

## **APPENDIX C**

### **Cost Detail Reports for MWL Corrective Measures Alternatives**

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** No Further Action Alternatives  
**ID:** No Further Action Alternatives  
**Type:** None

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## Phase Element

<b>Name:</b> MWL I.a - NFA With Institutional Controls	<b>Media/Waste Type:</b> Solids
<b>Type:</b> Long Term Monitoring	<b>Secondary Media/Waste Type:</b> Soil
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> None	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the existing operational cover would be maintained and current institutional controls would	

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Cost Type: User-Defined

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## **Phase Element Technology Cost Detail Report (without Markups)**

continue for the foreseeable future. Soil would be added to the existing landfill surface to bring the operational cover to a central crown and uniform grade to prevent ponding and promote surface runoff. Estimated costs for groundwater, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
Total Element Cost							\$9,613.83	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

**Element:** Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040101	Security Fence, 10' Galvanized with 3 Strands Barbed Wire	620.00	LF	12.40	8.56	6.93	\$17,290.93	<input type="checkbox"/>
18040105	Boundary Fence, 5' Galvanized	1,021.00	LF	1.33	2.23	1.90	\$5,573.43	<input type="checkbox"/>
18040115	Swing Gates, Complete	1.00	EA	641.73	117.00	94.77	\$853.50	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	2.00	EA	534.92	89.52	26.90	\$1,302.69	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	29.96	0.00	\$1,340.94	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	17.66	0.00	\$4,238.38	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$30,599.88</b>	
<b>Total Technology Cost</b>							<b>\$30,599.88</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	6,100.00	CY	0.28	1.72	4.35	\$38,699.01	<input type="checkbox"/>
17040101	General Area Cleanup	2.60	ACRE	0.00	201.17	43.35	\$635.75	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$39,334.76</b>	
<b>Total Technology Cost</b>							<b>\$39,334.76</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	
<b>Total Phase Element Cost</b>							<b>\$179,163.40</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Containment Alternatives  
**ID:** Containment Alternatives  
**Type:** None

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## Phase Element

<b>Name:</b> MWL III.a - Bio-intrusion Barrier	<b>Media/Waste Type:</b> Solids
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> Soil
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> In Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, a bio-intrusion barrier would be deployed on the existing operational cover. The barrier would be	

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Cost Type: User-Defined

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## **Phase Element Technology Cost Detail Report (without Markups)**

composed of a layer of cobbles or boulders to limit intrusion of deep-rooted plants and burrowing mammals. The barrier would be constructed once the landfill surface was centrally crowned and brought to a uniform grade. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Capping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	6,100.00	CY	0.28	2.10	4.35	\$41,000.54	<input type="checkbox"/>
17030430	Gravel, 6" Lifts	8,713.00	CY	37.50	3.18	1.56	\$368,003.14	<input type="checkbox"/>
33060301	Level and Compact Working Surface	6,292.00	CY	0.00	1.95	3.70	\$35,544.14	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$444,547.82</b>	
<b>Total Technology Cost</b>							<b>\$444,547.82</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Professional Labor Management

Element: Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	30,594.53	0.00	\$30,594.53	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	30,594.53	0.00	\$30,594.53	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	33,653.98	0.00	\$33,653.98	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	4,283.23	0.00	\$4,283.23	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	4,283.23	0.00	\$4,283.23	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	917.84	0.00	\$917.84	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	61,189.05	0.00	\$61,189.05	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$165,516.38</b>	
<b>Total Technology Cost</b>							<b>\$165,516.38</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
Total Element Cost							\$18,089.47	
Total Technology Cost							\$18,089.47	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	

**Element:** Capping

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18050402	Seeding, Vegetative Cover	1.00	ACRE	1,889.64	71.35	48.92	\$2,009.90	<input type="checkbox"/>
18050409	Fertilize, 800 Lbs/Acre, Push Rotary	6.00	ACRE	34.10	27.25	8.46	\$418.83	<input type="checkbox"/>
18050415	Mowing	16.00	ACRE	0.00	18.54	6.30	\$397.50	<input type="checkbox"/>
33220106	Staff Engineer	2.00	HR	0.00	26.31	0.00	\$52.63	<input type="checkbox"/>
33220112	Field Technician	7.00	HR	0.00	17.66	0.00	\$123.62	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,002.48</b>	
<b>Total Technology Cost</b>							<b>\$3,002.48</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$2,912.41</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Cleanup and Landscaping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
Total Element Cost							\$18,507.85	
Total Technology Cost							\$18,507.85	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
Total Element Cost							\$7,725.45	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
Total Element Cost							\$3,216.54	
Total Technology Cost							\$10,941.99	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
Total Element Cost							\$158,921.66	
Total Technology Cost							\$158,921.66	
Total Phase Element Cost							\$984,282.83	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Containment Alternatives  
**ID:** Containment Alternatives  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL III.b - Vegetative Soil Cover	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> None
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> None
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, a vegetative soil cover would be deployed on the existing operational cover. The vegetative soil	

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## **Phase Element Technology Cost Detail Report (without Markups)**

cover would be composed of multiple lifts of compacted soil to isolate buried waste from the surface environment and to minimize infiltration of water. A topsoil layer, admixed with gravel, would be vegetated with native plants to mitigate surface erosion and to promote evapotranspiration. A cover constructed of natural soil will perform with minimal maintenance by emulating the natural analog ecosystem. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	41,408.35	0.00	\$41,408.35	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	38,647.79	0.00	\$38,647.79	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	33,126.68	0.00	\$33,126.68	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	5,521.11	0.00	\$5,521.11	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	5,521.11	0.00	\$5,521.11	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	1,656.33	0.00	\$1,656.33	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	55,211.13	0.00	\$55,211.13	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$181,092.51</b>	
<b>Total Technology Cost</b>							<b>\$181,092.51</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	

**Element:** Capping

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18050402	Seeding, Vegetative Cover	1.00	ACRE	1,889.64	71.35	48.92	\$2,009.90	<input type="checkbox"/>
18050409	Fertilize, 800 Lbs/Acre, Push Rotary	6.00	ACRE	34.10	27.25	8.46	\$418.83	<input type="checkbox"/>
18050415	Mowing	16.00	ACRE	0.00	18.54	6.30	\$397.50	<input type="checkbox"/>
33220106	Staff Engineer	2.00	HR	0.00	26.31	0.00	\$52.63	<input type="checkbox"/>
33220112	Field Technician	7.00	HR	0.00	17.66	0.00	\$123.62	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,002.48</b>	
<b>Total Technology Cost</b>							<b>\$3,002.48</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$2,912.41</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Capping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	16,000.00	CY	0.28	2.10	4.35	\$107,542.40	<input type="checkbox"/>
18050302	Topsoil, 6" Lifts, On-Site	2,200.00	CY	0.01	1.98	5.27	\$15,970.90	<input type="checkbox"/>
18050402	Seeding, Vegetative Cover	3.65	ACRE	1,889.64	87.01	48.92	\$7,393.30	<input type="checkbox"/>
33060301	Level and Compact Working Surface	8,833.00	CY	0.00	1.95	3.70	\$49,898.50	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$180,805.10</b>	
<b>Total Technology Cost</b>							<b>\$180,805.10</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Cleanup and Landscaping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$7,725.45</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,216.54</b>	
<b>Total Technology Cost</b>							<b>\$10,941.99</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$158,921.66</b>	
<b>Total Technology Cost</b>							<b>\$158,921.66</b>	
<b>Total Phase Element Cost</b>							<b>\$736,116.24</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Containment Alternatives  
**ID:** Containment Alternatives  
**Type:** None

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## Phase Element

<b>Name:</b> MWL III.c - Vegetative Soil Cover w/ Bio Barrier	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> None
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> None
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, a biointrusion barrier composed of a layer of cobbles or boulders would be constructed on the	

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## **Phase Element Technology Cost Detail Report (without Markups)**

existing operational cover before deployment of a vegetative soil cover. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	51,425.00	0.00	\$51,425.00	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	51,425.00	0.00	\$51,425.00	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	56,567.50	0.00	\$56,567.50	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	7,199.50	0.00	\$7,199.50	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	7,199.50	0.00	\$7,199.50	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	1,542.75	0.00	\$1,542.75	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	102,850.01	0.00	\$102,850.01	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$278,209.27</b>	
<b>Total Technology Cost</b>							<b>\$278,209.27</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Capping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	16,000.00	CY	0.28	2.10	4.35	\$107,542.40	<input type="checkbox"/>
17030430	Gravel, 6" Lifts	8,713.00	CY	37.50	3.18	1.56	\$368,003.14	<input type="checkbox"/>
18050302	Topsoil, 6" Lifts, On-Site	2,200.00	CY	0.01	1.98	5.27	\$15,970.90	<input type="checkbox"/>
18050402	Seeding, Vegetative Cover	25.00	ACRE	1,889.64	87.01	48.92	\$50,639.06	<input type="checkbox"/>
33060301	Level and Compact Working Surface	8,833.00	CY	0.00	1.95	3.70	\$49,898.50	<input type="checkbox"/>
33080513	Drainage Netting, Geotextile Fabric Heat-bonded 2 Sides	158,994.00	SF	0.36	0.05	0.00	\$65,139.84	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$657,193.84</b>	
<b>Total Technology Cost</b>							<b>\$657,193.84</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	

