24					-	
EOD Demolition Kit		51.39					-	
Foester Ferrex Ordnance Locator		385.43					-	
Schonstedt Magnetic Locator		51.39		5.25	2.00		539.60	
Explosive Storage magazine		44.97					-	
Carrier Phase GPS		899.35					-	
Surveyor's Kit		64.24					-	
Total Station Survey Equipment		835.11					-	
Ford Explorer		321.20		5.25	1.00		1,686.30	
Pickup, 4x4, 3/4 Ton		449.67					-	
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08	
Mileage		0.40		50.00	2.00		40.00	
Fuel		1.74		35.00	5.25		319.73	
Lodging		68.09		14.00	5.25		5,004.62	
Meals and Incidentals		38.65		15.00	5.25		3,035.81	
Project Consumables		192.72		1.00	5.25		1,011.78	
Printing and Binding		205.56					-	
Shipping		154.17					-	
Site Trailer		963.59					-	
Electrical Hook Up		1,927.17					-	
Magazine Fencing		899.35					-	
Magazine Mobilization		770.87					-	
Donor Explosives		1,541.74					-	
Site Remediation		500.00					-	
Subtotal - Other Direct Costs							14,213.79	
Total Estimated Costs							31,253.19	

Surface Clearance o

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Natural Brush/Forests--A

**Task 9
Final Report**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						220.50	14,431.83
Other Direct Costs		Loaded Rate	Number Weeks	Number Units	Amount		
FM Radio, Handheld w/ charger		25.69				-	
FM Radio Repeater/Base Station		44.97				-	
Cellular Telephone and Service		64.24				-	
Video Camera		32.12				-	
Computer		96.36				-	
Brushcutter, power		96.36				-	
Chainsaw		64.24				-	
EOD Demolition Kit		51.39				-	
Foester Ferrex Ordnance Locator		385.43				-	
Schonstedt Magnetic Locator		51.39				-	
Explosive Storage magazine		44.97				-	
Carrier Phase GPS		899.35				-	
Surveyor's Kit		64.24				-	
Total Station Survey Equipment		835.11				-	
Ford Explorer		321.20				-	
Pickup, 4x4, 3/4 Ton		449.67				-	
Air Fare - Round Trip		1,220.54				-	
Mileage		0.40				-	
Fuel		1.74				-	
Lodging		68.09				-	
Meals and Incidentals		38.55				-	
Project Consumables		192.72				-	
Printing and Binding		205.56		1.00 2.00		411.12	
Shipping		154.17				-	
Site Trailer		963.59				-	
Electrical Hook Up		1,927.17				-	
Magazine Fencing		899.35				-	
Magazine Mobilization		770.87				-	
Donor Explosives		1,541.74				-	
Site Remediation		500.00				-	
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						14,842.95	

Surface Clearance

Corps of Engineers
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**Task 10
Site Remediation**

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						-	-
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		84.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00		1.00	1.00		500.00
Subtotal - Other Direct Costs							500.00
Total Estimated Costs							500.00

Natural Brush/Forests - A

Alternative 7 - Surface and Subsurface OE Clearance Over Entire Area to a Depth of One Foot

Alternative 7 requires a complete OE surface and subsurface OE clearance of 169.05 acres to a depth of one foot. The work schedule is based on working four 10-hour days per work week. Where possible, local laborers are used to reduce per diem and labor cost. Per diem costs for laborers is assumed to be one-half the JTR rate. Because the surface clearance will be performed concurrently with the subsurface clearance, the cost for the surface clearance is included in the subsurface costs. Brush clearing efforts are intensive based on previous work performed at the site; therefore, the production effort is established at 4 grids per day per team. It is assumed that 80% of the total grids will require moderate brush clearance efforts. During the Engineering Design effort 8.61 acres were geophysically investigated to a depth of 4 feet. Brush clearance and surface clearance production rates have been proportionally increased to account for the effort previously completed. The land survey effort was not adjusted, as grids established during the Engineering Design initiative add no value to the removal action. Typically, a survey team can survey twenty 100' X 100' grids per day. Given the erratic terrain and vegetation at Camp Croft, this estimate was held to 14 grids per day. A site restoration line item has been included in this estimate to account for funds to re-seed and return the site to near original condition.

