Underground Storage Tank Cleanup Fund

FY 2025-26 COST GUIDELINES Updates

The Underground Storage Tank Cleanup Fund (Cleanup Fund) has completed an update of the Cost Guidelines for FY 2025-26. This effort focused on updating labor rates and unit costs using the California Consumer Price Index (CPI), which will have an immediate impact on reimbursements. In addition, the update included stakeholder involvement, the addition of remediation costs, and integration of guidelines into a unified document.

The Cleanup Fund Guidelines now consist of this unified document for use to help determine whether costs generally are considered to be reasonable and necessary for reimbursement purposes. The FY2025-26 Cost Guidelines document includes only the current guidance rates for convenience. Previous cost guidelines with past rates remain accessible on the Cleanup Fund webpage.

In general, the information in the August 11, 2011, August 2, 2018, July 1, 2023, and current documents supersede the information provided in the October 1, 2001 document.

Methodology Used in the Update: The California CPI Inflation calculator uses the average CPI for a given calendar year. This data represents changes in prices of all goods and services purchased for consumption by urban households. While the Cleanup Fund thinks that this approach is generally valid, we also realize that some costs are influenced by factors other than simple inflation. Claimants still may provide justification showing that costs incurred are reasonable and necessary on a site-specific basis. The California CPI Inflation Calculator is available on the California Department of Industrial Relations website at: https://www.dir.ca.gov/OPRL/capriceindex.htm.

Background on the Cost Guidelines: The Cost Guidelines were developed pursuant to subdivision (h) of section 25299.57 of the Health and Safety Code, which states, in part, that the State Water Resources Control Board “shall develop a summary of expected costs for common remedial actions. The summary of expected costs may be used by claimants as a guide in the selection of supervision of consultants and contractors.”

Purpose of the Cost Guidelines: The primary purpose of the Cost Guidelines document is to provide guidance to claimants for evaluating proposed and incurred corrective action costs at sites eligible to participate in the Cleanup Fund. Specifically, these Guidelines may help claimants identify whether goods and services are potentially reimbursable and understand how the Cleanup Fund evaluates activities and costs. Claimants also will be able to judge whether they likely will be required to provide additional justification to support a given cost, or whether a call for assistance from the Cleanup Fund is in order.

The Cost Guidelines is a guideline only; it does not establish reimbursement limits for the listed items and activities. Similarly, reimbursement will be limited to the actual value and level of work performed and to actual costs paid to contractors. Further, the fact that the cost is within guidelines does not mean that the work was necessary, directed, or contributed to the advancement of the cleanup of a particular site or that it is eligible for Cleanup Fund reimbursement.

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Typical Personnel Labor Rates [Section 1] (Table 1.1)

Professional Staff Title/Classification	Billable Rate 2025 ($/hr)
Principal Engineer/Geologist	$ 241
Project Manager	$ 201
Senior Engineer/Geologist	$ 201
Project/Associate Engineer/Geologist	$ 173
Staff Engineer/Geologist	$ 144
Senior Technician	$ 134
Technician	$ 115
Drafts Person	$ 105
RR Analyst	$ 92
Clerical	$ 86

Lab Analysis (Soil & Water) [Section 2] (Table 2.1)

EPA Method (*See Note 1*)	Component	2025 ($/ea)
8015	Total Petroleum Hydrocarbons (TPH) - gasoline	$ 105
8015	Total Petroleum Hydrocarbons (TPH) - diesel/motor oil	$ 124
8020	BTEX/MTBE	$ 105
8015/8020	TPH/BTEX/MTBE (gasoline only)	$ 124
8260 (incl. Oxygenates)	Volatile Organic Compounds	$ 288
8270	Semi-Volatile Organic Compounds	$ 527
6010/7421	Total Lead (*See Note 2*)	$ 77
	Waste Characterization (Reactivity/Corrosivity/Ignitability)	$ 345
	5 LUFT Metals (*See Note 3*)	$ 153
	CAM 17 Metals (*See Note 3*)	$ 335

(***Note 1***) These EPA Methods are common terminology in practice used by industry today. Some substitutions, modifications, and alternatives to the precise EPA Method are common. Verify lab certification.

(***Note 2***) Lead analysis may be required when leaded gasoline was stored in the UST. Usually, a limited number of these tests are run. If the test is performed regularly, justification will be required.

(***Note 3***) Metal contamination is not typically an eligible substance, one screening sample is normally allowed if specifically required, or as needed for landfill disposal. Justification for additional sampling will be required.

On-Site Laboratories
[Section 3] (Table 3.1)

Flat Fee	Method / Component	2025 ($/unit)
Daily Rental Fee	EPA Method 8015/8020	$ 2,876
Daily Rental Fee	EPA Method 8015/8260	$ 3,834
Variable Fee	**Method / Component**	**2025 ($/unit)**
Mobilization/Daily Fee ($/day)	Includes daily mobilization, chemist, and all equipment, supplies and disposal	$ 766
Analysis Charges ($/each)	EPA Method 8015/8020	$ 96
Analysis Charges ($/each)	EPA Method 8015/8260	$ 220

Lab Analysis (Air)
[Section 4] (Table 4.1)

Component	2025 ($/each)
TPH	$ 115
BTEX/MTBE	$ 220
EPA Method 8260	$ 383

Supplies
[Section 5] (Tables 5.1 – 5.2)

Field Supplies (Table 5.1)

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Soil Sampling Liners (Brass)	2" x 6" each	$ 12
Soil Sampling Liners (Stainless Steel)	2" x 6" each	$ 20
Bailers (disposable) Polypropylene	1.5" O.D. each	$ 16
Tedlar Bags (1 liter)	each	$ 20
Film/Development	roll	At Cost

Supplies
[Section 5 cont.] (Table 5.2)

Well Supplies (Table 5.2)

2" PVC, Schedule 40

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
PVC Well Casing (10' lengths)	per foot	$ 7
PVC Well Screen 0.010" & 0.020" (Up to 5' Lengths)	per foot	$ 12
PVC Well Screen 0.010" & 0.020" (Up to 10' Lengths)	per foot	$ 20
Threaded Cap (Top or Bottom)	each	$ 16
Slip Cap	each	$ 20
Locking Cap	each	At Cost

4" PVC, Schedule 40

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
PVC Well Casing (10' lengths)	per foot	$ 12
PVC Well Screen 0.010" & 0.020" (Up to 5' Lengths)	per foot	$ 17
PVC Well Screen 0.010" & 0.020" (Up to 10' Lengths)	per foot	$ 14
Threaded Cap (Top or Bottom)	each	$ 26
Slip Cap	each	$ 16
Locking Cap	each	$ 42

Supplies
[Section 5 cont.] (Table 5.2 cont.)

Well Supplies (Table 5.2 cont.)

Concrete

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Ready Mix	90 lb. Bag	$ 10
Portland Cement Concrete	90 lb. Bag	$ 16
Sand Cement Slurry Backfill w/ Delivery	cubic yard	$ 115

Grout

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Bentonite Grout	50 lb. Bag	$ 20
Bentonite Chips	50 lb. Bag	$ 20
Bentonite Granular	50 lb. Bag	$ 20
Bentonite Tablets	50 lb. Bag	$ 77

Sand

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Monterey Sand	100 lb. Bag	$ 16
Silica Sand	100 lb. Bag	$ 16

Supplies
[Section 5 cont.] (Table 5.2 cont.)

Well Supplies (Table 5.2 cont.)

Well Covers

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Manholes (locking/tight/Traffic Rated)	8 inch (each)	$ 96
Manholes (locking/tight/Traffic Rated)	12 inch (each)	$ 144
Standpipe, Steel, Locking	8"dia.x 3' (each)	$ 192
Christy Box® or Equivalent	8 inch (each)	$ 144
Christy Box® or Equivalent	12 inch (each)	$ 192

Miscellaneous

Supplies (Field, Wells, Miscellaneous)	Size/Unit	2025 ($/unit)
Padlocks	each	$ 20
Asphalt Patch (Cold-Mix)	50 lb. Bag	$ 20
55-gallon Drum	each	$ 77
Visqueen® or Equivalent 6 mil, 20'x100'	roll	$ 144
Tyvek Suits	each	$ 12

Small Items
[Section 6] (Table 6.1)

Small Items	2025 ($/day)
For example: gloves, water, ropes, tape, soap, twine, pens, bottles, paint, warning tape, distilled water etc.	$ 48

Equipment (Small)
[Section 7] (Table 7.1)

Equipment	2025 Costs / Time / Unit		
Compressor	**Daily**	**Weekly**	**Monthly**
Air Compressor	$ 163	$ 604	
Concrete Coring/Cutting Equipment	**Daily**	**Weekly**	**Monthly**
Coring Machine - 8" diameter (including bit)	$ 144	$ 479	
Concrete Saw	$ 144	$ 479	
Fence	**Daily**	**Weekly**	**Monthly**
Chain Link $/100 ft		$ 192	$ 767

Equipment (Small)
[Section 7 cont.] (Table 7.1 cont.)