**Element:** Capping

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18050402	Seeding, Vegetative Cover	1.00	ACRE	1,889.64	71.35	48.92	\$2,009.90	<input type="checkbox"/>
18050409	Fertilize, 800 Lbs/Acre, Push Rotary	6.00	ACRE	34.10	27.25	8.46	\$418.83	<input type="checkbox"/>
18050415	Mowing	16.00	ACRE	0.00	18.54	6.30	\$397.50	<input type="checkbox"/>
33220106	Staff Engineer	6.00	HR	0.00	26.31	0.00	\$157.89	<input type="checkbox"/>
33220112	Field Technician	29.00	HR	0.00	17.66	0.00	\$512.14	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,496.25</b>	
<b>Total Technology Cost</b>							<b>\$3,496.25</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$3,391.36</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$55,616.49</b>	
<b>Total Technology Cost</b>							<b>\$55,616.49</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

**Element:** Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$7,725.45</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,216.54</b>	
<b>Total Technology Cost</b>							<b>\$10,941.99</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$158,921.66</b>	
<b>Total Technology Cost</b>							<b>\$158,921.66</b>	
<b>Total Phase Element Cost</b>							<b>\$1,310,100.69</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Containment Alternatives  
**ID:** Containment Alternatives  
**Type:** None

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## Phase Element

<b>Name:</b> MWL III.d - RCRA C Cap	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> None
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> None
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, a RCRA Subtitle C cap would be deployed on the existing operational cover. The primary	

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## **Phase Element Technology Cost Detail Report (without Markups)**

function of a RCRA Subtitle C cap is to limit water infiltration into waste disposal cells in order to minimize creation of leachate that could migrate to groundwater. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	65,835.27	0.00	\$65,835.27	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	65,835.27	0.00	\$65,835.27	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	82,294.08	0.00	\$82,294.08	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	8,229.41	0.00	\$8,229.41	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	8,229.41	0.00	\$8,229.41	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	1,152.12	0.00	\$1,152.12	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	82,294.08	0.00	\$82,294.08	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$313,869.62</b>	
<b>Total Technology Cost</b>							<b>\$313,869.62</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Capping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	35,391.85	CY	0.28	2.10	4.35	\$237,882.79	<input type="checkbox"/>
18050302	Topsoil, 6" Lifts, On-Site	3,702.90	CY	0.01	1.98	5.27	\$26,881.20	<input type="checkbox"/>
18050402	Seeding, Vegetative Cover	3.65	ACRE	1,889.64	87.01	48.92	\$7,393.30	<input type="checkbox"/>
33060301	Level and Compact Working Surface	8,833.00	CY	0.00	1.95	3.70	\$49,898.50	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	1,771.71	LF	0.04	0.58	0.15	\$1,382.82	<input type="checkbox"/>
33080507	Clay 10E-7, 6" Lifts, Off-Site	16,589.00	CY	5.95	5.86	7.13	\$314,132.62	<input type="checkbox"/>
33080513	Drainage Netting, Geotextile Fabric Heat-bonded 2 Sides	175,961.90	SF	0.36	0.05	0.00	\$72,091.59	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	175,961.90	SF	0.25	1.00	0.09	\$235,736.17	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$945,399.00</b>	
<b>Total Technology Cost</b>							<b>\$945,399.00</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
Total Element Cost							\$18,089.47	
Total Technology Cost							\$18,089.47	

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	

**Element:** Capping

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18050402	Seeding, Vegetative Cover	1.00	ACRE	1,889.64	71.35	48.92	\$2,009.90	<input type="checkbox"/>
18050409	Fertilize, 800 Lbs/Acre, Push Rotary	8.00	ACRE	34.10	27.25	8.46	\$558.44	<input type="checkbox"/>
18050415	Mowing	22.00	ACRE	0.00	18.54	6.30	\$546.56	<input type="checkbox"/>
33220106	Staff Engineer	7.00	HR	0.00	26.31	0.00	\$184.20	<input type="checkbox"/>
33220112	Field Technician	33.00	HR	0.00	17.66	0.00	\$582.78	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,881.88</b>	
<b>Total Technology Cost</b>							<b>\$3,881.88</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$3,765.42</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

**Element:** Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
Total Element Cost							\$9,316.19	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
Total Element Cost							\$5,116.08	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

Cost Database Date: 2001

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
Total Element Cost							\$7,725.45	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
Total Element Cost							\$3,216.54	
Total Technology Cost							\$10,941.99	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$158,921.66</b>	
<b>Total Technology Cost</b>							<b>\$158,921.66</b>	
<b>Total Phase Element Cost</b>							<b>\$1,634,340.26</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Containment Alternatives  
**ID:** Containment Alternatives  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL III.e - RCRA C Cap w/ Biointrusion Barrier	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> None
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> None
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults

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## Phase Element Technology Cost Detail Report (without Markups)

**Description:** Under this alternative, a bio-intrusion barrier composed of a layer of cobbles would be included in the RCRA Subtitle C cap. EPA recommends that a 3-ft cobble barrier be placed between the vegetation/soil layer and the drainage layer. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	97,554.30	0.00	\$97,554.30	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	97,554.30	0.00	\$97,554.30	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	121,942.88	0.00	\$121,942.88	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	12,194.29	0.00	\$12,194.29	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	12,194.29	0.00	\$12,194.29	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	1,707.20	0.00	\$1,707.20	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	121,942.88	0.00	\$121,942.88	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$465,090.12</b>	
<b>Total Technology Cost</b>							<b>\$465,090.12</b>	

Cost Database Date: 2001

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Access Roads

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010102	Medium Brush without Grub, Clearing	5.81	ACRE	0.00	69.06	63.00	\$767.28	<input type="checkbox"/>
17030103	Rough Grading, 14G, 1 Pass	33,733.33	SY	0.00	0.31	0.68	\$33,449.97	<input type="checkbox"/>
17030108	Fine Grading, 130G, 2 Passes	13,493.33	SY	0.00	0.07	0.12	\$2,571.83	<input type="checkbox"/>
17030202	Ditch Excavation, Normal Soil, Haul Spoil 1 Mile	7,308.89	CY	0.00	1.59	0.96	\$18,602.59	<input type="checkbox"/>
17030506	Compact Sand Subgrade (Wet & 2 Passes)	16,866.67	SY	0.00	0.15	0.25	\$6,682.57	<input type="checkbox"/>
19030401	18' Complete, 24" Corrugated Metal Pipe Culvert with Headwalls	4.00	EA	2,487.47	1,208.27	306.16	\$16,007.61	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$78,081.85</b>	
<b>Total Technology Cost</b>							<b>\$78,081.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Capping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030422	Unclassified Fill, 6" Lifts, On-Site, Includes Spreading and Compaction	35,391.85	CY	0.28	2.10	4.35	\$237,882.79	<input type="checkbox"/>
17030430	Gravel, 6" Lifts	13,313.00	CY	37.50	3.18	1.56	\$562,289.20	<input type="checkbox"/>
18050302	Topsoil, 6" Lifts, On-Site	3,702.90	CY	0.01	1.98	5.27	\$26,881.20	<input type="checkbox"/>
18050402	Seeding, Vegetative Cover	3.65	ACRE	1,889.64	87.01	48.92	\$7,393.30	<input type="checkbox"/>
33060301	Level and Compact Working Surface	8,833.00	CY	0.00	1.95	3.70	\$49,898.50	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	1,771.71	LF	0.04	0.58	0.15	\$1,382.82	<input type="checkbox"/>
33080507	Clay 10E-7, 6" Lifts, Off-Site	16,589.00	CY	5.95	5.86	7.13	\$314,132.62	<input type="checkbox"/>
33080513	Drainage Netting, Geotextile Fabric Heat-bonded 2 Sides	351,923.80	SF	0.36	0.05	0.00	\$144,183.19	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	175,961.90	SF	0.25	1.00	0.09	\$235,736.17	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$1,579,779.79</b>	
<b>Total Technology Cost</b>							<b>\$1,579,779.79</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