Total Acreage/grids to Surface Clear:	169.05 acres/736 (100' X100') search grids
Total Acreage Previously Geophysically Investigated:	8.61 acres
Adjusted acreage:	160.44 acres
Adjusted number of grids	698 grids
Grids Requiring Brush Clearance	588 grids/135.17 acres
Search Grid Size: 100' X 100'	.22 acres per grid

Production Rates:

Brush Clearance	4 grids per day per four man team (four teams @ 16 grids per day)
Land Survey	14 grids per day per two person team (three teams @ 42 grids per day)
Surface Clearance	7.62 grids per day (1.75 acres) per 5 person team (4 teams@ 30.48 grids per workday)

Duration:

Project Management	45 working days/11.25 weeks
Land Survey	20 working days/5 weeks (three teams)
Brush Clearance	37 working days/9.25 weeks – 4 grids per work day per four-person team (four teams @ 16 grids per workday)
Subsurface Clearance	23 working days/5.75 weeks (four five-person teams)
Disposal	Effort included in Surface Clearance
Quality Control	23 working days/5.75 weeks (2 person team)
Total Duration	45 Working Days/11.25 weeks

OE Surface/Subsurface Clearance of Entire Area to 1 Foot - Alternative 7

Corps of Engineers
Camp Croft, Spartanburg, S.C.
Engineering Design Cost Estimate
Natural Brush/Forests--A

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Summary		
					Number People	Estimated Hours	Amount
Program Management I		82.06				39.90	3,274.19
Project Manager III		75.92				472.50	36,344.70
Project Manager II		66.67				222.60	14,840.74
Certified Industrial Hygienist		74.81				20.00	1,496.20
Engineer II		75.92				63.00	4,845.96
Survey Manager		56.42				231.00	13,033.02
Surveyor V		46.18				630.00	29,080.80
Quality Control Specialist	Regular	47.04				230.00	10,818.20
Site Safety Officer	Regular	47.04				450.00	21,168.00
UXO Supervisor/Tech VI	Regular	53.29				542.00	28,883.18
UXO Supervisor/Tech V	Regular	47.04				920.00	43,276.80
UXO Technician IV	Regular	40.49				5,180.00	209,738.20
UXO Technician III	Regular	34.10				830.00	28,303.00
Laborer II	Regular	28.65				8,880.00	254,412.00
Subtotal - Labor						18,711.00	699,515.99
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.89					2,459.82
FM Radio Repeater/Base Station		44.97					2,023.65
Cellular Telephone and Service		64.24					774.09
Video Camera		32.12					387.05
Computer		96.36					2,625.81
Brushcutter, power		96.36					4,456.65
Chainsaw		64.24					2,971.10
EOD Demolition Kit		51.39					295.49
Foester Ferrex Ordnance Locator		385.43					308.34
Schonstedt Magnetic Locator		51.39					9,173.12
Explosive Storage magazine		44.97					1,517.74
Carrier Phase GPS		899.35					3,597.40
Surveyor's Kit		64.24					963.60
Total Station Survey Equipment		835.11					12,528.65
Ford Explorer		321.20					7,500.02
Pickup, 4x4, 3/4 Ton		449.67					27,092.62
Air Fare - Round Trip		1,220.54					17,087.56
Mileage		0.40					1,100.00
Fuel		1.74					7,261.46
Lodging		68.09					162,309.54
Meals and Incidentals		38.55					93,435.57
Project Consumables		192.72					10,695.96
Printing and Binding		205.58					1,644.48
Shipping		154.17					925.02
Site Trailer		963.59					2,707.69
Electrical Hook Up		1,927.17					1,927.17
Magazine Fencing		899.35					899.35
Magazine Mobilization		770.87					770.87
Donor Explosives		1,541.74					2,775.13
Site Remediation		500.00					500.00
Subtotal - Other Direct Costs						382,712.95	382,712.95
Total Estimated Costs						1,082,228.94	1,082,228.94

OE Surface/Subsurface Clearance of
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forests--A

Task 1
Site Visit

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	Amount
Program Management I		82.08	42.00	0.20	1.00	8.40	689.30
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	0.80	1.00	33.60	2,240.11
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		66.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist Regular							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer Regular							
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI Regular							
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.80	1.00	32.00	1,705.28
UXO Supervisor/Tech V Regular							
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV Regular							
UXO Technician IV	Regular	40.49				-	-
UXO Technician III Regular							
UXO Technician III	Regular	34.10				-	-
Laborer II Regular							
Laborer II	Regular	28.65				-	-
Subtotal - Labor						74.00	4,634.69
Other Direct Costs							
		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24		0.80	1.00		51.39
Video Camera		32.12		0.80	1.00		25.70
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43		0.80	1.00		308.34
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		2.00	0.80		513.92
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		5.00	8.00		69.60
Lodging		68.09		4.00	2.00		544.72
Meals and Incidentals		38.55		5.00	2.00		385.50
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						4,572.97	
Total Estimated Costs						9,207.66	