Equipment	2025 Costs / Time / Unit		
Field Instruments	**Daily**	**Weekly**	**Monthly**
Datalogger (2 channel)	$ 124	$ 623	
Photo-ionization Detector (PID)	$ 192	$ 671	
Flame Ionization Detector (FID)	$ 288	$ 958	
Water Level Indicator	$ 48	$ 163	
Oil/Water Interface Probe	$ 77	$ 241	
pH/Conductivity/Temperature Meter	$ 77	$ 241	
Dissolved Oxygen Meter	$ 77	$ 241	
Combustible Gas Meter (LEL/O2)	$ 96	$ 335	
Turbidity Meter	$ 38	$ 134	
Field Sampling Equipment	**Daily**	**Weekly**	**Monthly**
Bailer (reusable Teflon)	$ 38	$ 134	
Hand Auger	$ 48	$ 163	
Core Sampler & Hammer	$ 10	$ 38	

Equipment (Small)
[Section 7 cont.] (Table 7.1 cont.)

Equipment	2025 Costs / Time / Unit		
Generators, gasoline/diesel powered	**Daily**	**Weekly**	**Monthly**
Generator, 1-3 kW	$ 77	$ 288	
Generator, 5-6 kW	$ 105	$ 383	
Steam Cleaner	$ 144	$ 479	
Pumps	**Daily**	**Weekly**	**Monthly**
Gasoline Powered Pump 2" dia., 150 gpm.	$ 105	$ 383	
Pump, Submersible, 10 gpm.	$ 86	$ 288	
D.C. Purging Pump 3 gpm.	$ 29	$ 96	
Skimmers/Separators Hydrocarbon Recovery	**Daily**	**Weekly**	**Monthly**
Passive Skimmer (1 liter)			$ 29
Electric Skimmer			$ 241
Filter Separator			$ 192

Equipment (Small)
[Section 7 cont.] (Table 7.1 cont.)

Equipment	2025 Costs / Time / Unit		
Storage Tanks	**Daily**	**Weekly**	**Monthly**
Storage Tanks, 1,000 gallon	$ 24	$ 163	$ 623
Storage Tanks, 5,000 gallon	$ 36	$ 241	$ 958
Storage Tanks, 21,000 gallon	$ 59	$ 402	$ 1,611
Rolloff Bin	$ 37	$ 182	$ 671
Survey Equipment	**Daily**	**Weekly**	**Monthly**
Level/transit, Tripod, Rod/Prism, Tape/Chain	$ 67	$ 268	
Traffic Control Components	**Daily**	**Weekly**	**Monthly**
Barricades		$ 10	$ 38
Cones/Delineators (25 each)	$ 16	$ 67	

Equipment (Heavy) [Section 8] (Table 8.1)

Equipment	2025 Costs / Time / Unit		
Machinery	**Hourly**	**Daily**	**Weekly**
Backhoe (operated)	$ 173	$ 1,380	$ 6,901
Compactor (compaction wheel or vibraplate)		$ 241	$ 1,201
Excavator (operated)	$ 268	$ 2,108	$ 10,544
Loaders (operated)	**Hourly**	**Daily**	**Weekly**
Bobcat	$ 144	$ 1,150	$ 5,752
Loader	$ 230	$ 1,841	$ 9,202
Trucks	**Hourly**	**Daily**	**Weekly**
Truck /Automobile	IRS Mileage Per Diem Rates		
Specialized Equipment Truck (4WD)	IRS Mileage Per Diem Rates		
Truck - 10 cubic yard (operated) $/day	$ 124	$ 997	$ 4,984
Truck - 20 cubic yard (operated) $/day	$ 144	$ 1,150	$ 5,752
Vacuum Truck (operated) $/day	$ 144	$ 1,150	$ 5,752

Equipment (Drilling) [Section 9] (Table 9.1)

Equipment	2025 Costs / Time / Unit	
Equipment	**Hourly**	**Daily**
Mobilization/Demobilization (4 hour maximum)	$ 192	
Hollow Stem Auger Drill Rig	$ 249	
Rotary Drill Rig	$ 306	
Direct Push Technology Rig	$ 249	
Steam Cleaner		$ 144
Cement Pump		$ 115
Support Truck/Van		$ 163
Compressor with Paving Breaker		$ 163
Concrete Coring Machine		$ 144
Generator (3500 watt)		$ 105

Drilling (Soil Borings, Monitoring Wells) [Section 10] (Tables 10.1 – 10.2)

Description	Depth	2025 ($/ft)
Borings: backfill with cement/bentonite slurry mixture	0 to 50 feet	$ 35
Borings: backfill with cement/bentonite slurry mixture	50 to100 feet	$ 35
Borings: backfill with cement/bentonite slurry mixture	>100 feet	$ 35
Wells: includes borehole drilling, PVC screen and blank schedule 40, end plug, locking cap, sand, bucket of bentonite pellets for seal, concrete grout, and well box; also includes 15 minutes surging time to set sand pack. This rate would be less if no sampling is needed during drilling.		
2" PVC	0 to 50 feet	$ 65
2" PVC	50 to100 feet	$ 63
2" PVC	>100 feet	$ 61
4" PVC	0 to 50 feet	$ 77
4" PVC	50 to100 feet	$ 75
4" PVC	>100 feet	$ 73

Well Demolition: Drilling Rig Costs, Includes Backfill (Table 10.2)

Description	Depth	2025 ($/ft)
2" PVC		$ 30
4" PVC		$ 38

Miscellaneous Drilling Costs [Section 11] (Table 11.1)

Description	Unit	2025 ($/Unit)
Additional Well Development	Hourly	$ 211
Continuous Core Sampling	Additional ($/ft)	$ 11
Angle Drilling	Additional ($/ft)	$ 11

Cone Penetrometer/Geoprobe®/Hydropunch™ [Section 12] (Table 12.1)

Description	2025 ($/ft)
Includes: CPT Equipment, vehicle, labor, professional oversight, all necessary supplies, replacement tips, grout, sample rings and all other necessities to perform field work.	$ 48

Preliminary Site Assessment Phase Workplan [Section 13] (Table 13.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/Geologist	Review and signature	1	$ 241	$ 241
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	8	$ 173	$ 1,388
Staff Engineer/ Geologist	Initial Site Concept. Model/plan prep.	8	$ 144	$ 1,153
Drafts Person	Prepare site & sampling location maps	3	$ 105	$ 315
Clerical	Typing/reproduction/ mailing	3	$ 86	$ 257
			Total Cost	**$ 3,354**

Soil and Water Investigation Phase Workplan [Section 14] (Table 14.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	1	$ 241	$ 241
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	10	$ 173	$ 1,734
Staff Engineer/ Geologist	Revise Site Concept. Model/Plan prep.	12	$ 144	$ 1,730
Drafts Person	Prepare site & sampling location maps	4	$ 105	$ 421
Clerical	Typing/reproduction/ mailing	4	$ 86	$ 343
			Total Costs	**$ 4,468**

Interim Remedial Action Workplan [Section 15] (Table 15.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	1	$ 241	$ 241
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	6	$ 173	$ 1,041
Staff Engineer/ Geologist	Workplan preparation	4	$ 144	$ 577
Drafts Person	Prepare site & sampling location maps	4	$ 105	$ 421
Clerical	Typing/reproduction/ mailing	3	$ 86	$ 257
			Total Costs	**$ 2,535**

Community Health and Safety Plan [Section 16] (Table 16.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	0.5	$ 241	$ 120
Project/Associate Engineer/Geologist	Regulatory liaison and plan preparation	6	$ 173	$ 1,041
Drafts Person	Site, vicinity, hospital, location maps	4	$ 105	$ 421
Clerical	Typing/reproduction/ mailing	3	$ 86	$ 257
			Total Cost	**$ 1,838**

Cone Penetrometer Test: Installation of Eight (8) CPT Probes to Thirty (30) Feet [Section 17] (Table 17.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling and Coordination	6	$ 201	$ 1,203
Staff Engineer/ Geologist	Field Prep/ Permit/ Fieldwork	12	$ 144	$ 1,730
			Total Labor	**$ 2,933**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 240**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller	feet	240	$ 48	$ 11,447
Analytical (EPA 8015)	each	8	$ 124	$ 989
Analytical (EPA 8260 w/oxygenates)	each	8	$ 288	$ 2,307
Markup	percentage	1	10%	$ 1,474
			Total Subcontractor	**$ 16,217**
			Total Cost	**$ 19,390**