Cost Database Date: 2001

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	

**Element:** Capping

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18050402	Seeding, Vegetative Cover	1.00	ACRE	1,889.64	71.35	48.92	\$2,009.90	<input type="checkbox"/>
18050409	Fertilize, 800 Lbs/Acre, Push Rotary	8.00	ACRE	34.10	27.25	8.46	\$558.44	<input type="checkbox"/>
18050415	Mowing	22.00	ACRE	0.00	18.54	6.30	\$546.56	<input type="checkbox"/>
33220106	Staff Engineer	7.00	HR	0.00	26.31	0.00	\$184.20	<input type="checkbox"/>
33220112	Field Technician	33.00	HR	0.00	17.66	0.00	\$582.78	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,881.88</b>	
<b>Total Technology Cost</b>							<b>\$3,881.88</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$3,765.42</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$7,725.45</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,216.54</b>	
<b>Total Technology Cost</b>							<b>\$10,941.99</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$158,921.66</b>	
<b>Total Technology Cost</b>							<b>\$158,921.66</b>	
<b>Total Phase Element Cost</b>							<b>\$2,419,941.55</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Excavation Alternatives - Option A  
**ID:** Excavation Alternatives - Option A  
**Type:** None

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## Phase Element

<b>Name:</b> MWL V.a - Complete Excavation w/ ARS	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, the landfill would be excavated and the wastes would be placed in permanent, aboveground,	

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## **Phase Element Technology Cost Detail Report (without Markups)**

retrievable storage. Secure, high bay warehouses for processing and storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote handling, and/or robotic equipment required for excavation of the classified area are included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	
<b>Total Technology Cost</b>							<b>\$0.00</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$0.00</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	201.51	CY	0.00	71.34	0.00	\$14,376.03	<input type="checkbox"/>
17030279	4 CY, Crawler-mounted, Hydraulic Excavator	66,783.70	CY	0.00	1.35	3.02	\$291,424.05	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	1,749.82	BCY	21.29	1.17	1.28	\$41,554.72	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	83,731.52	CY	4.95	2.21	2.70	\$825,509.09	<input type="checkbox"/>
33020217	Gamma Spectroscopy	212.00	EA	77.04	0.00	0.00	\$16,333.33	<input type="checkbox"/>
33020401	Disposable Materials per Sample	212.00	EA	7.22	0.00	0.00	\$1,530.92	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	212.00	EA	21.04	0.00	0.00	\$4,461.03	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	212.00	EA	570.45	0.00	0.00	\$120,934.68	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	212.00	EA	148.07	0.00	0.00	\$31,390.61	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	212.00	EA	176.56	0.00	0.00	\$37,430.53	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	212.00	EA	260.02	0.00	0.00	\$55,124.98	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	212.00	EA	38.52	0.00	0.00	\$8,166.66	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	212.00	EA	59.39	0.00	0.00	\$12,590.28	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	212.00	EA	73.83	0.00	0.00	\$15,652.79	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	212.00	EA	72.23	0.00	0.00	\$15,312.51	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	623,967.30	SF	0.10	0.04	0.00	\$89,040.14	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	59,700.00	CY	1,000.00	0.00	0.00	\$59,700,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	20,861.00	CY	10,000.00	0.00	0.00	\$208,610,000.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$269,891,437.55</b>	
<b>Total Technology Cost</b>							<b>\$269,891,437.55</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grapppler	364.00	EA	0.00	29.84	24.51	\$19,784.60	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	364.00	EA	118.57	0.00	0.00	\$43,159.88	<input type="checkbox"/>
Total Element Cost							\$156,479.02	
Total Technology Cost							\$156,479.02	

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Professional Labor Management

Element: Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	2,036,060.00	0.00	\$2,036,060.00	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	1,628,848.00	0.00	\$1,628,848.00	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	5,090,150.00	0.00	\$5,090,150.00	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	1,018,030.00	0.00	\$1,018,030.00	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	1,018,030.00	0.00	\$1,018,030.00	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	20,360.60	0.00	\$20,360.60	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	2,036,060.00	0.00	\$2,036,060.00	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$12,847,538.60</b>	
<b>Total Technology Cost</b>							<b>\$12,847,538.60</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Transportation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	54,023.00	EA	0.00	32.86	2.91	\$1,932,397.31	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	364.00	EA	0.00	2.73	1.62	\$1,584.60	<input type="checkbox"/>
33190229	Van Trailer Transportation Hazardous Waste Minimum Charge	5,882.00	EA	66.71	0.00	0.00	\$392,388.22	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	8,099.00	EA	668.00	0.00	0.00	\$5,410,132.00	<input checked="" type="checkbox"/>
95010302	4 ft X 2 ft X 7 ft Shipping Box wi Liner	45,924.00	EA	668.00	0.00	0.00	\$30,677,232.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	115,333.00	CY	0.00	197.58	0.00	\$22,787,494.14	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$61,201,228.27</b>	
<b>Total Technology Cost</b>							<b>\$61,201,228.27</b>	

Cost Database Date: 2001

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	34,253.33	CY	4.95	2.21	2.70	\$337,703.56	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	255,255.80	SF	0.10	0.04	0.00	\$36,425.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,160,280.14</b>	
<b>Total Technology Cost</b>							<b>\$75,160,280.14</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$420,059,550.28	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Excavation Alternatives - Option B  
**ID:** Excavation Alternatives - Option B  
**Type:** None

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## Phase Element

<b>Name:</b> MWL V.a - Complete Excavation w/ ARS	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> System Defaults
<b>Description:</b> Under this alternative, the landfill would be excavated and the wastes would be placed in permanent, aboveground,	

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## **Phase Element Technology Cost Detail Report (without Markups)**

retrievable storage. Secure, high bay warehouses for processing and storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote handling, and/or robotic equipment required for excavation of the classified area are included. All soils, including contaminated soils, will be placed in the excavation as backfill.

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Cleanup and Landscaping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
Total Element Cost							\$18,507.85	
Total Technology Cost							\$18,507.85	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Operations and Maintenance (12 - months only)

**Element:** Miscellaneous

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
99020110	Annual Maintenance Materials and Labor	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$0.00</b>	
<b>Total Technology Cost</b>							<b>\$0.00</b>	
<b>Runtime Percent Cost Adjustment</b>							<b>97%</b>	
<b>O &amp; M Total Cost</b>							<b>\$0.00</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	1,779,827.00	0.00	\$1,779,827.00	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	1,423,861.63	0.00	\$1,423,861.63	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	4,449,567.50	0.00	\$4,449,567.50	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	889,913.50	0.00	\$889,913.50	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	889,913.50	0.00	\$889,913.50	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	17,798.27	0.00	\$17,798.27	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	1,779,827.00	0.00	\$1,779,827.00	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$11,230,708.39</b>	
<b>Total Technology Cost</b>							<b>\$11,230,708.39</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grapppler	364.00	EA	0.00	29.84	24.51	\$19,784.60	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	364.00	EA	118.57	0.00	0.00	\$43,159.88	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$156,479.02</b>	
<b>Total Technology Cost</b>							<b>\$156,479.02</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Transportation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	8,099.00	EA	0.00	32.86	2.91	\$289,700.42	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	364.00	EA	0.00	2.73	1.62	\$1,584.60	<input type="checkbox"/>
33190229	Van Trailer Transportation Hazardous Waste Minimum Charge	1,198.00	EA	66.71	0.00	0.00	\$79,918.58	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	8,099.00	EA	668.00	0.00	0.00	\$5,410,132.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	23,486.00	CY	0.00	197.58	0.00	\$4,640,363.88	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$10,421,699.48</b>	
<b>Total Technology Cost</b>							<b>\$10,421,699.48</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	201.51	CY	0.00	71.34	0.00	\$14,376.03	<input type="checkbox"/>
17030279	4 CY, Crawler-mounted, Hydraulic Excavator	66,783.70	CY	0.00	1.35	3.02	\$291,424.05	<input type="checkbox"/>
17030415	Backfill with Excavated Material	61,626.40	CY	0.28	5.28	1.16	\$413,993.82	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	1,749.82	BCY	21.29	1.17	1.28	\$41,554.72	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	16,746.30	CY	4.95	2.21	2.70	\$165,101.78	<input type="checkbox"/>
33020217	Gamma Spectroscopy	212.00	EA	77.04	0.00	0.00	\$16,333.33	<input type="checkbox"/>
33020401	Disposable Materials per Sample	212.00	EA	7.22	0.00	0.00	\$1,530.92	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	212.00	EA	21.04	0.00	0.00	\$4,461.03	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	212.00	EA	570.45	0.00	0.00	\$120,934.68	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	212.00	EA	148.07	0.00	0.00	\$31,390.61	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	212.00	EA	176.56	0.00	0.00	\$37,430.53	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	212.00	EA	260.02	0.00	0.00	\$55,124.98	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	212.00	EA	38.52	0.00	0.00	\$8,166.66	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	212.00	EA	59.39	0.00	0.00	\$12,590.28	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	212.00	EA	73.83	0.00	0.00	\$15,652.79	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	212.00	EA	72.23	0.00	0.00	\$15,312.51	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	124,793.50	SF	0.10	0.04	0.00	\$17,808.03	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	59,700.00	CY	1,000.00	0.00	0.00	\$59,700,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	20,861.00	CY	10,000.00	0.00	0.00	\$208,610,000.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$269,573,791.96</b>	
<b>Total Technology Cost</b>							<b>\$269,573,791.96</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030415	Backfill with Excavated Material	28,992.02	CY	0.28	5.28	1.16	\$194,762.59	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	2,740.27	CY	4.95	2.21	2.70	\$27,016.32	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	20,420.46	SF	0.10	0.04	0.00	\$2,914.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,010,844.49</b>	
<b>Total Technology Cost</b>							<b>\$75,010,844.49</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$367,196,110.04	

