

RESPONSE PLAN
FORMER SOUTHLAND STEEL PROPERTY

APPENDIX F
ESTIMATED COSTS

Appendix F: Estimated Costs

The estimated costs have been prepared as follows:

- A capital and recurring cost for each alternative;
- A separate cost for groundwater monitoring;
- Costs for soil vapor and groundwater investigations that are planned and described in Appendix C – Sampling and Analysis Plan.

The costs are summarized in a table at the start of the Appendix. The summary table has the following features:

- Groundwater monitoring, an annual project support cost of \$5,000, and a 5-year review cost of \$15,000 are included as a recurring cost for all alternatives.
- The above recurring cost is presented as if each alternative is a stand-alone alternative for implementation. Since this is not the case, if soil and soil vapor alternatives are implemented, the groundwater monitoring cost will need to be removed from one of the alternatives. If the groundwater treatment remedy is implemented, this same monitoring cost will be removed from the recurring cost figure.
- The Item 4 soil vapor and groundwater monitoring costs for two sampling events is stand-alone and is a required prerequisite to the implementation of any of the site remedies. Based on discussion with DTSC, this scope of work is required and is not considered part of site remedial costs.
- CEQA compliance costs are assumed to be minimal and are not separately identified within the cost estimates. It is assumed that DTSC will procure a negative declaration and no such costs will be required.
- Costs have not been included for fees that may be charged by DTSC or other regulatory agencies or for legal support that may be necessary in drafting agreements necessary for ResPlan implementation.
- Costs have not been included for Public Meetings and other Community Support requirements that may be incurred by the Successor Agency.
- Other incidental costs unrelated to the performance of site work that are required to comply with local or other regulatory mandates are not included.

Summary of Estimated Costs

The estimated costs for the selected remedies are as follows:

- **Soil remediation:** The soil excavation and removal action cost for selected alternative S3 is \$1,226,000 for the initial cost of removal and disposal of about 3,750 cubic yards of impacted soil from the site. The recurring costs of \$231,000 are for groundwater monitoring for 10 years, nominal annual technical support costs of \$5,000 per year, and a \$15,000 cost for 5 year reviews.

- Soil Vapor: The selected remedy for soil vapor is to remove the impacted soil during the soil excavation. It is estimated that this amount will add about 250 cubic yards of soil and \$115,000 to the remedial cost. There is no additional recurring cost as the groundwater monitoring is already included in S3. This remedy is contingent on the results of planned field investigations and estimated to have a 50 percent likelihood of being needed.
- Groundwater remediation: The requirement for groundwater remediation is dependent on the results obtained from new wells planned to be installed at the site. The need for treatment will be decided following the availability of results from two sampling events of site monitoring wells.

If required, it is expected that alternative 2 (GW2) will be selected for implementation. This alternative is estimated to have an initial cost of \$425,000 for the installation of new injection wells, for planning and designing of the system, procuring the necessary approvals, and for start-up of the operations. The total recurring cost for operations for ten years is \$1,452,000, much of which is comprised of the costs of the injection fluid for dechlorination. The costs for this alternative have some uncertainty related to them as it is estimated that this remedy has less than a 25 percent likelihood of being implemented in the near term. This low likelihood of the requirement for this option is because the groundwater plume appears to be a part of a regional condition and it will be more economical for the Successor Agency to participate in a joint effort as opposed to an independent treatment system.

In summary, the remediation costs for the site are most likely to be less than \$2,000,000 with a small chance that groundwater treatment is necessary.

Summary of Cost Estimates for Remediation
City of Huntington Park - Southland Steel Property (Eco-13-595)

Media	Alternative	Capital Costs	Recurring Costs	Total Cost
Soil	S1: No Action	\$0	\$231,000	\$231,000
	S2: Excavation and On-Site Stabilization	\$1,076,000	\$231,000	\$1,307,000
	S3: Excavation and Off-Site Disposal	\$1,226,000	\$231,000	\$1,457,000
Soil Vapor	SV1: No Action	\$0	\$231,000	\$231,000
	SV2: Soil Vapor Extraction System	\$407,000	\$653,000	\$1,060,000
	SV3: Soil Excavation and Removal	\$115,000	\$231,000	\$346,000
	SV4: Active or Passive Soil Venting in Building Areas	\$1,939,000	\$231,000	\$2,170,000
Soil Vapor & Groundwater	GW1: No Action	\$0	\$231,000	\$231,000
	GW2: In-Situ Treatment by Dechlorination	\$425,000	\$1,683,000	\$2,108,000
	GW3: Pump and Treat	\$657,000	\$1,187,000	\$1,844,000
Soil Vapor & Groundwater	Investigations 4 New Monitoring Wells & Initial Monitoring	\$247,000	N/A	\$247,000