Hand Augering:
Installation of Five (5) Hand Augers Borings to Ten (10) Feet
[Section 18] (Table 18.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	2	$ 201	$ 401
Staff Engineer/ Geologist	Field work/QA	10	$ 144	$ 1,442
Technician	Field work	10	$ 115	$ 1,149
			Total Labor	**$ 2,992**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Hand Auger	each	1	$ 59	$ 59
Coring Machine	day	1	$ 144	$ 144
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 442**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Analytical (EPA 8015)	each	6	$ 124	$ 741
Analytical (EPA 8260 w/oxygenates)	each	6	$ 288	$ 1,730
Markup	percentage	1	10%	$ 247
			Total Subcontractor	**$ 2,719**
			Total Cost	**$ 6,153**

Soil Boring Installation: Installation of Three (3) Borings to Thirty (30) Feet [Section 19] (Table 19.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	6	$ 201	$ 1,203
Staff Engineer/ Geologist	Field prep/ Permit/Fieldwork	12	$ 144	$ 1,730
			Total Labor	**$ 2,933**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Drums	each	6	$ 77	$ 462
Soil Sampling Liners	each	15	$ 12	$ 179
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 880**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller Mobilization	hour	4	$ 192	$ 767
Driller	feet	90	$ 35	$ 3,122
Analytical (EPA 8015)	each	15	$ 124	$ 1,854
Analytical (EPA 8260 w/oxygenates)	each	15	$ 288	$ 4,325
Markup	percentage	1	10%	$ 1,007
			Total Subcontractor	**$ 11,075**
			Total Cost	**$ 14,889**

Soil Boring Installation: Installation of Six (6) Borings to Fifty (50) Feet [Section 20] (Table 20.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	10	$ 201	$ 2,005
Staff Engineer/ Geologist	Field prep/ Permit/Fieldwork	30	$ 144	$ 4,325
			Total Labor	**$ 6,331**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	3	$ 192	$ 576
Truck	day	3	$ -	$ -
Visqueen® or equivalent	roll	1	$ 144	$ 144
Soil Sampling Liners	each	48	$ 12	$ 572
Misc. Field Items	day	3	$ 48	$ 143
			Total Equipment	**$ 1,435**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller Mobilization	hour	4	$ 192	$ 767
Driller	feet	300	$ 35	$ 10,406
Analytical (EPA 8015)	each	48	$ 124	$ 5,932
Analytical (EPA 8260 w/oxygenates)	each	48	$ 288	$ 13,841
Markup	percentage	1	10%	$ 3,095
			Total Subcontractor	**$ 34,041**
			Total Cost	**$ 41,806**

Trench/Test Pit Excavation: Excavation of Thirty (30) Feet of Trench to Fifteen (15) Feet [Section 21] (Table 21.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	6	$ 201	$ 1,203
Staff Engineer/ Geologist	Field prep/ Fieldwork	10	$ 144	$ 1,442
			Total Labor	**$ 2,645**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Visqueen® or equivalent	roll	1	$ 144	$ 144
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 384**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Backhoe (w/operator)	hour	8	$ 173	$ 1,388
Backfill	cubic yards	35	$ 29	$ 1,024
Analytical (EPA 8015)	each	6	$ 124	$ 741
Analytical (EPA 8260 w/oxygenates)	each	6	$ 288	$ 1,730
Markup	percentage	1	10%	$ 488
			Total Subcontractor	**$ 5,372**
			Total Cost	**$ 8,400**

Hydropunch™: Installation of Six (6) Sample Probes to Thirty (30) Feet to Sample Groundwater [Section 22] (Table 22.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	6	$ 201	$ 1,203
Staff Engineer/ Geologist	Field prep/ Fieldwork	12	$ 144	$ 1,730
			Total Labor	**$ 2,933**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 240**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller Mobilization	hour	4	$ 192	$ 767
Driller	feet	180	$ 48	$ 8,585
Analytical (EPA 8015)	each	9	$ 124	$ 1,112
Analytical (EPA 8260 w/oxygenates	each	9	$ 288	$ 2,595
Markup	percentage	1	10%	$ 1,306
			Total Subcontractor	**$ 14,366**
			Total Cost	**$ 17,539**

Groundwater Well Installation: Installation of Three (3) Borings to Thirty (30) Feet, Converted to Two-inch Monitoring Wells [Section 23] (Table 23.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	6	$ 201	$ 1,203
Staff Engineer/ Geologist	Field prep/ Permit/Fieldwork	16	$ 144	$ 2,307
			Total Labor	**$ 3,510**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	1	$ -	$ -
Drums	each	6	$ 77	$ 462
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 701**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller Mobilization	hour	4	$ 192	$ 767
Driller	feet	90	$ 65	$ 5,854
Analytical (EPA 8015)	each	15	$ 124	$ 1,854
Analytical (EPA 8260 w/oxygenates)	each	15	$ 288	$ 4,325
Markup	percentage	1	10%	$ 1,280
			Total Subcontractor	**$ 14,080**
			Total Cost	**$ 18,291**

Groundwater Well Installation: Installation of Six (6) Borings to Fifty (50) Feet, Converted to Two-inch Monitoring Wells [Section 24] (Table 24.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	12	$ 201	$ 2,406
Staff Engineer/ Geologist	Field prep/ Permit/Fieldwork	40	$ 144	$ 5,767
			Total Labor	**$ 8,173**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	4	$ 192	$ 767
Truck	day	4	$ -	$ -
Visqueen® or equivalent	roll	1	$ 144	$ 144
Misc. Field Items	day	4	$ 48	$ 191
			Total Equipment	**$ 1,102**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller Mobilization	hour	4	$ 192	$ 767
Driller	feet	300	$ 65	$ 19,512
Analytical (EPA 8015)	each	36	$ 124	$ 4,449
Analytical (EPA 8260 w/oxygenates)	each	36	$ 288	$ 10,380
Markup	percentage	1	10%	$ 3,511
			Total Subcontractor	**$ 38,619**
			Total Cost	**$ 47,895**

Well Development:
* Only Providing Data for 3 Wells *
[Section 25] (Table 25.1)

Personnel	Description of work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	1	$ 201	$ 201
Technician	Develop 3 wells at 30 feet	3	$ 115	$ 345
			Total Labor	**$ 545**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Water Level Indicator	day	1	$ 48	$ 48
Truck	day	1	$ -	$ -
Drums	each	3	$ 77	$ 231
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 326**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Driller	hour	3	$ 211	$ 634
Markup	percentage	1	10%	$ 63
			Total Subcontractor	**$ 698**
			Total Cost to develop 3 wells at 30 feet	**$ 1,569**

Vapor Test (8 hour)
[Section 26] (Table 26.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	2	$ 201	$ 401
Staff Engineer/ Geologist	Perform test/ data analysis	12	$ 144	$ 1,730
Technician	Set-up & operation/ vapor sampling	16	$ 115	$ 1,838
			Total Labor	**$ 3,970**
Equipment Rental/Supplies	**Units**	**Units**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	day	1	$ 192	$ 192
Truck	day	2	$ -	$ -
VES Trailer (fully equipped)	each	1	$ 958	$ 958
Misc. Field Items	day	2	$ 48	$ 95
			Total Equipment	**$ 1,246**
Subcontractor	**Units**	**Units**	**Rate ($/unit)**	**Cost**
Analytical (BTEX/MTBE)	each	4	$ 220	$ 880
Markup	percentage	1	10%	$ 88
			Total Subcontractor	**$ 968**
			Total Cost	**$ 6,183**

Pump Test (48 hour) [Section 27] (Table 27.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	8	$ 201	$ 1,604
Project/Associate Engineer/Geologist	Test coordination/ Data Analysis	24	$ 173	$ 4,163
Technician	Set-up and run test/wastewater mgmt.	60	$ 115	$ 6,894
			Total Labor	**$ 12,661**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Pump (submersible)	week	1	$ 329	$ 329
Generator	week	1	$ 283	$ 283
Truck	day	4	$ -	$ -
Storage Tank (21,000 gal)	month	1	$ 1,581	$ 1,581
Datalogger/ Transducers (8)	each	1	$ 3,717	$ 3,717
Misc. Field Items	day	4	$ 47	$ 188
			Total Equipment	**$ 6,098**
			Total Cost	**$ 18,759**

Free Product Removal: Up to Six (6) Wells [Section 28] (Table 28.1)

Activity	Description of Work	Units	2025 Rate ($/unit)	2025 Total Cost
Empty and Record Level in Skimmer	Technician (hour)	4	$ 115	$ 460
	Oil/Water Interface Probe (day)	1	$ 77	$ 77
	Truck (day)	1	$ -	$ -
	Misc. Field Supplies	1	$ 48	$ 48
			Total (event)	**$ 584**
Manual Removal of Free Product	Technician (hour)	6	$ 115	$ 689
	Oil/Water Interface Probe (day)	1	$ 77	$ 77
	Bailer	1	$ 38	$ 38
	Misc. Field Supplies	1	$ 48	$ 48
	Truck (day)	1	$ -	$ -
			Total (event)	**$ 852**