Cost Database Date: 2001

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Excavation Alternatives - Option A  
**ID:** Excavation Alternatives - Option A  
**Type:** None

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## Phase Element

<b>Name:</b> MWL V.b - Complete Excavation With Offsite Disp.	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A

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## Phase Element Technology Cost Detail Report (without Markups)

**Description:** Under this alternative, the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classified area are included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	3,166,428.50	0.00	\$3,166,428.50	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	2,533,142.75	0.00	\$2,533,142.75	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	7,916,071.00	0.00	\$7,916,071.00	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	1,583,214.25	0.00	\$1,583,214.25	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	1,583,214.25	0.00	\$1,583,214.25	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	31,664.29	0.00	\$31,664.29	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	3,166,428.50	0.00	\$3,166,428.50	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$19,980,163.54</b>	
<b>Total Technology Cost</b>							<b>\$19,980,163.54</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Off-site Transportation and Landfill Disposal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	54,023.00	EA	0.00	22.04	2.18	\$1,308,593.73	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	364.00	EA	0.00	2.73	1.62	\$1,584.60	<input type="checkbox"/>
95010201	Low Level Radioactive Waste Shipping & Disposal	91,847.00	CY	673.92	0.00	0.00	\$61,897,530.24	<input checked="" type="checkbox"/>
95010202	Mixed Waste Shipping & Disposal	23,486.00	CY	6,739.20	0.00	0.00	\$158,276,851.20	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	8,099.00	EA	668.00	0.00	0.00	\$5,410,132.00	<input checked="" type="checkbox"/>
95010302	4 ft X 2 ft X 7 ft Shipping Box wi Liner	45,924.00	EA	668.00	0.00	0.00	\$30,677,232.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	115,333.00	CY	0.00	197.58	0.00	\$22,787,494.14	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$280,359,417.91</b>	
<b>Total Technology Cost</b>							<b>\$280,359,417.91</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	364.00	EA	0.00	29.84	24.51	\$19,784.60	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	364.00	EA	118.57	0.00	0.00	\$43,159.88	<input type="checkbox"/>
Total Element Cost							\$156,479.02	
Total Technology Cost							\$156,479.02	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	201.51	CY	0.00	71.34	0.00	\$14,376.03	<input type="checkbox"/>
17030279	4 CY, Crawler-mounted, Hydraulic Excavator	66,783.70	CY	0.00	1.35	3.02	\$291,424.05	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	1,749.82	BCY	21.29	1.17	1.28	\$41,554.72	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	83,731.52	CY	4.95	2.21	2.70	\$825,509.09	<input type="checkbox"/>
33020217	Gamma Spectroscopy	100.00	EA	77.04	0.00	0.00	\$7,704.40	<input type="checkbox"/>
33020401	Disposable Materials per Sample	100.00	EA	7.22	0.00	0.00	\$722.13	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	100.00	EA	21.04	0.00	0.00	\$2,104.26	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	100.00	EA	570.45	0.00	0.00	\$57,044.66	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	100.00	EA	148.07	0.00	0.00	\$14,806.89	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	100.00	EA	176.56	0.00	0.00	\$17,655.91	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	100.00	EA	260.02	0.00	0.00	\$26,002.35	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	100.00	EA	38.52	0.00	0.00	\$3,852.20	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	100.00	EA	59.39	0.00	0.00	\$5,938.81	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	100.00	EA	73.83	0.00	0.00	\$7,383.39	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	100.00	EA	72.23	0.00	0.00	\$7,222.88	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	623,967.30	SF	0.10	0.04	0.00	\$89,040.14	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	66,784.00	CY	1,000.00	0.00	0.00	\$66,784,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	20,861.00	CY	10,000.00	0.00	0.00	\$208,610,000.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$276,806,947.13</b>	
<b>Total Technology Cost</b>							<b>\$276,806,947.13</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	34,253.33	CY	4.95	2.21	2.70	\$337,703.56	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	255,255.80	SF	0.10	0.04	0.00	\$36,425.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,160,280.14</b>	
<b>Total Technology Cost</b>							<b>\$75,160,280.14</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$55,616.49</b>	
<b>Total Technology Cost</b>							<b>\$55,616.49</b>	
<b>Total Phase Element Cost</b>							<b>\$653,265,874.44</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study Al

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

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## Site

**Name:** Excavation Alternatives - Option B  
**ID:** Excavation Alternatives - Option B  
**Type:** None

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## Phase Element

<b>Name:</b> MWL V.b - Complete Excavation With Offsite Disp.	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A

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## **Phase Element Technology Cost Detail Report (without Markups)**

**Description:** Under this alternative, the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classified area are included. Under Option B, all soils (including contaminated soils) will be returned to the excavation as backfill.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	2,570,344.00	0.00	\$2,570,344.00	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	2,056,275.25	0.00	\$2,056,275.25	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	6,425,860.00	0.00	\$6,425,860.00	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	1,285,172.00	0.00	\$1,285,172.00	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	1,285,172.00	0.00	\$1,285,172.00	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	25,703.44	0.00	\$25,703.44	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	2,570,344.00	0.00	\$2,570,344.00	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$16,218,870.69</b>	
<b>Total Technology Cost</b>							<b>\$16,218,870.69</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
Total Element Cost							\$18,089.47	
Total Technology Cost							\$18,089.47	

Cost Database Date: 2001

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Off-site Transportation and Landfill Disposal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	8,099.00	EA	0.00	22.04	2.18	\$196,181.27	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	364.00	EA	0.00	2.73	1.62	\$1,584.60	<input type="checkbox"/>
95010202	Mixed Waste Shipping & Disposal	23,486.00	CY	6,739.20	0.00	0.00	\$158,276,851.20	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	8,099.00	EA	668.00	0.00	0.00	\$5,410,132.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	23,486.00	CY	0.00	197.58	0.00	\$4,640,363.88	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$168,525,112.95</b>	
<b>Total Technology Cost</b>							<b>\$168,525,112.95</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	364.00	EA	0.00	29.84	24.51	\$19,784.60	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	364.00	EA	118.57	0.00	0.00	\$43,159.88	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$156,479.02</b>	
<b>Total Technology Cost</b>							<b>\$156,479.02</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Cleanup and Landscaping

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	201.51	CY	0.00	71.34	0.00	\$14,376.03	<input type="checkbox"/>
17030279	4 CY, Crawler-mounted, Hydraulic Excavator	66,783.70	CY	0.00	1.35	3.02	\$291,424.05	<input type="checkbox"/>
17030415	Backfill with Excavated Material	61,626.40	CY	0.28	5.28	1.16	\$413,993.82	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	1,749.82	BCY	21.29	1.17	1.28	\$41,554.72	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	16,746.30	CY	4.95	2.21	2.70	\$165,101.78	<input type="checkbox"/>
33020217	Gamma Spectroscopy	212.00	EA	77.04	0.00	0.00	\$16,333.33	<input type="checkbox"/>
33020401	Disposable Materials per Sample	212.00	EA	7.22	0.00	0.00	\$1,530.92	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	212.00	EA	21.04	0.00	0.00	\$4,461.03	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	212.00	EA	570.45	0.00	0.00	\$120,934.68	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	212.00	EA	148.07	0.00	0.00	\$31,390.61	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	212.00	EA	176.56	0.00	0.00	\$37,430.53	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	212.00	EA	260.02	0.00	0.00	\$55,124.98	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	212.00	EA	38.52	0.00	0.00	\$8,166.66	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	212.00	EA	59.39	0.00	0.00	\$12,590.28	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	212.00	EA	73.83	0.00	0.00	\$15,652.79	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	212.00	EA	72.23	0.00	0.00	\$15,312.51	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	124,793.50	SF	0.10	0.04	0.00	\$17,808.03	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	59,700.00	CY	1,000.00	0.00	0.00	\$59,700,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	20,861.00	CY	10,000.00	0.00	0.00	\$208,610,000.00	<input checked="" type="checkbox"/>
Total Element Cost							\$269,573,791.96	
Total Technology Cost							\$269,573,791.96	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030415	Backfill with Excavated Material	28,992.02	CY	0.28	5.28	1.16	\$194,762.59	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	2,740.27	CY	4.95	2.21	2.70	\$27,016.32	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	20,420.46	SF	0.10	0.04	0.00	\$2,914.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,010,844.49</b>	
<b>Total Technology Cost</b>							<b>\$75,010,844.49</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$530,287,685.81	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Excavation Alternatives - Option A  
**ID:** Excavation Alternatives - Option A  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL V.c - Partial Excavation w/ ARS	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the classified area of the landfill would be excavated and the wastes would be placed in	