**Groundwater Monitoring Required Alternative No. 1
Semi-Annual for Two Years
and Annual for Additional Eight Years**

City of Huntington Park - Southland Steel Property (Eco-13-595)

RECURRING COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
Field Activities - GW Sampling (2 years of semi-annual events)					
Labor					
Program Manager (Groundwater Sampling), 1-2 year	2	1	hr	\$175.00	\$350.00
Project Manager (Groundwater Sampling), 1-2 year	2	2	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 1-2 year	2	24	hr	\$120.00	\$5,760.00
Field Technician (Groundwater Sampling), 1-2 year	2	30	hr	\$75.00	\$4,500.00
Office Support (Groundwater Sampling), 1-2 year	2	24	hr	\$55.00	\$2,640.00
Subtotal Labor					\$13,850.00
Other Direct Costs					
Field Supplies	4	1	ea	\$100.00	\$400.00
Mileage	6	90	mi	\$0.56	\$302.40
Subtotal ODCs					\$702.40
Subcontractor Costs					
Laboratory Support					
Groundwater Sampling (1-2 year) - VOCs + TPHg (8260B)	2	13	ea	85.00	\$2,917.20
Groundwater Sampling (1-2 year) - Perchlorate (314)	2	12	ea	75.00	\$2,376.00
Groundwater Sampling (1-2 year) - Hexavalent Chromium (7199)	2	12	ea	100.00	\$3,168.00
Groundwater Sampling (1-2 year) - Metals (6010B)	2	2	ea	85.00	\$340.00
Groundwater Sampling (1-2 year) - TPHd (M8015D)	2	2	each	35.00	\$140.00
Subtotal Laboratory					\$8,941.20
Drum Disposal					
Water Sampling Drum Disposal (1-2 year)	2	2	ea	300.00	\$1,200.00
Subtotal Drum Disposal					\$1,200.00
Field Activities - GW Sampling (2 years of semi-annual events)					\$24,693.60
Report Preparation - Draft, Years 1-2					
Labor					
Program Manager	2	2.00	hr	\$175.00	\$700.00
Project Manager	2	4.00	hr	\$150.00	\$1,200.00
Senior Scientist/Engineer/Geologist	2	20.00	hr	\$120.00	\$4,800.00
Technical Editor	2	4.00	hr	\$60.00	\$480.00
Office Support	2	8.00	hr	\$55.00	\$880.00
Subtotal Labor					\$8,060.00
Other Direct Costs					
Document Delivery	2		each	\$95.00	\$0.00
Subtotal ODCs					\$0.00
Report Preparation - Draft, Years 1-2					\$8,060.00
Report Comments, Responses & Meetings, Years 1-2					
Labor					
Program Manager	2	1.00	hr	\$175.00	\$350.00
Project Manager	2	2.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	2	8.00	hr	\$120.00	\$1,920.00
Technical Editor	2	2.00	hr	\$60.00	\$240.00
Office Support	2	2.00	hr	\$55.00	\$220.00
Subtotal Labor					\$3,330.00
Other Direct Costs					
Mileage	2	90.00	mi	\$0.56	\$100.80
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$600.80
Report Comments, Responses & Meetings, Years 1-2					\$3,930.80

**Groundwater Monitoring Required Alternative No. 1
Semi-Annual for Two Years
and Annual for Additional Eight Years
City of Huntington Park - Southland Steel Property (Eco-13-595)**

Report Preparation - Final, Years 1-2

Labor						
Program Manager	2	0.50	hr	\$175.00		\$175.00
Project Manager	2	2.00	hr	\$150.00		\$600.00
Senior Scientist/Engineer/Geologist	2	4.00	hr	\$120.00		\$960.00
Technical Editor	2	2.00	hr	\$60.00		\$240.00
Office Support	1	4.00	hr	\$55.00		\$220.00
					Subtotal Labor	\$2,195.00
Other Direct Costs						
Document Delivery	2	5.00	each	\$95.00		\$950.00
					Subtotal ODCs	\$950.00

Report Preparation - Final, Years 1-2 **\$3,145.00**

RECURRING COSTS Years 1-2 **\$39,829.40**

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
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Field Activities - GW Sampling (8 years of annual events)