Groundwater Monitoring Event: Three (3) Wells at Thirty (30) Feet [Section 29] (Table 29.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	1	$ 201	$ 201
Technician	Field prep/ Fieldwork	8	$ 115	$ 919
			Total Labor	**$ 1,120**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Pump	day	1	$ 29	$ 29
Truck	day	1	$ -	$ -
Drums	each	3	$ 77	$ 231
PH/Conductivity/ Temperature Meter	day	1	$ 77	$ 77
Water Level Indicator	day	1	$ 48	$ 48
Bailers	each	3	$ 16	$ 49
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 481**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Analytical (EPA 8015)	each	4	$ 124	$ 494
Analytical (EPA 8260 w/oxygenates)	each	4	$ 288	$ 1,153
Markup	percentage	1	10%	$ 165
			Total Subcontractor	**$ 1,812**
			Total Cost	**$ 3,414**

Groundwater Monitoring Event: Six (6) Wells at Fifty (50) Feet [Section 30] (Table 30.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Project Manager	Scheduling/ Coordination	2	$ 201	$ 401
Staff Engineer/ Geologist	Field prep/ Fieldwork	10	$ 144	$ 1,442
Technician	Field prep/ Fieldwork	10	$ 115	$ 1,149
			Total Labor	**$ 2,992**
Equipment Rental/Supplies	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Pump	day	1	$ 29	$ 29
Truck	day	1	$ -	$ -
Drums	each	6	$ 77	$ 462
PH/Conductivity/ Temperature Meter	day	1	$ 77	$ 77
Water Level Indicator	day	1	$ 48	$ 48
Bailers	each	6	$ 16	$ 98
Misc. Field Items	day	1	$ 48	$ 48
			Total Equipment	**$ 761**
Subcontractor	**Units**	**Count**	**Rate ($/unit)**	**Cost**
Analytical (EPA 8015)	each	7	$ 124	$ 865
Analytical (EPA 8260 w/oxygenates)	each	7	$ 288	$ 2,018
Markup	percentage	1	10%	$ 288
			Total Subcontractor	**$ 3,172**
			Total Cost	**$ 6,925**

Periodic Groundwater Monitoring Report: Three (3) Wells, No Other Activity Conducted [Section 31] (Table 31.1)

Personnel	Description of Work	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	2	$ 241	$ 481
Project/Associate Engineer/Geologist	Project management, report preparation and review	6	$ 173	$ 1,041
Staff Engineer/ Geologist	Report preparation	8	$ 144	$ 1,153
Drafts Person	Prepare report figures	4	$ 105	$ 421
Clerical	Typing/ reproduction/ mailing	4	$ 86	$ 343
			Total Cost	**$ 3,438**

Once an initial report is prepared for a site, the subsequent reports should take less effort to prepare.

Periodic Groundwater Monitoring Report: Six (6) Wells, No Other Activity Conducted [Section 32] (Table 32.1)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	2	$ 241	$ 481
Project/Associate Engineer/Geologist	Project management, report preparation and review	8	$ 173	$ 1,388
Staff Engineer/ Geologist	Report preparation	12	$ 144	$ 1,730
Drafts Person	Prepare report figures	4	$ 105	$ 421
Clerical	Typing/ reproduction/ mailing	4	$ 86	$ 343
			Total Cost	**$ 4,362**

Once an initial report is prepared for a site, the subsequent reports should take less effort to prepare.

Periodic Update Report: Significant Activities Conducted [Section 33] (Tables 33.1 – 33.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	1	$ 241	$ 241
Project/Associate Engineer/Geologist	Project management, report preparation and review	4	$ 173	$ 694
Drafts Person	Prepare report figures	1	$ 105	$ 105
Clerical	Typing/ reproduction/ mailing	1	$ 86	$ 86
			Total Cost	**$ 1,125**

Periodic Update Report: No Activities Conducted During Reporting Period [Section 33 cont.] (Table 33.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Project/Associate Engineer/Geologist	Project management, report preparation and review	1	$ 173	$ 173
Clerical	Typing/ reproduction/ mailing	1	$ 86	$ 86
			Total Cost	**$ 259**

Site Assessment Report: Six (6) Borings to Thirty (30) Feet, Three (3) Converted to Monitoring Wells [Section 34] (Table 34.1)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	4	$ 241	$ 963
Senior Engineer/ Geologist	Data evaluation/ conclusions & recommendations/ review	8	$ 201	$ 1,604
Project/Associate Engineer/Geologist	Regulatory liaison and report preparation	16	$ 173	$ 2,775
Staff Engineer/ Geologist	Revise Site Conceptual Model/ report preparation	16	$ 144	$ 2,307
Drafts Person	Prepare site & sampling location maps	8	$ 105	$ 841
Clerical	Typing/ reproduction/ mailing	8	$ 86	$ 685
			Total Cost	**$ 9,175**

Corrective Action Plan Preparation: Basic Site with Moderate Groundwater and Soil Contamination [Section 35] (Tables 35.1 – 35.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	4	$ 241	$ 963
Senior Engineer/ Geologist	Review and signature	12	$ 201	$ 2,406
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	20	$ 173	$ 3,469
Staff Engineer/ Geologist	Revise Site Concept. Model/Plan prep.	20	$ 144	$ 2,883
Drafts Person	Prepare site & sampling location maps	12	$ 105	$ 1,262
Clerical	Typing/ reproduction/ mailing	8	$ 86	$ 685
			Total Cost	**$ 11,668**

Corrective Action Plan Preparation: Complicated Site with Extensive Groundwater and Soil Contamination, Difficult Hydrogeology and Multiple Contaminants [Section 35 cont.] (Table 35.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	6	$ 241	$ 1,444
Senior Engineer/ Geologist	Review and signature	12	$ 201	$ 2,406
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	32	$ 173	$ 5,550
Staff Engineer/ Geologist	Revise Site Concept. Model/ Plan prep.	32	$ 144	$ 4,614
Drafts Person	Prepare site & sampling location maps	16	$ 105	$ 1,682
Clerical	Typing/ reproduction/ mailing	12	$ 86	$ 1,028
			Total Cost	**$ 16,724**

Remedial Action Plan Preparation: Basic Site with Moderate Groundwater and Soil Contamination [Section 36] (Tables 36.1 – 36.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	4	$ 241	$ 963
Senior Engineer/ Geologist	Remedial design, review and signature	8	$ 201	$ 1,604
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	12	$ 173	$ 2,081
Staff Engineer/ Geologist	Plan preparation	12	$ 144	$ 1,730
Drafts Person	Prepare figures and design drawings	8	$ 105	$ 841
Clerical	Typing/ reproduction/ mailing	8	$ 86	$ 685
			Total Cost	**$ 7,905**

Remedial Action Plan Preparation: Complicated Site with Extensive Groundwater and Soil Contamination, Difficult Hydrogeology and Multiple Contaminants [Section 36 cont.] (Table 36.2)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	4	$ 241	$ 963
Senior Engineer/ Geologist	Remedial design, review and signature	16	$ 201	$ 3,209
Project/Associate Engineer/Geologist	Regulatory liaison, project management and plan preparation	24	$ 173	$ 4,163
Staff Engineer/ Geologist	Plan preparation	16	$ 144	$ 2,307
Drafts Person	Prepare figures and design drawings	12	$ 105	$ 1,262
Clerical	Typing/ reproduction/ mailing	8	$ 86	$ 685
			Total Cost	**$ 12,587**

Excavate and Segregate Overburdened and Contaminated Soil [Section 37] (Tables 37.1-37.3)

Activity	2025 Cost/Unit
Excavate	$16/Per Cubic Yard
Replacement Material (including compaction)	$23/Per Cubic Yard

Consulting Excavation Cost (Table 37.2)

Personnel	Hours	2025 Labor Rate ($/hour)	2025 Total Cost
Staff Engineer/ Geologist	20	$ 144	$ 2,883
		Total Labor	**$ 2,883**
Equipment Rental/Supplies	**Units**	**Rate ($/unit)**	**Cost**
Gas Monitor (PID)	2	$ 192	$ 384
Truck	120	$ -	$ -
Misc. Field Items	2	$ 48	$ 95
		Total Equipment	**$ 479**
Analytical	**Units**	**Rate ($/unit)**	**Cost**
EPA 8015/8020	20	$ 124	$ 2,472
Markup	1	10%	$ 247
		Total Analytical	**$ 2,719**
		Total Consultant	**$ 6,081**

Excavation Contractor Cost (Table 37.3)

Activity	Units	2025 Rate ($/unit)	2025 Total Cost
Excavation	500	$ 23	$ 11,382
Backfill and Compaction	500	$ 35	$ 17,344
		Total Contractor	**$ 28,726**

System Operation and Maintenance [Section 38] (Table 38.1)