Cost Database Date: 2001

Cost Type: User-Defined

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## **Phase Element Technology Cost Detail Report (without Markups)**

permanent, aboveground retrievable storage. Secure, high bay warehouses for processing and storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote-handling and/or robotic equipment required for excavation of the classified area are included.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Drum Removal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	36.00	EA	0.00	29.84	24.51	\$1,956.72	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	36.00	EA	118.57	0.00	0.00	\$4,268.56	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$99,759.82</b>	
<b>Total Technology Cost</b>							<b>\$99,759.82</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	475,003.28	0.00	\$475,003.28	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	380,002.63	0.00	\$380,002.63	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	1,187,508.25	0.00	\$1,187,508.25	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	237,501.64	0.00	\$237,501.64	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	237,501.64	0.00	\$237,501.64	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	4,750.03	0.00	\$4,750.03	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	475,003.28	0.00	\$475,003.28	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,997,270.75</b>	
<b>Total Technology Cost</b>							<b>\$2,997,270.75</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	34,253.33	CY	4.95	2.21	2.70	\$337,703.56	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	255,255.80	SF	0.10	0.04	0.00	\$36,425.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,160,280.14</b>	
<b>Total Technology Cost</b>							<b>\$75,160,280.14</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Transportation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	16,979.00	EA	0.00	32.86	2.91	\$607,337.13	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	36.00	EA	0.00	2.73	1.62	\$156.72	<input type="checkbox"/>
33190229	Van Trailer Transportation Hazardous Waste Minimum Charge	1,774.00	EA	66.77	0.00	0.00	\$118,449.98	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	906.00	EA	668.00	0.00	0.00	\$605,208.00	<input checked="" type="checkbox"/>
95010302	4 ft X 2 ft X 7 ft Shipping Box wi Liner	16,073.00	EA	668.00	0.00	0.00	\$10,736,764.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	34,772.00	CY	0.00	197.58	0.00	\$6,870,112.67	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,938,028.50</b>	
<b>Total Technology Cost</b>							<b>\$18,938,028.50</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$97,997,925.91	

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Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Excavation Alternatives - Option B  
**ID:** Excavation Alternatives - Option B  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL V.c - Partial Excavation w/ ARS	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the classified area of the landfill would be excavated and the wastes would be placed in	

Cost Database Date: 2001

Cost Type: User-Defined

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## **Phase Element Technology Cost Detail Report (without Markups)**

permanent, aboveground retrievable storage. Secure, high bay warehouses for processing and storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote-handling and/or robotic equipment required for excavation of the classified area are included. Under Option B, all soils (including contaminated soils) will be returned to the excavation as backfill.

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grapppler	36.00	EA	0.00	29.84	24.51	\$1,956.72	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	36.00	EA	118.57	0.00	0.00	\$4,268.56	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$99,759.82</b>	
<b>Total Technology Cost</b>							<b>\$99,759.82</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	385,393.72	0.00	\$385,393.72	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	308,314.97	0.00	\$308,314.97	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	963,484.31	0.00	\$963,484.31	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	192,696.86	0.00	\$192,696.86	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	192,696.86	0.00	\$192,696.86	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	3,853.94	0.00	\$3,853.94	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	385,393.72	0.00	\$385,393.72	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,431,834.38</b>	
<b>Total Technology Cost</b>							<b>\$2,431,834.38</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Transportation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	906.00	EA	0.00	32.86	2.91	\$32,407.53	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	36.00	EA	0.00	2.73	1.62	\$156.72	<input type="checkbox"/>
33190229	Van Trailer Transportation Hazardous Waste Minimum Charge	134.00	EA	66.77	0.00	0.00	\$8,947.18	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	906.00	EA	668.00	0.00	0.00	\$605,208.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	2,626.00	CY	0.00	197.58	0.00	\$518,834.58	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$1,165,554.00</b>	
<b>Total Technology Cost</b>							<b>\$1,165,554.00</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030415	Backfill with Excavated Material	28,992.02	CY	0.28	5.28	1.16	\$194,762.59	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	2,740.27	CY	4.95	2.21	2.70	\$27,016.32	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	20,420.46	SF	0.10	0.04	0.00	\$2,914.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,010,844.49</b>	
<b>Total Technology Cost</b>							<b>\$75,010,844.49</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$55,616.49</b>	
<b>Total Technology Cost</b>							<b>\$55,616.49</b>	
<b>Total Phase Element Cost</b>							<b>\$79,510,579.39</b>	

Cost Database Date: 2001

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Excavation Alternatives - Option A  
**ID:** Excavation Alternatives - Option A  
**Type:** None

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## Phase Element

<b>Name:</b> MWL V.d - Partial Excavation With Offsite Disp.	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the classified area of the landfill would be excavated and the wastes would be shipped to offsite,	

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## **Phase Element Technology Cost Detail Report (without Markups)**

licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classified area are included.

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Professional Labor Management

Element: Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	671,219.94	0.00	\$671,219.94	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	536,975.94	0.00	\$536,975.94	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	1,678,049.75	0.00	\$1,678,049.75	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	335,609.97	0.00	\$335,609.97	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	335,609.97	0.00	\$335,609.97	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	6,712.20	0.00	\$6,712.20	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	671,219.94	0.00	\$671,219.94	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,235,397.70</b>	
<b>Total Technology Cost</b>							<b>\$4,235,397.70</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Drum Removal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	36.00	EA	0.00	29.84	24.51	\$1,956.72	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	36.00	EA	118.57	0.00	0.00	\$4,268.56	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$99,759.82</b>	
<b>Total Technology Cost</b>							<b>\$99,759.82</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	34,253.33	CY	4.95	2.21	2.70	\$337,703.56	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	255,255.80	SF	0.10	0.04	0.00	\$36,425.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,160,280.14</b>	
<b>Total Technology Cost</b>							<b>\$75,160,280.14</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Off-site Transportation and Landfill Disposal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	16,979.00	EA	0.00	32.86	2.91	\$607,337.13	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	36.00	EA	0.00	2.73	1.62	\$156.72	<input type="checkbox"/>
95010201	Low Level Radioactive Waste Shipping & Disposal	32,147.00	CY	673.92	0.00	0.00	\$21,664,506.24	<input checked="" type="checkbox"/>
95010202	Mixed Waste Shipping & Disposal	2,626.00	CY	6,739.20	0.00	0.00	\$17,697,139.20	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	906.00	EA	668.00	0.00	0.00	\$605,208.00	<input checked="" type="checkbox"/>
95010302	4 ft X 2 ft X 7 ft Shipping Box wi Liner	16,073.00	EA	668.00	0.00	0.00	\$10,736,764.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	34,772.00	CY	0.00	197.58	0.00	\$6,870,251.76	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$58,181,363.05</b>	
<b>Total Technology Cost</b>							<b>\$58,181,363.05</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$138,479,387.41	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Excavation Alternatives - Option B  
**ID:** Excavation Alternatives - Option B  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL V.d - Partial Excavation With Offsite Disp.	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2006	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the classified area of the landfill would be excavated and the wastes would be shipped to offsite,	

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## **Phase Element Technology Cost Detail Report (without Markups)**

licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classied area are included. Under Option B, all soils (included contaminated soils) are returned to the excavation as backfill.