OE Surface/Subsurface Clearance of
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Task 2
Work Plan

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly Rate	per Week	Weeks	People	Hours	
Program Management I		82.06	42.00	0.50	1.00	21.00	1,723.26
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.50	1.00	105.00	7,000.35
Certified Industrial Hygienist		74.81	40.00	0.50	1.00	20.00	1,496.20
Engineer II		76.92	42.00	0.50	1.00	21.00	1,615.32
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.16				-	-
Quality Control Specialist Regular 47.04 - -							
Site Safety Officer Regular 47.04 - -							
UXO Supervisor/Tech VI	Regular	53.29	40.00	1.00	1.00	40.00	2,131.60
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						291.00	16,706.01
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36		1.00	1.00		96.36
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		1.00	1.00		321.20
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	1.00		1,220.54
Mileage		0.40		50.00	1.00		20.00
Fuel		1.74		1.00	40.00		69.60
Lodging		68.09		6.00	1.00		408.54
Meals and Incidentals		38.55		7.00	1.00		269.85
Project Consumables		192.72		8.00	1.00		1,541.76
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						4,358.97	
Total Estimated Costs							23,064.98

OE Surface/Subsurface Clearance of
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 Natural Brush/Forests--A

Task 3
Site Management

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount	
Program Management I		82.08				-	-	
Project Manager III		76.92	42.00	11.25	1.00	472.50	36,344.70	
Project Manager II		66.67				-	-	
Certified Industrial Hygienist		74.81				-	-	
Engineer II		76.92				-	-	
Survey Manager		66.42				-	-	
Surveyor V		46.16				-	-	
Quality Control Specialist		Regular	47.04					
Site Safety Officer		Regular	47.04	40.00	11.25	1.00	450.00	21,168.00
UXO Supervisor/Tech VI		Regular	53.29	40.00	11.25	1.00	450.00	23,980.50
UXO Supervisor/Tech V		Regular	47.04					
UXO Technician IV		Regular	40.49					
UXO Technician III		Regular	34.10					
Laborer II		Regular	28.65					
Subtotal - Labor						1,372.50	81,493.20	

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69			-
FM Radio Repeater/Base Station	44.97	11.25	4.00	2,023.65
Cellular Telephone and Service	64.24	11.25	1.00	722.70
Video Camera	32.12	11.25	1.00	361.35
Computer	96.36	11.25	1.00	1,084.05
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39			-
Explosive Storage magazine	44.97	11.25	3.00	1,517.74
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	3.00	3,661.62
Mileage	0.40	2,000.00	1.00	800.00
Fuel	1.74	105.00	11.25	2,055.38
Lodging	68.09	21.00	11.25	16,086.26
Meals and Incidentals	38.55	22.00	11.25	9,541.13
Project Consumables	192.72	11.25	1.00	2,168.10
Printing and Binding	205.56	2.00	1.00	411.12
Shipping	154.17	1.00	3.00	462.51
Site Trailer	963.59	2.81	1.00	2,707.69
Electrical Hook Up	1,927.17	1.00	1.00	1,927.17
Magazine Fencing	899.35	1.00	1.00	899.35
Magazine Mobilization	770.87	1.00	1.00	770.87
Donor Explosives	1,541.74			-
Site Remediation	500.00			-
Subtotal - Other Direct Costs				47,200.89
Total Estimated Costs				128,693.89

OE Surface/Subsurface Clearance of
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Task 4
Land Survey

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		65.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42	42.00	1.50	1.00	63.00	3,554.46
Surveyor V		46.16	42.00	5.00	3.00	630.00	29,080.80
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	5.00	3.00	600.00	20,460.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
						1,293.00	53,095.26