Consulting Costs (Table 38.1)				
Personnel	**Description of Work**	**Units**	**2025 Rate ($/unit)**	**2025 Total Cost**
Technician (1/04/01)	Regular field maintenance/log	4	$ 115	$ 460
Technician (1/11/01)	Regular field maintenance/log	4	$ 115	$ 460
Technician (1/18/01)	Regular field maintenance/log	4	$ 115	$ 460
Technician 1/25/01)	Replace vacuum gauge/ oil change/ Regular field maintenance/log	4	$ 115	$ 460
			Total Consulting	**$ 1,838**
Supplies		**Units**	**Rate ($/unit)**	**Cost**
Vacuum Gauge, Replace		1.00	$ 41	$ 41
Oil & Filter (4 qt. 10-40)		1.00	$ 48	$ 48
Markup		1	10%	$ 9
			Total Supplies	**$ 98**
Analytical		**Units**	**Rate ($/unit)**	**Cost**
EPA 8015/8020 (air)		3	$ 220	$ 660
EPA 8260 w/oxygenates (water)		3	$ 288	$ 865
Markup		1	10%	$ 153
			Total Analytical	**$ 1,678**
			Total Cost/Month	**$ 3,614**
Operations and Maintenance Supplies			**2025 Rates**	
Replacement Granular Activated Carbon (GAC) (Liquid Phase) per pound			$ 2.85	
Replacement Granular Activated Carbon (GAC) (Vapor Phase) per pound			$ 2.85	
Miscellaneous Repair Parts			At Cost	

Contaminated Waste
[Section 39] (Table 39.1)

Contaminated Soil:	Units	2025 Rate ($/unit)
Load	cubic yard	$ 11
Load	hourly	see equipment (heavy), Table 8.1
Transportation	hourly	see equipment (heavy), Table 8.1
Disposal	Ton	see off-site disposal, Table 40.1
Contaminated Liquid:	**Units**	**2025 Rate ($/unit)**
Load and Transport	gallon	$ 1.45
Load and Transport	hourly	see equipment (heavy), Table 8.1
Disposal	gallon	$ 1.84
Containerized Waste:	**Units**	**2025 Rate ($/unit)**
Load/Transport/Dispose Soil	55-gallon drum	$ 192
Load/Transport/Dispose Water	55-gallon drum	$ 192

Off-Site Remediation [Section 40] (Tables 40.1 – 40.2)

Method	Description	2025 Cost/ton
Asphalt Recycling	Contaminated soil used as a substitute for sand aggregate in asphalt production	$ 105
Thermal Desorption	Contamination is thermally desorbed from soil in a fixed facility rotary kiln, and the vapors are burned in a flame burner	$ 105
Bioremediation	Soil is bioremediated at a dedicated facility. Costs will vary depending upon the level of contamination found in the soil.	$ 86

Off-site Disposal (Table 40.2)

Facility	Description	2025 Cost/ton
Class I Landfill (Hazardous)	Accepts 'hazardous' wastes, uncommon for Petroleum UST contamination	$ 288
Class II Landfill (Designated)	Accepts designated wastes	$77 to $126
Class III Landfill (Non-hazardous)	Municipal facilities can sometimes accept varying levels depending upon their specific design and permits. May use remediated soil as "cover" material at no cost.	$19 to $59

Cleanup Progress Report [Section 41] (Table 41.1)

Personnel	Description of Work	Units	2025 Labor Rate ($/hour)	2025 Total Cost
Principal Engineer/ Geologist	Review and signature	1	$ 241	$ 241
Project/Associate Engineer/Geologist	Regulatory liaison, project management and report preparation	8	$ 173	$ 1,388
Staff Engineer/ Geologist	Report preparation	8	$ 144	$ 1,153
Drafts Person	Prepare report figures	4	$ 105	$ 421
Clerical	Typing/ reproduction/ mailing	4	$ 86	$ 343
			Total Cost	**$ 3,545**

Site Survey [Section 42] (Tables 42.1 – 42.3)

Description	2025 Cost/Event
Site Survey (3 wells)	$ 862
Site Survey (6 wells)	$ 1,341

Underground Utility Check (Table 42.2)

Description	2025 Cost/Event
USA Notification for Three Drilling Points	$ 144
Electromagnetic Scan for Underground Structures	$ 1,150

Traffic Control (Table 42.3)

Description	2025 Cost/Day
Basic Traffic Control for Closing One Lane	$ 671
Extensive Traffic Control Requiring Multiple Flag Persons and Closure of Lanes	$ 1,821

Total Subcontract or Equipment Amount [Section 43] (Table 43.1)

Total Subcontract or Equipment Amount	2025 Maximum Markup
Less than $50,000	10%
Greater than 50,000	10%

After Tank Removal, Overexcavate and Dispose of 150 Yd3 of Petroleum Contaminated Soil [Section 44] (Tables 44.1-44.4)

Task 1
Overexcavate/Stockpile Soil and Sample Excavation Sidewalls [Section 44 cont.] (Table 44.1)

2025 Consulting Costs

Personnel	Unit	Labor Rate ($/hour)	Units	Cost
Project Manager	hr	$ 201	4	$ 802
Staff	hr	$ 144	12	$ 1,730
Technician	hr	$ 115	10	$ 1,149
			Subtotal	**$ 3,681**

2025 Equipment Rental/Supplies Costs

Personnel	Unit	Rate ($/unit)	Units	Cost
PID	day	$ 192	1	$ 192
Fence w/Gate	mo.	$ 767	1	$ 767
Visqueen® or equivalent	roll	$ 144	2	$ 288
Truck	mi.	$ 1	100	$ 63
Misc. Supplies	day	$ 48	1	$ 48
			Subtotal	**$ 1,358**

Task 1 (cont.)
[Section 44 cont.] (Table 44.1 cont.)

2025 Subcontractor Costs				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
Backhoe	day	$ 1,380	1	$ 1,380
Loader	day	$ 1,841		
18 yd3 Truck.	hr	$ 144		
Class 2 LF Fees	ton	$ 124		
Soil Backfill	ton	$ 23		
Gravel Backfill	ton	$ 23		
Asphalt Saw.	hr	$ 96		
Asphalt Disp.	ft2	$ 5		
Asphalt Repave	ft2	$ 5		
TPH- gas	ea.	$ 124	6	$ 741
TPH - Diesel	ea.	$ 124	6	$ 741
Total Lead	ea.	$ 77		
CAM 17	ea.	$ 383		
RCI	ea.	$ 345		
Markup	ea.	10%	1	$ 286
			Subtotal	**$ 3,149**
			Task 1 Subtotal	**$ 8,188**

Task 2
Sample Stockpiled Soil and Arrange Proper Disposal
[Section 44 cont.] (Table 44.2)

2025 Consulting Costs				
Personnel	**Unit**	**Labor Rate ($/hour)**	**Units**	**Cost**
Project Manager	hr	$ 201	2	$ 401
Staff	hr	$ 144	8	$ 1,153
Technician	hr	$ 115		
			Subtotal	**$ 1,554**

2025 Equipment Rental/Supplies				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
PID	day	$ 192		
Fence w/Gate	mo.	$ 767		
Visqueen® or equivalent	roll	$ 144		
Truck	mi.	$ 1	100	$ 63
Misc. Supplies	day	$ 48	1	$ 48
			Subtotal	**$ 110**

Task 2 (cont.)
[Section 44 cont.] (Table 44.2 cont.)

2025 Subcontractor Costs				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
Backhoe	day	$ 1,380		
Loader	day	$ 1,841		
18 yd3 Truck.	hr	$ 144		
Class 2 LF Fees	ton	$ 124		
Soil Backfill	ton	$ 23		
Gravel Backfill	ton	$ 23		
Asphalt Saw.	hr	$ 96		
Asphalt Disp.	ft2	$ 5		
Asphalt Repave	ft2	$ 5		
TPH- gas	ea.	$ 124	6	$ 741
TPH - Diesel	ea.	$ 124	6	$ 741
Total Lead	ea.	$ 77	1	$ 77
CAM 17	ea.	$ 383	1	$ 383
RCI	ea.	$ 345	1	$ 345
Markup	ea.	10%	1	$ 229
			Subtotal	**$ 2,516**
			Task 2 Subtotal	**$ 4,181**

Task 3
Load, Transport, and Dispose of Soil
[Section 44 cont.] (Table 44.3)

2025 Consulting Costs				
Personnel	**Unit**	**Labor Rate ($/hour)**	**Units**	**Cost**
Project Manager	hr	$ 201		
Staff	hr	$ 144		
Technician	hr	$ 115	10	$ 1,149
			Subtotal	**$ 1,149**

2025 Equipment Rental/Supplies				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
PID	day	$ 192		
Fence w/Gate	mo.	$ 767		
Visqueen® or equivalent	roll	$ 144		
Truck	mi.	$ 1	100	$ 63
Misc. Supplies	day	$ 48	1	$ 48
			Subtotal	**$ 110**

Task 3 (cont.)
[Section 44 cont.] (Table 44.3 cont.)