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	473,834.72	0.00	\$473,834.72	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	379,067.78	0.00	\$379,067.78	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	1,184,586.75	0.00	\$1,184,586.75	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	236,917.36	0.00	\$236,917.36	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	236,917.36	0.00	\$236,917.36	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	4,738.35	0.00	\$4,738.35	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	473,834.72	0.00	\$473,834.72	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,989,897.03</b>	
<b>Total Technology Cost</b>							<b>\$2,989,897.03</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
Total Element Cost							\$18,089.47	
Total Technology Cost							\$18,089.47	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	36.00	EA	0.00	29.84	24.51	\$1,956.72	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	36.00	EA	118.57	0.00	0.00	\$4,268.56	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$99,759.82</b>	
<b>Total Technology Cost</b>							<b>\$99,759.82</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Off-site Transportation and Landfill Disposal

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	906.00	EA	0.00	32.86	2.91	\$32,407.53	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	36.00	EA	0.00	2.73	1.62	\$156.72	<input type="checkbox"/>
95010202	Mixed Waste Shipping & Disposal	2,626.00	CY	6,739.20	0.00	0.00	\$17,697,139.20	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	906.00	EA	668.00	0.00	0.00	\$605,208.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	2,626.00	CY	0.00	197.58	0.00	\$518,845.08	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,853,756.53</b>	
<b>Total Technology Cost</b>							<b>\$18,853,756.53</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030415	Backfill with Excavated Material	28,992.02	CY	0.28	5.28	1.16	\$194,762.59	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	2,740.27	CY	4.95	2.21	2.70	\$27,016.32	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	20,420.46	SF	0.10	0.04	0.00	\$2,914.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	1,000.00	0.00	0.00	\$27,354,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	10,000.00	0.00	0.00	\$26,260,000.00	<input checked="" type="checkbox"/>
95010501	Robotics Excavation of the MWL Classified Area	1.00	EA	20,811,193.00	0.00	0.00	\$20,811,193.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$75,010,844.49</b>	
<b>Total Technology Cost</b>							<b>\$75,010,844.49</b>	

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	
Total Phase Element Cost							\$97,756,844.57	

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# Phase Element Technology Cost Detail Report (without Markups)

Folder: MWL Corrective Measures Study AI

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## Project

**Name:** MWL Corrective Measures Study Alternatives  
**ID:** MWL Corrective Measures Study Alternatives  
**Location:** ALBUQUERQUE, NEW MEXICO  
**Modifiers:**     **Material** 0.935  
                  **Labor** 1.031  
                  **Equipment** 0.949  
**Category:** None  
**Report Option:** Fiscal Year

---

## Site

**Name:** Excavation Alternatives - Option A  
**ID:** Excavation Alternatives - Option A  
**Type:** None

---

## Phase Element

<b>Name:</b> MWL V.e - Future Excavation	<b>Media/Waste Type:</b> N/A
<b>Type:</b> Remedial Action	<b>Secondary Media/Waste Type:</b> N/A
<b>Labor Rate Group:</b> System Labor Rate	<b>Contaminant:</b> Low Level Radioactive
<b>Analysis Rate Group:</b> System Analysis Rate	<b>Secondary Contaminant:</b> Metals
<b>Approach:</b> Ex Situ	<b>Markup Template:</b> System Defaults
<b>Start Date:</b> 10/1/2039	<b>O&amp;M Markup Template:</b> N/A
<b>Description:</b> Under this alternative, the landfill would be excavated 50 years after landfill closure. Secure, high bay warehouses for	

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## **Phase Element Technology Cost Detail Report (without Markups)**

processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation are not included. It is assumed that remote handling and robotics will not be required during future excavation. Because tritium activities will have decayed to background ranges, all soils will be returned to the excavation as backfill. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring in the interim period until excavation are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Drum Removal

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030276	1 CY, Crawler-mounted, Hydraulic Excavator	806.67	CY	0.00	3.31	2.93	\$5,038.38	<input type="checkbox"/>
33080572	60 Mil Polymeric Liner, High-density Polyethylene	25,348.35	SF	0.38	2.89	0.22	\$88,496.16	<input type="checkbox"/>
33100101	Transfer Drums to Staging Area with Grappler	364.00	EA	0.00	29.84	24.51	\$19,784.60	<input type="checkbox"/>
33190972	Steel Overpack, 85 Gallon, UN Code 1A2/X440/S	364.00	EA	118.57	0.00	0.00	\$43,159.88	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$156,479.02</b>	
<b>Total Technology Cost</b>							<b>\$156,479.02</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Professional Labor Management

**Element:** Professional Labor Percentage

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33220138	Project Management Labor Cost	1.00	LS	0.00	228,328.55	0.00	\$228,328.55	<input checked="" type="checkbox"/>
33220139	Planning Documents Labor Cost	1.00	LS	0.00	182,662.83	0.00	\$182,662.83	<input checked="" type="checkbox"/>
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	570,821.38	0.00	\$570,821.38	<input checked="" type="checkbox"/>
33220141	Reporting Labor Cost	1.00	LS	0.00	114,164.27	0.00	\$114,164.27	<input checked="" type="checkbox"/>
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	114,164.27	0.00	\$114,164.27	<input checked="" type="checkbox"/>
33220143	Public Notice Labor Cost	1.00	LS	0.00	2,283.29	0.00	\$2,283.29	<input checked="" type="checkbox"/>
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220145	Permitting Labor Cost	1.00	LS	0.00	228,328.55	0.00	\$228,328.55	<input checked="" type="checkbox"/>
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	<input type="checkbox"/>
				<b>Total Element Cost</b>		<b>\$1,440,753.13</b>		
				<b>Total Technology Cost</b>		<b>\$1,440,753.13</b>		

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# Phase Element Technology Cost Detail Report (without Markups)

Technology: Fencing

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
18040105	Boundary Fence, 5' Galvanized	1,801.00	LF	1.33	2.72	1.90	\$10,711.45	<input type="checkbox"/>
18040116	5' Swing Gate, 12' Double	1.00	EA	534.92	109.17	26.90	\$671.00	<input type="checkbox"/>
18040501	Hazardous Waste Signing	30.00	EA	14.73	36.54	0.00	\$1,538.27	<input type="checkbox"/>
33220112	Field Technician	240.00	HR	0.00	21.54	0.00	\$5,168.76	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,089.47</b>	
<b>Total Technology Cost</b>							<b>\$18,089.47</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Cleanup and Landscaping

**Element:** N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17040101	General Area Cleanup	25.00	ACRE	0.00	201.17	43.35	\$6,113.03	<input type="checkbox"/>
18050101	Area Preparation, 67% Level & 33% Slope	25.00	ACRE	0.00	29.16	36.19	\$1,633.78	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	25.00	ACRE	313.67	84.41	32.36	\$10,761.04	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$18,507.85</b>	
<b>Total Technology Cost</b>							<b>\$18,507.85</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Decontamination Facilities