Labor						
Program Manager (Groundwater Sampling), 3-10 year	1	1	hr	\$175.00		\$175.00
Project Manager (Groundwater Sampling), 3-10 year	1	2	hr	\$150.00		\$300.00
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 3-10 year	1	24	hr	\$120.00		\$2,880.00
Field Technician (Groundwater Sampling), 3-10 year	1	30	hr	\$75.00		\$2,250.00
Office Support (Groundwater Sampling), 3-10 year	1	24	hr	\$55.00		\$1,320.00
					Subtotal Labor	\$6,925.00
Other Direct Costs						
Field Supplies	2	1	ea	\$100.00		\$200.00
Mileage	3	90	mi	\$0.56		\$151.20
					Subtotal ODCs	\$351.20
Subcontractor Costs						
Laboratory Support						
Groundwater Sampling (3-10 year of annual) - VOCs + TPHg (8260B)	1	13	ea	85.00		\$1,458.60
Groundwater Sampling (3-10 year of annual) - Perchlorate (314)	1	12	ea	75.00		\$1,188.00
Groundwater Sampling (3-10 year of annual) - Hexavalent Chromium (7199)	1	12	ea	100.00		\$1,584.00
Groundwater Sampling (3-10 year of annual) - Metals (6010B)	1	2	ea	85.00		\$170.00
Groundwater Sampling (3-10 year of annual) - TPHd (M8015D)	1	2	each	35.00		\$70.00
					Subtotal Laboratory	\$4,470.60
Drum Disposal						
Water Sampling Drum Disposal (3-10 year)	1	2	ea	300.00		\$600.00
					Subtotal Drum Disposal	\$600.00

Field Activities - GW Sampling (8 years of annual events) **\$12,346.80**

Report Preparation - Draft, Years 3-10

Labor						
Program Manager	1	2.00	hr	\$175.00		\$350.00
Project Manager	1	4.00	hr	\$150.00		\$600.00
Senior Scientist/Engineer/Geologist	1	20.00	hr	\$120.00		\$2,400.00
Technical Editor	1	4.00	hr	\$60.00		\$240.00
Office Support	1	8.00	hr	\$55.00		\$440.00
					Subtotal Labor	\$4,030.00
Other Direct Costs						
Document Delivery	1		each	\$95.00		\$0.00
					Subtotal ODCs	\$0.00

Report Preparation - Draft, Years 3-10 **\$4,030.00**

**Groundwater Monitoring Required Alternative No. 1
Semi-Annual for Two Years
and Annual for Additional Eight Years
City of Huntington Park - Southland Steel Property (Eco-13-595)**

Report Comments, Responses & Meetings, Years 3-10						
Labor						
	Program Manager	1	1.00	hr	\$175.00	\$175.00
	Project Manager	1	2.00	hr	\$150.00	\$300.00
	Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
	Technical Editor	1	2.00	hr	\$60.00	\$120.00
	Office Support	1	2.00	hr	\$55.00	\$110.00
					Subtotal Labor	\$1,665.00
Other Direct Costs						
	Mileage	1	90.00	mi	\$0.56	\$50.40
	Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
					Subtotal ODCs	\$550.40
Report Comments, Responses & Meetings, Years 3-10						\$2,215.40

**Groundwater Monitoring Required Alternative No. 1
Semi-Annual for Two Years
and Annual for Additional Eight Years
City of Huntington Park - Southland Steel Property (Eco-13-595)**

Report Preparation - Final, Years 3-10

Labor						
Program Manager	1	0.50	hr	\$175.00		\$87.50
Project Manager	1	2.00	hr	\$150.00		\$300.00
Senior Scientist/Engineer/Geologist	1	4.00	hr	\$120.00		\$480.00
Technical Editor	1	2.00	hr	\$60.00		\$120.00
Office Support	1	4.00	hr	\$55.00		\$220.00
				Subtotal Labor		\$1,207.50
Other Direct Costs						
Document Delivery					1	5.00 each
				\$95.00		\$475.00
				Subtotal ODCs		\$475.00

Report Preparation - Final, Years 3-10	\$1,682.50
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RECURRING COSTS Years 3-10 \$20,274.70

**Groundwater Monitoring Required Alternative No. 1
Semi-Annual for Two Years
and Annual for Additional Eight Years**

**Present Worth Calculations
City of Huntington Park - Southland Steel Property (Eco-13-595)**

Year	O&M Costs					Cummulative PW Cost
	P/F (7 percent)	Annual	Periodic	GW Monitoring	PW Cost	
0	1.00000	Capital Costs and Installation - see other tables				
1	0.93458	\$5,000		\$39,829	\$41,897	\$41,897
2	0.87344	\$5,000		\$39,829	\$39,156	\$81,052
3	0.81630	\$5,000		\$20,275	\$20,632	\$101,684
4	0.76290	\$5,000		\$20,275	\$19,282	\$120,966
5	0.71299	\$5,000	\$15,000	\$20,275	\$28,715	\$149,681
6	0.66634	\$5,000		\$20,275	\$16,842	\$166,523
7	0.62275	\$5,000		\$20,275	\$15,740	\$182,263
8	0.58201	\$5,000		\$20,275	\$14,710	\$196,973
9	0.54393	\$5,000		\$20,275	\$13,748	\$210,721
10	0.50835	\$5,000	\$15,000	\$20,275	\$20,474	\$231,194
Total PW Costs:						\$231,000