2025 Subcontractor Costs				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
Backhoe	day	$ 1,380		
Loader	day	$ 1,841	1	$ 1,841
18 yd3 Truck.	hr	$ 144	40	$ 5,767
Class 2 LF Fees	ton	$ 124	225	$ 27,805
Soil Backfill	ton	$ 23	200	$ 4,553
Gravel Backfill	ton	$ 23	5	$ 114
Asphalt Saw.	hr	$ 96	4	$ 386
Asphalt Disp.	ft2	$ 5		
Asphalt Repave	ft2	$ 5		
TPH- gas	ea.	$ 124		
TPH - Diesel	ea.	$ 124		
Total Lead	ea.	$ 77		
CAM 17	ea.	$ 383		
RCI	ea.	$ 345		
Markup	ea.	10%	1	$ 4,046
			Subtotal	**$ 44,511**
			Task 3 Subtotal	**$ 45,770**

Task 4
Backfill, Compact, and Repave
[Section 44 cont.] (Table 44.4)

2025 Consulting Costs				
Personnel	**Unit**	**Labor Rate ($/hour)**	**Units**	**Cost**
Project Manager	hr	$ 201	1	$ 201
Staff	hr	$ 144		
Technician	hr	$ 115	12	$1,379
			Subtotal	**$ 1,579**

2025 Equipment Rental/Supplies				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
PID	day	$ 192		
Fence w/Gate	mo.	$ 767		
Visqueen® or equivalent	roll	$ 144		
Truck	mi.	$ 1	200	$ 125
Misc. Supplies	day	$ 48	2	$ 95
			Subtotal	**$ 220**

Task 4 (cont.)
[Section 44 cont.] (Table 44.4 cont.)

2025 Subcontractor Costs				
Personnel	**Unit**	**Rate ($/unit)**	**Units**	**Cost**
Backhoe	day	$ 1,380	2	$ 2,760
Loader	day	$ 1,841		
18 yd3 Truck.	hr	$ 144		
Class 2 LF Fees	ton	$ 124		
Soil Backfill	ton	$ 23		
Gravel Backfill	ton	$ 23		
Asphalt Saw.	hr	$ 96	4	$ 386
Asphalt Disp.	ft2	$ 5	150	$ 813
Asphalt Repave	ft2	$ 5	150	$ 813
TPH- gas	ea.	$ 124		
TPH - Diesel	ea.	$ 124		
Total Lead	ea.	$ 77		
CAM 17	ea.	$ 383		
RCI	ea.	$ 345		
Markup	ea.	10%	1	$ 477
			Subtotal	**$ 5,249**
			Task 4 Subtotal	**$ 7,049**
			Grand Total	**$ 65,118**

Remediation Cost Guidelines
Excavation
[Section 45] (Table 45.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Prepare CAP	The CAP would typically include the following: • Assessment of contamination in soil and groundwater • Current CSM • Remedial action cleanup goals • FS evaluation/screening • Selection of remedy • Identify life-cycle expectations for remedial action schedule and objectives Note: Pilot test costs are not included	Low	$ 8,734
		Medium	$ 12,477
		High	$ 17,468
Prepare RAP	The RAP would typically include the following: • Selected remedial technology • Basis of design • Remedial action schedule and objectives • Implementation schedule • Excavation layout • Grading and erosion control • Stormwater pollution prevention • Soil transport and disposal • Traffic control • Air monitoring and dust control • Confirmation sampling • Backfill compaction and geotechnical requirements	Low	$ 9,981
		Medium	$ 13,725
		High	$ 18,715
Design Drawings/ Specifications	< 100 tons of soil; minimal design drawings required by local agencies. Assumes shoring or dewatering is not required.	Low	$ 9,981
	>100 tons < 1,000 tons of soil; moderate design drawings required by local agencies. Assumes shoring or dewatering is not required.	Medium	$ 13,725
	>1,000 tons < 3,500 tons of soil; extensive design drawing required by local agencies. Assumes shoring or dewatering is not required.	High	$ 18,715

Excavation (cont.)
[Section 45 cont.] (Table 45.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Permits	Permits, as needed (e.g. encroachment, building, grading, SWPPP, air permits, traffic control plan, discharge, and planning permits). Cost may vary based on local permitting agency requirements. Permit fees, bond premiums, and labor to obtain permits and bonds may be submitted for reimbursement.	Varies	Varies
Excavation Activities (per ton)	> 1,000 tons < 3,700 tons of soil Cost is all-inclusive of time, materials, and contractor labor for the excavation preparation, mobilization/demobilization, equipment, excavation, loading, transportation, disposal (Class III landfill 50 miles from site), laboratory analytical, and limited resurfacing for an excavation.	Low	$ 81
	> 100 tons < 1,000 tons of soil Cost is all-inclusive of time, materials, and contractor labor for the excavation preparation, mobilization/demobilization, equipment, excavation, loading, transportation, disposal (Class III landfill 50 miles from site), laboratory analytical, and limited resurfacing for an excavation.	Medium	$ 93
	< 100 tons of soil Cost is all-inclusive of time, materials, and contractor labor for the excavation preparation, mobilization/demobilization, equipment, excavation, loading, transportation, disposal (Class III landfill 50 miles from site), laboratory analytical, and limited resurfacing for an excavation.	High	$ 188

Excavation (cont.)
[Section 45 cont.] (Table 45.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Coordination, Oversight, and Management by Consultant	Excavation duration approximately two weeks; includes nominal site supervision, and project management.	Low	$ 22,458
	Excavation duration approximately three weeks; includes nominal to moderate site supervision, and project management.	Medium	$ 42,421
	Excavation duration approximately four weeks; includes moderate site supervision, and project management.	High	$ 74,861
Excavation Report	Summary of excavation activities including: waste manifests; post remedial analytical results; and figure showing excavation and dimensions.	Low	$ 6,238
		Medium	$ 8,734
		High	$ 11,229

Remediation Cost Guidelines
Soil Vapor Extraction
(fixed system, not used in conjunction with other technologies)
[Section 46] (Table 46.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Prepare CAP	The CAP would typically include the following: • Assessment of contamination in soil and groundwater • Current CSM • Remedial action cleanup goals • FS evaluation/screening • Selection of remedy • Identify life-cycle expectations for remedial action schedule and objectives Note: Pilot test costs are not included	Low	$ 10,605
		Medium	$ 13,101
		High	$ 18,715
Prepare RAP	The RAP would typically include the following: • Selected remedial technology • Basis of design • Remedial action schedule and objectives • Implementation schedule • Draft O&M Plan	Low	$ 9,358
		Medium	$ 11,853
		High	$ 15,596
Pilot testing	One day (24 hours) pilot test with one newly installed SVE well (cost for SVE well captured below) and pre-existing observation wells.	Low	$ 22,458
	Two-day (48 hours) pilot test with two SVE wells (cost for SVE wells captured below) and pre-existing observation wells.	Medium	$ 31,192
	Three-day (72 hours) pilot test with three SVE wells (cost for SVE wells captured below) and pre-existing observation wells.	High	$ 39,926

Soil Vapor Extraction (fixed system, not used in conjunction with other technologies) [Section 46 cont.] (Table 46.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Design Drawings/ Specifications	Basic design drawings and specifications for two SVE wells with typical 100 scfm blower and vapor treatment using two 2,000 lb. carbon canisters.	Low	$ 7,486
	Basic design drawings and specifications for four SVE wells with typical 250 scfm blower and vapor treatment using thermal oxidizer.	Medium	$ 9,981
	Basic design drawings and specifications for eight SVE wells with typical 500 scfm blower and vapor treatment using thermal oxidizer.	High	$ 14,972
Permits	Permits, as needed (e.g. encroachment, building, air permits, traffic control plan, discharge, and planning permits). Cost may vary based on local permitting agency requirements. Permit fees, bond premiums, and labor to obtain permits and bonds may be submitted for reimbursement.	Varies	Varies
Remediation Well Installation	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs.	Low	$ 17,468
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs.	Medium	$ 27,449
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs.	High	$ 39,926

Soil Vapor Extraction (fixed system, not used in conjunction with other technologies) [Section 46 cont.] (Table 46.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Remediation equipment (Cost to rent versus purchase of equipment must be justified with cost/benefit evaluation)	New turn-key skid mounted SVE system with a typical 100 scfm blower and vapor treatment with two 2,000 lb. carbon canisters.	Low	$ 27,449
	New turn-key skid mounted SVE system with 250 scfm blower with thermal oxidizer for vapor treatment.	Medium	$ 81,099
	New turn-key skid mounted SVE system with 500 scfm blower with thermal oxidizer for vapor treatment.	High	$ 112,292
System Installation	Fixed system with approximately 200 square foot remediation compound, with approximately 150 linear feet of trenching for SVE conveyance piping, system manifold, electrical drop, and fencing.	Low	$ 49,907
	Fixed system with approximately 200 square foot remediation compound, with approximately 250 linear feet of trenching for SVE conveyance piping, system manifold, electrical drop, and fencing.	Medium	$ 62,384
	Fixed system with approximately 400 square foot remediation compound, with approximately 350 linear feet of trenching for SVE conveyance piping, system manifold, electrical drop, and fencing.	High	$ 81,099