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030109	Pad Subgrade Preparation	133.33	CY	0.00	2.56	2.93	\$731.72	<input type="checkbox"/>
17030257	Cat 215, 1.0 CY, Soil, Shallow, Trenching	2.49	CY	0.00	0.79	0.73	\$3.79	<input type="checkbox"/>
17030501	Compact Subgrade, 2 Lifts	133.33	CY	0.00	0.26	0.32	\$76.72	<input type="checkbox"/>
17030510	Dry Roll Gravel, Steel Roller	200.00	SY	0.00	0.70	0.30	\$199.84	<input type="checkbox"/>
18010102	Gravel, Delivered & Dumped	55.56	CY	17.74	2.98	1.86	\$1,254.78	<input type="checkbox"/>
18010103	Gravel (90%) & Sand Base (10%), with Calcium Chloride 3/4 - 1 Lb/CY	55.56	CY	17.70	3.32	1.96	\$1,276.96	<input type="checkbox"/>
18010201	Concrete Curb, 6" x 6"	166.00	LF	1.02	1.32	0.01	\$390.50	<input type="checkbox"/>
18020203	26" x 26", 5' Deep Area Drain with Grate	1.00	EA	1,374.82	1,533.90	28.90	\$2,937.62	<input type="checkbox"/>
18020321	6" Structural Slab on Grade	1,500.00	SF	2.24	3.22	0.19	\$8,474.85	<input type="checkbox"/>
19020313	5' x 5' x 5' Reinforced Concrete Sump	1.00	EA	1,321.01	2,184.04	94.73	\$3,599.77	<input type="checkbox"/>
19020604	12" x 12" CIP Concrete In-Ground Trench Drain with Metal Grate	28.00	LF	35.08	70.16	0.65	\$2,965.00	<input type="checkbox"/>
19040606	5,000 Gallon Steel Sump, Aboveground with Supports & Fittings	1.00	EA	4,044.81	1,793.22	207.74	\$6,045.78	<input type="checkbox"/>
33080503	Polymeric Liner Anchor Trench, 3' x 1.5'	199.20	LF	0.04	0.87	0.20	\$222.75	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33080532	8 oz/sy Erosion Control/Drainage Filter Fabric (80 Mil)	200.00	SY	0.61	0.71	0.03	\$269.26	<input type="checkbox"/>
33080571	40 Mil Polymeric Liner, High-density Polyethylene	1,800.00	SF	0.25	1.49	0.12	\$3,347.46	<input type="checkbox"/>
33170814	1,800 PSI Pressure Washer, 6 HP, 4.8 GPM	1.00	EA	1,528.40	0.00	0.00	\$1,528.40	<input type="checkbox"/>
33170822	8' x 36' Decontamination Trailer with 2 Showers, Fans	25.00	MO	2,057.00	0.00	0.00	\$51,425.00	<input type="checkbox"/>
33170823	Operation of Pressure Washer, Including Water, Soap, Electricity, Labor	1,040.00	HR	5.84	54.48	0.00	\$62,735.71	<input type="checkbox"/>
33199921	DOT Steel Drum, 55 Gallon	361.00	EA	67.85	0.00	0.00	\$24,494.93	<input type="checkbox"/>
33220112	Field Technician	16,640.00	HR	0.00	32.11	0.00	\$534,292.10	<input type="checkbox"/>
33231306	High Sump Level Switch for Avoiding Overflow	1.00	EA	187.00	226.23	0.00	\$413.23	<input type="checkbox"/>
33260623	(2 1/2", 4") PVC Double-wall Piping, with Fittings	30.00	LF	14.22	29.56	0.00	\$1,313.25	<input type="checkbox"/>
33290401	25 GPM, 1 1/2" Discharge, Cast-iron Sump Pump	1.00	EA	1,844.34	529.14	0.00	\$2,373.48	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$710,372.89</b>	
<b>Total Technology Cost</b>							<b>\$710,372.89</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Transportation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33170433	Load Shipping Boxes on Disposal Vehicle	8,099.00	EA	0.00	32.86	2.91	\$289,700.42	<input type="checkbox"/>
33190103	Load Drums on Disposal Vehicle	364.00	EA	0.00	2.73	1.62	\$1,584.60	<input type="checkbox"/>
33190229	Van Trailer Transportation Hazardous Waste Minimum Charge	1,198.00	EA	66.71	0.00	0.00	\$79,918.58	<input checked="" type="checkbox"/>
95010301	4 ft X 4 ft X 7 ft Shipping Box wi Liner	8,099.00	EA	668.00	0.00	0.00	\$5,410,132.00	<input checked="" type="checkbox"/>
95010407	Load Bulk Solid Waste Into Shipping Box: Level C	23,486.00	CY	0.00	197.58	0.00	\$4,640,363.88	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$10,421,699.48</b>	
<b>Total Technology Cost</b>							<b>\$10,421,699.48</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	48.78	CY	0.00	71.34	0.00	\$3,480.04	<input type="checkbox"/>
17030415	Backfill with Excavated Material	28,992.02	CY	0.28	5.28	1.16	\$194,762.59	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	520.91	BCY	21.29	1.17	1.28	\$12,370.57	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	2,740.27	CY	4.95	2.21	2.70	\$27,016.32	<input type="checkbox"/>
33020217	Gamma Spectroscopy	229.00	EA	77.04	0.00	0.00	\$17,643.08	<input type="checkbox"/>
33020401	Disposable Materials per Sample	229.00	EA	7.22	0.00	0.00	\$1,653.68	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	229.00	EA	21.04	0.00	0.00	\$4,818.76	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	229.00	EA	570.45	0.00	0.00	\$130,632.27	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	229.00	EA	148.07	0.00	0.00	\$33,907.78	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	229.00	EA	176.56	0.00	0.00	\$40,432.03	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	229.00	EA	260.02	0.00	0.00	\$59,545.38	<input type="checkbox"/>
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	229.00	EA	38.52	0.00	0.00	\$8,821.54	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	229.00	EA	59.39	0.00	0.00	\$13,599.87	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	229.00	EA	73.83	0.00	0.00	\$16,907.96	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	229.00	EA	72.23	0.00	0.00	\$16,540.40	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	20,420.46	SF	0.10	0.04	0.00	\$2,914.00	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	27,354.00	CY	100.00	0.00	0.00	\$2,735,400.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	2,626.00	CY	1,000.00	0.00	0.00	\$2,626,000.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,947,051.49</b>	
<b>Total Technology Cost</b>							<b>\$5,947,051.49</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Excavation

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030212	Hand Excavation, Sand/Gravel	201.51	CY	0.00	71.34	0.00	\$14,376.03	<input type="checkbox"/>
17030279	4 CY, Crawler-mounted, Hydraulic Excavator	66,783.70	CY	0.00	1.35	3.02	\$291,424.05	<input type="checkbox"/>
17030415	Backfill with Excavated Material	61,626.40	CY	0.28	5.28	1.16	\$413,993.82	<input type="checkbox"/>
17030418	Delivered & Dumped, Backfill with Stone	1,749.82	BCY	21.29	1.17	1.28	\$41,554.72	<input type="checkbox"/>
17030423	Unclassified Fill, 6" Lifts, Off-Site, Includes Delivery, Spreading, and Compaction	16,746.30	CY	4.95	2.21	2.70	\$165,101.78	<input type="checkbox"/>
33020217	Gamma Spectroscopy	212.00	EA	77.04	0.00	0.00	\$16,333.33	<input type="checkbox"/>
33020401	Disposable Materials per Sample	212.00	EA	7.22	0.00	0.00	\$1,530.92	<input type="checkbox"/>
33021102	Soil Moisture Content ASTM D2216	212.00	EA	21.04	0.00	0.00	\$4,461.03	<input type="checkbox"/>
33021705	Targeted TCLP (Metals, Volatiles, Semi-Volatiles only), Soil Analysis	212.00	EA	570.45	0.00	0.00	\$120,934.68	<input type="checkbox"/>
33021717	Pesticides/PCBs (SW 3550B/SW 8081/8082), Soil Analysis	212.00	EA	148.07	0.00	0.00	\$31,390.61	<input type="checkbox"/>
33021720	Volatile Organic Analysis (SW 5035/SW 8260B), Soil Analysis	212.00	EA	176.56	0.00	0.00	\$37,430.53	<input type="checkbox"/>
33021739	Semi-Volatile Organics, GC/MS (SW 8270C), with prep, Soil Analysis	212.00	EA	260.02	0.00	0.00	\$55,124.98	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021761	Metals, Furnace, 7000s, Per Each, Soil Analysis	212.00	EA	38.52	0.00	0.00	\$8,166.66	<input type="checkbox"/>
33022336	Vegetation/Soil/Sediment, Gross Beta - Total, Gas Flow Proportional Counting	212.00	EA	59.39	0.00	0.00	\$12,590.28	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	212.00	EA	73.83	0.00	0.00	\$15,652.79	<input type="checkbox"/>
33022352	Vegetation/Soil/Sediment, Gross Alpha - Total, Gas Flow Proportional Counting	212.00	EA	72.23	0.00	0.00	\$15,312.51	<input type="checkbox"/>
33080584	Plastic Laminate Waste Pile Cover	124,793.50	SF	0.10	0.04	0.00	\$17,808.03	<input type="checkbox"/>
33170803	Decontaminate Heavy Equipment	1.00	EA	0.00	605.23	0.00	\$605.23	<input type="checkbox"/>
95010410	Waste Characterization for Soils	59,700.00	CY	100.00	0.00	0.00	\$5,970,000.00	<input checked="" type="checkbox"/>
95010411	Waste Characterization for Debris	20,861.00	CY	1,000.00	0.00	0.00	\$20,861,000.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$28,094,791.96</b>	
<b>Total Technology Cost</b>							<b>\$28,094,791.96</b>	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Clear and Grub

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17010101	Light Brush without Grub, Clearing	25.00	ACRE	0.00	36.99	19.74	\$1,418.35	<input type="checkbox"/>
17010501	Dozer 105 HP D5, Grubbing & Stacking	10,083.00	CY	0.00	2.37	3.01	\$54,198.14	<input type="checkbox"/>
Total Element Cost							\$55,616.49	
Total Technology Cost							\$55,616.49	

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

Element: Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$7,725.45</b>	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,216.54</b>	
<b>Total Technology Cost</b>							<b>\$10,941.99</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Vadose Zone Monitoring System

Element: N/A

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	785.07	1,774.86	\$2,559.93	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	480.00	HR	0.00	21.54	0.00	\$10,337.52	<input type="checkbox"/>
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	750.00	LF	0.00	17.94	40.56	\$43,874.40	<input type="checkbox"/>
33231504	Surface Pad, Concrete, 2' x 2' x 4"	3.00	EA	32.79	81.59	5.00	\$358.14	<input type="checkbox"/>
33232301	5' Guard Posts, Cast Iron, Concrete Fill	12.00	EA	20.85	34.61	0.05	\$666.12	<input type="checkbox"/>
95010803	Three Neutron Access Tubes, installed by Resonant Sonic Drilling	1.00	SET	78,313.00	0.00	0.00	\$78,313.00	<input checked="" type="checkbox"/>
95010804	Vadose FLUTe Sampling System, 5 Ports, 250 ft Deep	3.00	EA	7,343.00	0.00	0.00	\$22,029.00	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$158,921.66</b>	
<b>Total Technology Cost</b>							<b>\$158,921.66</b>	

