

**Waste Area Group (WAG) 10**

**Ordnance  
Interim Action**

**Cost Estimate for Alternatives 2, 3, and 4**

**Prepared jointly by EG&G Idaho and MK-Ferguson of Idaho Company**

**for the U.S. Department of Energy  
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## Remedial Design and Action Costs for Alternative 2

The remedial design and action costs for Alternative 2 are presented in the proposed plan and address control through the use of administrative barriers. The methodology used to estimate the costs is described below.

- Design costs are based on estimated number of drawings and historical experience.
- Vendor estimates were used for the cost of materials.
- Installation costs were taken from other similar estimates prepared for the clean-up action at the Idaho National Engineering Laboratory (INEL).

Specific details related to the cost estimate for Alternative 2 are provided in the following tables:

- Table 1 Remedial Design Cost Estimate
- Table 2 Remedial Action Cost Estimate

Table 1

Remedial Design Cost Estimate

(\$ by category)

<u>Activity</u>	<u>Engineering</u>	<u>Technical Support</u>	<u>Total</u>
Title II Design	\$ <u>6,400</u>	\$ <u>9,200</u>	\$ <u>15,600</u>
Totals	\$6,400	\$9,200	\$15,600

Table 2

Remedial Action Cost Estimate

<u>ALTERNATE 2</u>	<u>Cost</u>
Materials/Installation	
Fencing (new 15,000 ft)	\$46,000
Fencing (Repair 60,000 ft)	14,000
Signs	9,000
Labor	<u>42,000</u>
Subtotal Materials/Installation	111,000
Labor	
Supervision	56,000
 TOTAL REMEDIAL ACTION ALTERNATIVE 2	 \$167,000.

## Remedial Design and Action Costs for Alternative 3

The remedial design and action costs for Alternative 3 are presented in the proposed plan and address remediation by detonation and incineration. The methodology used to estimate the costs is described below.

- Design costs are based on estimated number of drawings and historical experience.
- Vendor estimates were used for the cost of materials.
- Installation costs were taken from other similar estimates prepared for the clean-up action at the Idaho National Engineering Laboratory (INEL).

Specific details related to the cost estimate for Alternative 3 are provided in the following tables:

- Table 3 Remedial Design Cost Estimate
- Table 4 Remedial Action Cost Estimate

Table 3

Remedial Design Cost Estimate  
(\$ by category)

<u>Activity</u>	<u>Engineering</u>	<u>Technical Support</u>	<u>Total</u>
Record Search	\$170,000	\$30,000	\$200,000
Safety Analysis	85,000	35,000	120,000
Title II Design	<u>40,000</u>	<u>20,000</u>	<u>60,000</u>
Totals	\$295,000	\$85,000	\$380,000

Table 4

## Remedial Action Cost Estimate

<u>ALTERNATE 3</u>	<u>Cost</u>
Ordnance Search	
Supervisor/Tech. Support	\$144,000
Labor	272,000
Equipment (Geophysical/Electomag Survey)	<u>154,700</u>
Subtotal Ordnance Search	570,700
Ordnance Detonation	
Supervisor/Tech. Support (800 hrs.)	64,000
Labor (2400 hrs)	103,200
Equipment	
1-T Truck (Rental)	26,560
Crane (Rental)	53,120
FEL (Rental)	<u>53,120</u>
Subtotal Ordnance Detonation	300,000
Materials	30,000
Soil Samples	
450 Samples @ \$1,000 per sample	450,000
Soil Remediation	
Excavate 185 cy (\$75/cy)	13,875
Transport 185 cy (\$100/cy)	18,500
Incinerate 185 cy (\$3,225/cy)	<u>596,625</u>
Subtotal Soil Remediation	629,000
 TOTAL REMEDIAL ACTION ALTERNATIVE 3	 \$1,979,700

## Remedial Design and Action Costs for Alternative 4

The remedial design and action costs for Alternative 4 are presented in the proposed plan and address remediation by detonation and composting. The methodology used to estimate the costs is described below.

- Design costs are based on estimated number of drawings and historical experience.
- Vendor estimates were used for the cost of materials.
- Installation costs were taken from other similar estimates prepared for the clean-up action at the Idaho National Engineering Laboratory (INEL).

Specific details related to the cost estimate for Alternative 4 are provided in the following tables:

- Table 5 Remedial Design Cost Estimate
- Table 6 Remedial Action Cost Estimate



Table 5

Remedial Design Cost Estimate  
(\$ by category)

<u>Activity</u>	<u>Technical Engineering</u>	<u>Support</u>	<u>Total</u>
Record Search	\$170,000	\$ 30,000	\$200,000
Safety Analysis	85,000	35,000	120,000
Title II Design	<u>80,000</u>	<u>40,000</u>	<u>120,000</u>
Totals	\$385,000	\$105,000	\$440,000

Table 6  
Remedial Action Cost Estimate

<u>ALTERNATIVE 4</u>	<u>Cost</u>
Ordnance Search	
Supervisor/Tech. Support	\$144,000
Labor	272,000
Equipment (Geophysical/Electomag Survey)	<u>154,700</u>
Subtotal Ordnance Search	570,700
Ordnance Detonation	
Supervisor/Tech. Support (800 hrs.)	64,000
Labor (2400 hrs)	103,200
Equipment	
1-T Truck (Rental)	26,560
Crane (Rental)	53,120
FEL (Rental)	<u>53,120</u>
Subtotal Ordnance Detonation	300,000
Materials	30,000
Soil Samples	
450 Samples @ \$1,000 per sample	450,000
Confirmation Sampling (50 samples @ \$500)	<u>25,000</u>
Subtotal Samples	475,000
Composting Operation	
Pilot Plant	77,025
Excavate 185 cy (\$75/cy)	13,875
Transport 185 cy (\$10/cy)	1,850
Bioremediation 185 cy (\$850/cy)	157,250
Site Reclamation	<u>10,000</u>
Subtotal Composting Operation	260,000
 TOTAL REMEDIAL ACTION ALTERNATE 4	 \$1,635,700