Soil Vapor Extraction (fixed system, not used in conjunction with other technologies) [Section 46 cont.] (Table 46.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Startup/ Shakedown	Two technicians over two days with engineering support.	Low	$ 9,981
	Two technicians over four days with engineering support.	Medium	$ 17,468
	Two technicians over six days with engineering support.	High	$ 24,954
O&M (per month)	Includes bi-weekly visits, materials and equipment, analytical costs (up to six samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Low	$ 7,486
	Includes bi-weekly visits, materials and equipment, analytical costs (up to eight samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Medium	$ 12,477
	Includes bi-weekly visits, materials and equipment, analytical costs (up to ten samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	High	$ 14,972

Soil Vapor Extraction (fixed system, not used in conjunction with other technologies) [Section 46 cont.] (Table 46.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
System Installation Report (Includes well installation report)	Final O&M plan with start-up procedures, as-builts, and well installation report with EDD.	Low	$ 6,238
		Medium	$ 8,734
		High	$ 11,229
Well Destruction by Over-Drilling	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs. Assumes over drill of well to 25 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 3,743
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs. Assumes over drill of well to 25 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 6,238
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs. Assumes over drill of well to 25 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 9,981

Soil Vapor Extraction (fixed system, not used in conjunction with other technologies) [Section 46 cont.] (Table 46.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Well Destruction by Pressure Grouting	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs; Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 1,996
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs; Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 3,494
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs; Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 6,363
System Decommission and Site Restoration	Remove system, manifold, and all appurtenances (entire remediation system) from the site; disconnect and cap the piping in-place.	Low	$ 8,734
	Includes all parameters in the low costs, plus removal of compound, grout and cap piping in-place, and minimal resurfacing of areas altered by remediation system.	Medium	$ 18,715
	Includes all parameters of the medium costs, plus removal of piping, and moderate resurfacing of areas altered by remediation system.	High	$ 56,146

Remediation Cost Guidelines
Soil Vapor Extraction
(mobile system)
[Section 47] (Table 47.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Daily Rates	Includes costs for SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment, mobilization, materials, fuel, and task appropriate field labor balanced with electronic monitoring devices.	Low	$ 1,747
	Includes costs for SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment, mobilization, materials, fuel, and task appropriate field labor balanced with electronic monitoring devices.	Medium	$ 2,183
	Includes costs for SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment, mobilization, materials, fuel, and task appropriate field labor balanced with electronic monitoring devices.	High	$ 2,620
Weekly Rates	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Low	$ 5,989
	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Medium	$ 7,486
	SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment.	High	$ 9,108
Monthly Rates	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Low	$ 23,706
	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Medium	$ 29,944
	SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment.	High	$ 36,807

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48] (Table 48.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Prepare CAP	The CAP would typically include the following: • Assessment of contamination in soil and groundwater • Current CSM • Remedial action cleanup goals • FS evaluation/screening • Selection of remedy • Identify life-cycle expectations for remedial action schedule and objectives Note: Pilot test costs are not included	Low	$ 11,229
		Medium	$ 13,725
		High	$ 18,715
Prepare RAP	The RAP would typically include the following: • Selected remedial technology • Basis of design • Remedial action schedule and objectives • Implementation schedule • Draft O&M Plan	Low	$ 11,229
		Medium	$ 13,725
		High	$ 18,715
Pilot Testing	One day (24 hours) pilot test with one SVE well and two air sparge wells (cost for remediation wells captured below), and pre-existing observation wells.	Low	$ 24,954
	Two-day (48 hours) pilot test with two SVE wells and two air sparge wells (cost for remediation wells captured below), and pre-existing observation wells.	Medium	$ 33,687
	Three-day (72 hours) pilot test with three SVE wells and four air sparge wells (cost for remediation wells captured below), and pre-existing observation wells.	High	$ 42,421

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48 cont.] (Table 48.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Design Drawings/ Specifications	Design drawings for an AS/SVE system with four AS wells and two SVE wells. Minimal design drawings and specifications as required by local agencies.	Low	$ 11,229
	Design drawings for an AS/SVE system with eight AS wells and four SVE wells. Moderate design drawings and specifications as required by local agencies.	Medium	$ 15,596
	Design drawings for an AS/SVE system with sixteen AS wells and eight SVE wells. Extensive design drawings and specifications as required by local agencies.	High	$ 18,715
Permits	Permits, as needed (e.g. encroachment, building, air permits, traffic control plan, discharge, and planning permits). Costs may vary based on local permitting agency requirements. Permit fees, bond premiums, and labor to obtain permits and bonds may be submitted for reimbursement.	Varies	Varies
Remediation Well Installation	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs; four AS wells (two-inch diameter) to a depth of 35 ft bgs.	Low	$ 37,431
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs; eight AS wells (two-inch diameter) to a depth of 35 ft bgs.	Medium	$ 62,384
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs surface; sixteen AS wells (two-inch diameter) to a depth of 35 ft bgs.	High	$ 124,768

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48 cont.] (Table 48.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Remediation Equipment (Cost to rent versus purchase of equipment must be justified with cost/benefit evaluation)	New turn-key skid mounted SVE system with a 100 scfm blower and vapor abatement of two-1,000 lb. carbon canisters. Turn-key skid mounted air sparge system capable of sparging up to four sparge wells at flow rates and pressures based on pilot test results.	Low	$ 56,146
	New turn-key skid mounted SVE system with a 250 scfm blower with thermal oxidizer for vapor treatment. Turn-key skid mounted air sparge system capable of sparging up to eight sparge wells at flow rates and pressures based on pilot test results.	Medium	$ 106,053
	New turn-key skid mounted SVE system with a 500 scfm blower and thermal oxidizer for vapor treatment. Turn-key skid mounted air sparge system capable of sparging up to 16 sparge wells at flow rates and pressures based on pilot test results.	High	$ 143,484
System Installation	Approximately 200 square foot remediation compound, with approximately 150 linear feet of trenching for the AS/SVE conveyance piping, system manifold, electrical drop, and fencing.	Low	$ 69,870
	Approximately 200 square foot remediation compound, with approximately 250 linear feet of trenching for the AS/SVE conveyance piping system manifold, electrical drop, and fencing.	Medium	$ 81,099
	Approximately 400 square foot remediation compound, with approximately 350 linear feet of trenching for the AS/SVE conveyance piping, system manifold, electrical drop, and fencing.	High	$ 118,530

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48 cont.] (Table 48.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Coordination, Oversight, and Management by Consultant	60 hours of technician and/or engineer time.	Low	$ 9,981
	100 hours of technician and/or engineer time.	Medium	$ 17,468
	160 hours of technician and/or engineer time.	High	$ 27,449
Startup/ Shakedown	Two technicians over two days with engineering support.	Low	$ 9,981
	Two technicians over four days with engineering support.	Medium	$ 17,468
	Two technicians over six days with engineering support.	High	$ 24,954
O&M (per month)	Includes bi-weekly visits, materials and equipment, analytical costs (up to six samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Low	$ 8,110
	Includes bi-weekly visits, materials and equipment, analytical costs (up to eight samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Medium	$ 9,358
	Includes bi-weekly visits, materials and equipment, analytical costs (up to ten samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	High	$ 10,606
System Installation Report (Includes well installation report)	Final O&M plan with start-up procedures and as-builts, and well installation report with EDD.	Low	$ 7,486
		Medium	$ 9,981
		High	$ 12,477

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48 cont.] (Table 48.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Well Destruction by Over Drilling	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs; four AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 8,734
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs; eight AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 16,220
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs; sixteen AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 31,192

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(fixed system)
[Section 48 cont.] (Table 48.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Well Destruction by Pressure Grouting	Two SVE wells (two-inch diameter) to a depth of 25 ft bgs; four AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 4,741
	Four SVE wells (two-inch diameter) to a depth of 25 ft bgs; eight AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 8,983
	Eight SVE wells (two-inch diameter) to a depth of 25 ft bgs; sixteen AS wells (two-inch diameter) to a depth of 35 ft bgs. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 13,725
System Decommission and Site Restoration	Remove system, manifold, and all appurtenances (entire remediation system) from the site; disconnect and cap the piping in-place.	Low	$ 18,715
	Includes all parameters in the low costs plus, removal of compound, grout and cap piping in-place, and minimal resurfacing of areas altered by remediation system.	Medium	$ 31,192
	Includes all parameters of the medium costs, plus removal of piping, and moderate resurfacing of areas altered by remediation system.	High	$ 62,384