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.69	5.00	6.00	770.70
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36	5.00	3.00	1,445.40
Brushcutter, power	96.36			-
Chainsaw	64.24			-
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	5.00	3.00	770.85
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35	2.00	2.00	3,597.40
Surveyor's Kit	64.24	5.00	3.00	963.60
Total Station Survey Equipment	835.11	5.00	3.00	12,526.65
Ford Explorer	321.20	5.00	3.00	4,818.00
Pickup, 4x4, 3/4 Ton	449.67			-
Air Fare - Round Trip	1,220.54	1.00	6.00	7,323.24
Mileage	0.40	50.00	6.00	120.00
Fuel	1.74	96.00	5.00	835.20
Lodging	68.09	42.00	5.00	14,298.90
Meals and Incidentals	38.55	43.00	5.00	8,288.25
Project Consumables	192.72	5.00	2.00	1,927.20
Printing and Binding	205.56	1.00	2.00	411.12
Shipping	154.17	3.00	1.00	462.51
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation	500.00			-
Subtotal - Other Direct Costs				58,559.02
Total Estimated Costs				111,654.28

OE Surface/Subsurface Clearance of
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Task 5
Brush Clearance

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		48.16				-	-

Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	9.25	4.00	1,480.00	59,925.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65	40.00	9.25	24.00	8,880.00	254,412.00

Subtotal - Labor						10,360.00	314,337.20

Other Direct Costs	Loaded Rate	Number Weeks	Number Units	Amount
FM Radio, Handheld w/ charger	25.89	9.25	4.00	950.53
FM Radio Repeater/Base Station	44.97			-
Cellular Telephone and Service	64.24			-
Video Camera	32.12			-
Computer	96.36			-
Brushcutter, power	96.36	9.25	5.00	4,456.65
Chainsaw	64.24	9.25	5.00	2,971.10
EOD Demolition Kit	51.39			-
Foester Ferrex Ordnance Locator	385.43			-
Schonstedt Magnetic Locator	51.39	9.25	4.00	1,901.43
Explosive Storage magazine	44.97			-
Carrier Phase GPS	899.35			-
Surveyor's Kit	64.24			-
Total Station Survey Equipment	835.11			-
Ford Explorer	321.20			-
Pickup, 4x4, 3/4 Ton	449.67	9.25	4.00	16,637.79
Air Fare - Round Trip	1,220.54			-
Mileage	0.40	50.00	4.00	80.00
Fuel	1.74	128.00	9.25	2,060.16
Lodging	68.09	112.00	9.25	70,541.24
Meals and Incidentals	38.55	113.00	9.25	40,294.39
Project Consumables	192.72	9.25	2.00	3,565.32
Printing and Binding	205.56			-
Shipping	154.17			-
Site Trailer	963.59			-
Electrical Hook Up	1,927.17			-
Magazine Fencing	899.35			-
Magazine Mobilization	770.87			-
Donor Explosives	1,541.74			-
Site Remediation	500.00			-
Subtotal - Other Direct Costs				143,458.61
Total Estimated Costs				457,795.81

OE Surface/Subsurface Clearance of
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Task 6
Subsurface OE Removal

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
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Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04	40.00	5.75	4.00	920.00	43,276.80
UXO Technician IV	Regular	40.49	40.00	5.75	16.00	3,680.00	149,003.20
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
<hr/>							
Subtotal - Labor						4,600.00	192,280.00
<hr/>							
Other Direct Costs		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		5.75	4.00		590.87
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39		5.75	1.00		295.49
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		5.75	20.00		5,909.85
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		5.75	4.00		10,342.41
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		128.00	5.75		1,280.64
Lodging		68.09		140.00	5.75		54,812.45
Meals and Incidentals		38.55		141.00	5.75		31,254.41
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74		1.80	1.00		2,775.13
Site Remediation		500.00					-
Subtotal - Other Direct Costs							107,261.25
Total Estimated Costs							299,541.25

OE Surface/Subsurface Clearance of
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Task 7
Scrap Turn-In

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		78.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		78.92				-	-
Survey Manager		58.42				-	-
Surveyor V		48.16				-	-
Quality Control Specialist Regular 47.04 - -							
Site Safety Officer Regular 47.04 - -							
UXO Supervisor/Tech VI	Regular	53.29	40.00	0.50	1.00	20.00	1,065.80
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49	40.00	0.50	1.00	20.00	809.80
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor						40.00	1,875.60
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67		1.00	0.25		112.42
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74		80.00	1.00		139.20
Lodging		68.09		1.00	2.00		136.18
Meals and incidentals		38.55		1.00	2.00		77.10
Project Consumables		192.72		1.00	1.00		192.72
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs							657.62
Total Estimated Costs							2,533.22

OE Surface/Subsurface Clearance of
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Task 8
Quality Control