Cost Database Date: 2001

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020401	Disposable Materials per Sample	7.00	EA	7.22	0.00	0.00	\$50.55	<input type="checkbox"/>
33020402	Decontamination Materials per Sample	7.00	EA	6.45	0.00	0.00	\$45.13	<input type="checkbox"/>
33020561	Nylon Tubing, 1/4" Outside Diameter	2,525.00	LF	0.37	0.00	0.00	\$944.35	<input type="checkbox"/>
33021509	Water Quality Parameter Testing Device	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
33021601	Specific Conductance (EPA 120.1), Water Analysis	6.00	EA	12.44	0.00	0.00	\$74.61	<input type="checkbox"/>
33021602	pH (EPA 150.1), Water Analysis	6.00	EA	9.10	0.00	0.00	\$54.62	<input type="checkbox"/>
33021603	Total Dissolved Solids (EPA 160.1), Water Analysis	6.00	EA	14.88	0.00	0.00	\$89.29	<input type="checkbox"/>
33021607	Temperature (EPA 170.1), Water Analysis	6.00	EA	12.04	0.00	0.00	\$72.23	<input type="checkbox"/>
33021618	Volatile Organic Analysis (EPA 624), Water Analysis	7.00	EA	220.70	0.00	0.00	\$1,544.89	<input type="checkbox"/>
33021620	TAL Metals (EPA 6010/7000s), Water, Water Analysis	7.00	EA	348.71	0.00	0.00	\$2,440.96	<input type="checkbox"/>
33021651	Alkalinity (EPA 310.1/310.2), Water Analysis	6.00	EA	27.59	0.00	0.00	\$165.52	<input type="checkbox"/>
33021653	Chloride (EPA 300), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>

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## Phase Element Technology Cost Detail Report (without Markups)

Element: Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021662	Nitrogen, Nitrate & Nitrite (EPA 353.2), Water Analysis	6.00	EA	71.85	0.00	0.00	\$431.12	<input type="checkbox"/>
33021667	Sulfate (EPA 300.0), Water Analysis	6.00	EA	20.77	0.00	0.00	\$124.59	<input type="checkbox"/>
33022036	Documentation Package for QA Verification, Data & Benchwork	6.00	EA	122.79	0.00	0.00	\$736.73	<input type="checkbox"/>
33022106	Turbidity (EPA 180.1)	6.00	EA	13.99	0.00	0.00	\$83.97	<input type="checkbox"/>
33022271	Liquid, Gamma Isotopic, Gamma Spectroscopy	7.00	EA	150.48	0.00	0.00	\$1,053.34	<input type="checkbox"/>
33022284	Liquid, Tritium, (Direct Counting), Liquid Scintillation	7.00	EA	75.24	0.00	0.00	\$526.67	<input type="checkbox"/>
33022290	Liquid, Gross Alpha & Gross Beta - Total	6.00	EA	74.24	0.00	0.00	\$445.41	<input type="checkbox"/>
33230510	4" Submersible Pump Rental, Week	1.00	WK	195.72	0.00	0.00	\$195.72	<input type="checkbox"/>
33231186	Well Development Equipment Rental (weekly)	1.00	WK	204.77	0.00	0.00	\$204.77	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,613.83</b>	

Element: Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020603	Surface Soil Sampling Equipment	14.00	EA	433.98	0.00	0.00	\$6,075.72	<input type="checkbox"/>

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Element:** Surface Soil

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021102	Soil Moisture Content ASTM D2216	10.00	EA	26.30	0.00	0.00	\$263.03	<input type="checkbox"/>
33022342	Vegetation/Soil/Sediment, Gamma Isotopic, Gamma Spectroscopy	14.00	EA	120.38	0.00	0.00	\$1,685.34	<input type="checkbox"/>
33022351	Vegetation/Soil/Sediment, Tritium, Liquid Scintillation	14.00	EA	92.29	0.00	0.00	\$1,292.09	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9,316.19</b>	

**Element:** Air

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020315	Ambient Air Monitor, Monthly Rental	4.00	MO	797.67	0.00	0.00	\$3,190.69	<input type="checkbox"/>
33022235	Air, Gamma Isotopic, Gamma Spectroscopy	5.00	EA	124.39	0.00	0.00	\$621.97	<input type="checkbox"/>
33022240	Air, Gross Alpha & Gross Beta - Total, Gas Flow	5.00	EA	58.18	0.00	0.00	\$290.92	<input type="checkbox"/>
33029501	Tritium Analysis of Dessicant Column [From Air Sample]	5.00	LS	202.50	0.00	0.00	\$1,012.50	<input checked="" type="checkbox"/>
<b>Total Element Cost</b>							<b>\$5,116.08</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	48.00	MI	0.31	0.00	0.00	\$14.79	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	160.00	HR	0.00	21.54	0.00	\$3,445.84	<input type="checkbox"/>
33220114	Word Processing/Clerical	13.00	HR	0.00	16.98	0.00	\$220.71	<input type="checkbox"/>
33220115	Draftsman/CADD	13.00	HR	0.00	22.26	0.00	\$289.40	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$4,754.30</b>	
<b>Total Technology Cost</b>							<b>\$28,800.39</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

**Technology:** Monitoring (12 - months only)

**Element:** Groundwater

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33020561	Nylon Tubing, 1/4" Outside Diameter	25.00	LF	0.37	0.00	0.00	\$9.35	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$9.35</b>	

**Element:** General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
17030437	0.75 CY Backhoe with Front End Loader	8.00	HR	0.00	54.71	28.22	\$663.49	<input type="checkbox"/>
18040501	Hazardous Waste Signing	1.00	EA	14.73	36.54	0.00	\$51.28	<input type="checkbox"/>
18050401	Seeding, 67% Level & 33% Slope, Hydroseeding	0.50	ACRE	313.67	84.41	32.36	\$215.22	<input type="checkbox"/>
33010104	Car or Van Mileage Charge	32.00	MI	0.31	0.00	0.00	\$9.86	<input type="checkbox"/>
33220108	Project Scientist	8.00	HR	0.00	32.65	0.00	\$261.18	<input type="checkbox"/>
33220112	Field Technician	40.00	HR	0.00	21.54	0.00	\$861.46	<input type="checkbox"/>
33220114	Word Processing/Clerical	7.00	HR	0.00	16.98	0.00	\$118.85	<input type="checkbox"/>
33220115	Draftsman/CADD	7.00	HR	0.00	22.26	0.00	\$155.83	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$2,337.17</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
Total Technology Cost							\$2,346.52	

Cost Database Date: 2001

Cost Type: User-Defined

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## Phase Element Technology Cost Detail Report (without Markups)

Technology: Monitoring (12 - months only)

Element: Soil Gas

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33021122	Neutron (Moisture Content)- per linear foot	600.00	LF	0.51	0.00	0.00	\$303.54	<input type="checkbox"/>
33021829	Canister Samples By GC or GC/MS, TO-14	16.00	EA	390.04	0.00	0.00	\$6,240.56	<input type="checkbox"/>
33022285	Liquid, Tritium, (Distillation), Liquid Scintillation	16.00	EA	73.83	0.00	0.00	\$1,181.34	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$7,725.45</b>	

Element: General Monitoring

Assembly	Description	Quantity	Unit of Measure	Material Unit Cost	Labor Unit Cost	Equipment Unit Cost	Extended Cost	Cost Override
33010104	Car or Van Mileage Charge	40.00	MI	0.31	0.00	0.00	\$12.33	<input type="checkbox"/>
33220108	Project Scientist	24.00	HR	0.00	32.65	0.00	\$783.55	<input type="checkbox"/>
33220112	Field Technician	96.00	HR	0.00	21.54	0.00	\$2,067.50	<input type="checkbox"/>
33220114	Word Processing/Clerical	9.00	HR	0.00	16.98	0.00	\$152.80	<input type="checkbox"/>
33220115	Draftsman/CADD	9.00	HR	0.00	22.26	0.00	\$200.36	<input type="checkbox"/>
<b>Total Element Cost</b>							<b>\$3,216.54</b>	
<b>Total Technology Cost</b>							<b>\$10,941.99</b>	

Cost Database Date: 2001

Cost Type: User-Defined

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# Phase Element Technology Cost Detail Report (without Markups)

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Total Phase Element Cost	\$47,106,461.24
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