Remediation Cost Guidelines
Air Sparge & Soil Vapor Extraction
(mobile system) - Typical duration 3 to 6 months
[Section 49] (Table 49.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Daily Rates	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Low	$ 2,121
	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Medium	$ 2,246
	SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment.	High	$ 2,745
Weekly Rates	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Low	$ 6,862
	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Medium	$ 7,611
	SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment.	High	$ 9,358
Monthly Rates	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Low	$ 27,948
	SVE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment.	Medium	$ 30,443
	SVE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment.	High	$ 37,306

Remediation Cost Guidelines
Multi-Phase Extraction
(fixed system) - Typical duration 18 to 24 months
[Section 50] (Table 50.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Prepare CAP	The CAP would typically include the following: • Assessment of contamination in soil and groundwater • Current CSM • Remedial action cleanup goals • FS evaluation/screening • Selection of remedy • Identify life-cycle expectations for remedial action schedule and objectives Note: Pilot test costs are not included	Low	$ 11,229
		Medium	$ 13,725
		High	$ 18,715
Prepare RAP	The RAP would typically include the following: • Selected remedial technology • Basis of design • Remedial action schedule and objectives • Implementation schedule • Draft O&M Plan	Low	$ 12,477
		Medium	$ 14,972
		High	$ 19,963
Pilot Testing	One day (24 hours) pilot test measuring one MPE well and three to four observation wells. Cost includes pilot test summary report. Well installations are not included.	Low	$ 29,944
	Two-day (48 hours) pilot test measuring two MPE wells and four to five observation wells. Cost includes pilot test summary report. Well installations are not included.	Medium	$ 37,431
	Three-day (72 hours) pilot test measuring with three MPE wells and five to six observation wells. Cost includes pilot test summary report. Well installations are not included.	High	$ 49,907

Multi-Phase Extraction (fixed system) - Typical duration 18 to 24 months [Section 50 cont.] (Table 50.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Design Drawings/ Specifications	Minimal design drawings and specifications with two MPE wells.	Low	$ 14,972
	Moderate design drawings and specifications with four MPE wells.	Medium	$ 18,715
	Extensive design drawings and specifications with eight MPE wells.	High	$ 22,458
Permits	Permits, as needed (e.g. encroachment, building, air permits, traffic control plan, discharge, and planning permits). Cost may vary based on local permitting agency requirements. Permit fees, bond premiums, and labor to obtain permits and bonds may be submitted for reimbursement.	Varies	Varies
Remediation Well Installation	Two MPE wells (four-inch diameter) to a depth of 35 feet below ground surface.	Low	$ 18,715
	Four MPE wells (four-inch diameter) to a depth of 35 feet below ground surface.	Medium	$ 31,192
	Eight MPE wells (four-inch diameter) to a depth of 35 feet below ground surface.	High	$ 49,907

Multi-Phase Extraction (fixed system) - Typical duration 18 to 24 months [Section 50 cont.] (Table 50.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Remediation Equipment (Cost to rent versus purchase of equipment must be justified with cost/benefit evaluation)	New turn-key skid mounted MPE system with a typical 100 scfm blower and vapor treatment with two 2,000 lb. carbon canisters. Two groundwater extraction submersible pumps with two 2,000 lb. carbon canisters.	Low	$ 87,338
	New turn-key skid mounted MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Four groundwater extraction submersible pumps with two 2,000 lb. carbon canisters.	Medium	$ 137,245
	New turn-key skid mounted MPE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment. Eight groundwater extraction submersible pumps with two 2,000 lb. carbon canisters.	High	$ 187,153
System Installation	Approximately 200 square foot remediation compound, with approximately 150 linear feet of trenching for the AS/SVE conveyance piping, system manifold, electrical drop, and fencing.	Low	$ 81,099
	Approximately 200 square foot remediation compound, with approximately 250 linear feet of trenching for the AS/SVE conveyance piping system manifold, electrical drop, and fencing.	Medium	$ 106,053
	Approximately 400 square foot remediation compound, with approximately 350 linear feet of trenching for the AS/SVE conveyance piping, system manifold, electrical drop, and fencing.	High	$ 137,245

Multi-Phase Extraction (fixed system) - Typical duration 18 to 24 months [Section 50 cont.] (Table 50.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Coordination, Oversight, and Management by Consultant	60 hours of technician and/or engineer time.	Low	$ 9,981
	100 hours of technician and/or engineer time.	Medium	$ 17,468
	160 hours of technician and/or engineer time.	High	$ 27,449
Startup/ Shakedown	Two technicians over two days with engineering support.	Low	$ 9,981
	Two technicians over four days with engineering support.	Medium	$ 17,468
	Two technicians over six days with engineering support.	High	$ 24,954
O&M (per month)	Includes bi-weekly visits, materials and equipment, analytical costs (up to six samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Low	$ 9,981
	Includes bi-weekly visits, materials and equipment, analytical costs (up to eight samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	Medium	$ 12,477
	Includes bi-weekly visits, materials and equipment, analytical costs (up to ten samples), utilities (electrical), and monthly vapor monitoring reports, and quarterly remediation system operations reports.	High	$ 14,972
System Installation Report (Includes well installation report)	Final O&M plan with start-up procedures and as-builts, and well installation report with EDD.	Low	$ 7,486
		Medium	$ 9,981
		High	$ 12,477

Multi-Phase Extraction (fixed system) - Typical duration 18 to 24 months [Section 50 cont.] (Table 50.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Well Destruction by Over Drilling	Two MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 4,991
	Four MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 8,734
	Eight MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 35 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 13,725

Multi-Phase Extraction (fixed system) - Typical duration 18 to 24 months [Section 50 cont.] (Table 50.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Well Destruction by Pressure Grouting	Two MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Low	$ 2,745
	Four MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	Medium	$ 4,367
	Eight MPE wells (four-inch diameter) to a depth of 35 feet below ground surface. Assumes over drill of well to 5 ft bgs, consultant oversight, mob/demob, sealing material, backfill to surface, and surface patch at grade.	High	$ 6,238
System Decommission and Site Restoration	Remove system, manifold, and all appurtenances (entire remediation system) from the site; disconnect and cap the piping in-place.	Low	$ 18,715
	Includes all parameters in the low costs plus, removal of compound, grout and cap piping in-place, and minimal resurfacing of areas altered by remediation system.	Medium	$ 31,192
	Includes all parameters of the medium costs, plus removal of piping, and moderate resurfacing of areas altered by remediation system.	High	$ 62,384

Remediation Cost Guidelines
Multi-Phase Extraction
(mobile system) - Typical duration 18 to 24 months
[Section 51] (Table 51.1)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Daily Rates	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Two groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Daily rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Low	$ 2,371
	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Four groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Daily rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Medium	$ 2,620
	MPE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment. Eight groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Daily rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	High	$ 3,119
Weekly Rates	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Two groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Weekly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Low	$ 8,359

Multi-Phase Extraction (mobile system) - Typical duration 18 to 24 months [Section 51 cont.] (Table 51.1 cont.)

Remediation Technology & Phase	Parameters	Range	2025 Cost
Weekly Rates	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Four groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Weekly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Medium	$ 9,358
	MPE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment. Eight groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Weekly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	High	$ 10,730
Monthly Rates	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Two groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Monthly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Low	$ 32,440
	MPE system with a typical 250 scfm blower and thermal oxidizer for vapor treatment. Four groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Monthly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	Medium	$ 36,807
	MPE system with a typical 500 scfm blower and thermal oxidizer for vapor treatment. Eight groundwater extraction submersible pumps with two 2,000 lb. carbon canisters. Monthly rates for mobile remediation events include costs for equipment, mobilization, materials, fuel, and field labor.	High	$ 42,733

Key

AS = Air Sparge

bgs = below ground surface

BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes

CAM = Compliance Assurance Monitoring

CAP = Corrective Action Plan

CPT = Cone Penetration Test

CSM = Conceptual Site Model

EDD = GeoTracker Survey_XYZ electronic data deliverable

FCG = Fund Cost Guidelines

ft bgs = feet below ground surface

FS = Feasibility Study

gpm = gallons per minute

HSA = Hollow Stem Auger

IDW = Investigative Derived Waste

lb. = pound

LF = Landfill

LTCP = Low-Threat Underground Storage Tank Case Closure Policy (Policy)

LUFT = Leaking Underground Fuel Tank

LUST = Leaking Underground Storage Tank

MTBE = Methyl Tertiary Butyl Ether

MPE = Multi-Phase Extraction

NA = Not Applicable

Key (cont.)

O&M = Operation and Maintenance

PID = Photoionization Detector

RAP = Remedial Action Plan

RCI = Reactivity, Corrosivity, Ignitability

ROI = Radius of Influence

RR = Reimbursement Request

SA = Site Assessment

scfm = standard cubic feet per minute

SVE = Soil Vapor Extraction

SWPPP = Stormwater Pollution Prevention Plan

TD = Total Depth

TPH = Total Petroleum Hydrocarbons

UST = Underground Storage Tank

WQO = Water Quality Objectives

Yd3 = Cubic Yards