Labor Category		Loaded Hourly Rate	Hours per Week	Number Weeks	Number People	Estimated Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		56.42				-	-
Surveyor V		46.16				-	-
Quality Control Specialist							
Quality Control Specialist	Regular	47.04	40.00	5.75	1.00	230.00	10,819.20
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10	40.00	5.75	1.00	230.00	7,843.00
Laborer II	Regular	28.65				-	-
Subtotal - Labor						460.00	18,662.20
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69		5.75	1.00		147.72
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39		5.75	2.00		590.99
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20		5.75	1.00		1,846.90
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54		1.00	2.00		2,441.08
Mileage		0.40		50.00	2.00		40.00
Fuel		1.74		432.00	1.00		751.68
Lodging		68.09		14.00	5.75		5,481.25
Meals and Incidentals		38.55		15.00	5.75		3,324.94
Project Consumables		192.72		5.75	1.00		1,108.14
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						15,732.70	
Total Estimated Costs						34,394.90	

OE Surface/Subsurface Clearance of
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 Natural Brush/Forests--A

**Task 9
 Final Report**

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly Rate	per Week	Weeks	People	Hours	
Program Management I		82.06	42.00	0.25	1.00	10.50	861.63
Project Manager III		76.92				-	-
Project Manager II		66.67	42.00	2.00	1.00	84.00	5,600.28
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92	42.00	1.00	1.00	42.00	3,230.64
Survey Manager		56.42	42.00	2.00	1.00	84.00	4,739.28
Surveyor V		46.16				-	-
Quality Control Specialist Regular							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer Regular							
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI Regular							
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V Regular							
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV Regular							
UXO Technician IV	Regular	40.49				-	-
UXO Technician III Regular							
UXO Technician III	Regular	34.10				-	-
Laborer II Regular							
Laborer II	Regular	28.65				-	-
Subtotal - Labor						220.50	14,431.83
Other Direct Costs							
		Loaded Rate		Number Weeks	Number Units		Amount
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		88.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56		1.00	2.00		411.12
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,827.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.67					-
Donor Explosives		1,541.74					-
Site Remediation		500.00					-
Subtotal - Other Direct Costs						411.12	
Total Estimated Costs						14,842.95	

OE Surface/Subsurface Clearance of
 Corps of Engineers
 Camp Croft, Spartanburg, S.C.
 Engineering Design Cost Estimate
 Natural Brush/Forests--A

Task 10
Site Remediation

Labor Category		Loaded	Hours	Number	Number	Estimated	Amount
		Hourly	per				
		Rate	Week	Weeks	People	Hours	Amount
Program Management I		82.06				-	-
Project Manager III		76.92				-	-
Project Manager II		66.67				-	-
Certified Industrial Hygienist		74.81				-	-
Engineer II		76.92				-	-
Survey Manager		58.42				-	-
Surveyor V		46.16				-	-
Subtotal - Labor							
Quality Control Specialist	Regular	47.04				-	-
Site Safety Officer	Regular	47.04				-	-
UXO Supervisor/Tech VI	Regular	53.29				-	-
UXO Supervisor/Tech V	Regular	47.04				-	-
UXO Technician IV	Regular	40.49				-	-
UXO Technician III	Regular	34.10				-	-
Laborer II	Regular	28.65				-	-
Subtotal - Labor							
Other Direct Costs		Loaded		Number	Number		Amount
		Rate		Weeks	Units		
FM Radio, Handheld w/ charger		25.69					-
FM Radio Repeater/Base Station		44.97					-
Cellular Telephone and Service		64.24					-
Video Camera		32.12					-
Computer		96.36					-
Brushcutter, power		96.36					-
Chainsaw		64.24					-
EOD Demolition Kit		51.39					-
Foester Ferrex Ordnance Locator		385.43					-
Schonstedt Magnetic Locator		51.39					-
Explosive Storage magazine		44.97					-
Carrier Phase GPS		899.35					-
Surveyor's Kit		64.24					-
Total Station Survey Equipment		835.11					-
Ford Explorer		321.20					-
Pickup, 4x4, 3/4 Ton		449.67					-
Air Fare - Round Trip		1,220.54					-
Mileage		0.40					-
Fuel		1.74					-
Lodging		68.09					-
Meals and Incidentals		38.55					-
Project Consumables		192.72					-
Printing and Binding		205.56					-
Shipping		154.17					-
Site Trailer		963.59					-
Electrical Hook Up		1,927.17					-
Magazine Fencing		899.35					-
Magazine Mobilization		770.87					-
Donor Explosives		1,541.74					-
Site Remediation		500.00		1.00	1.00		500.00
Subtotal - Other Direct Costs							500.00
Total Estimated Costs							500.00