COST ESTIMATES

Soil Alternative No. 2: Excavation and On-site Stabilization

City of Huntington Park - Southland Steel Property (Eco-13-595)

TOTAL

TASK 1.1 - Contractor Selection	\$3,360.40
TASK 1.2 - Pre-Remediation Support	\$3,660.40
TASK 1.3 - Mobilization for Pre-Field Activities	\$4,730.40
TASK 2 - Field Activities	\$1,037,848.50
TASK 3.1 - Report Preparation - Draft	\$13,640.00
TASK 3.2 - Report Comments, Responses & Meetings	\$8,030.40
TASK 3.3 - Report Preparation - Final	\$4,975.00
CAPITAL COST TOTAL	\$1,076,000.00

Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
N/A					\$0.00

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$1,076,000.00	\$1,076,000.00	1	\$1,076,000.00

TOTAL RECURRING COSTS \$0.00

TOTAL COST \$1,076,000.00

COST ESTIMATES

Soil Alternative No. 2: Excavation and On-site Stabilization

City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$3,310.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$3,360.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	16.00	hr	\$75.00	\$1,200.00
Subtotal Labor					\$3,110.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$550.40
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$3,660.40
TASK 1.3 - Mobilization for Pre-Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00
Field Technician	1	16.00	hr	\$75.00	\$1,200.00
Subtotal Labor					\$4,680.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.3 - Mobilization for Pre-Field Activities					\$4,730.40
Total for Task 1:					\$11,751.20

Soil Alternative No. 2: Excavation and On-site Stabilization

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities

Labor						
Program Manager	1	8	hr	\$175.00	\$1,400.00	
Project Manager	1	4	hr	\$150.00	\$600.00	
Senior Scientist/Engineer/Geologist	1	40	hr	\$120.00	\$4,800.00	
Project Scientist/Engineer/Geologist	1	40	hr	\$100.00	\$4,000.00	
Field Technician	1	200	hr	\$75.00	\$15,000.00	
Office Support	1	24	hr	\$55.00	\$1,320.00	
				Subtotal Labor		\$27,120.00
Other Direct Costs						
Mileage						\$0.00
	15	90	mi	\$0.56	\$756.00	
				Subtotal ODCs		\$756.00
Subcontractor Costs						
Contractor for Field Activities						
Mobilization	1	1	ls	\$6,000.00	\$6,000.00	
Sawcut, demolish, remove & dispose of degraded paving	1	34730	sft	\$2.75	\$95,507.50	
Excavate and on-site temporary stockpile	1	3750	cyd	\$28.00	\$105,000.00	
Cement mixture for soil stabilization	1	3750	cyd	\$140.00	\$525,000.00	
Stormwater Plan and Permit Fees	1	1	ls	\$10,000.00	\$10,000.00	
Backfill & compaction	1	5250	ton	13.00	\$68,250.00	
Compaction testing and Reporting	1	1	ls	9,200.00	\$9,200.00	
Re-pave excavated area with 4-inch AC & restriping for parking	1	34730	sft	\$5.50	\$191,015.00	
				Subtotal Contractor		\$1,009,972.50

SUBTOTAL - TASK 2 - Field Activities	\$1,037,848.50
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Total for Task 2:	\$1,037,848.50
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TASK 3.1 - Report Preparation - Draft

Labor						
Program Manager	1	8.00	hr	\$175.00	\$1,400.00	
Project Manager	1	12.00	hr	\$150.00	\$1,800.00	
Senior Scientist/Engineer/Geologist	1	56.00	hr	\$120.00	\$6,720.00	
Technical Editor	1	40.00	hr	\$60.00	\$2,400.00	
Office Support	1	24.00	hr	\$55.00	\$1,320.00	
				Subtotal Labor		\$13,640.00
Other Direct Costs						
Document Delivery						\$0.00
	1		each	\$95.00	\$95.00	
				Subtotal ODCs		\$0.00

SUBTOTAL - TASK 3.1 - Report Preparation - Draft	\$13,640.00
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TASK 3.2 - Report Comments, Responses & Meetings

Labor						
Program Manager	1	8.00	hr	\$175.00	\$1,400.00	
Project Manager	1	12.00	hr	\$150.00	\$1,800.00	
Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00	
Technical Editor	1	16.00	hr	\$60.00	\$960.00	
Office Support	1	8.00	hr	\$55.00	\$440.00	
				Subtotal Labor		\$7,480.00
Other Direct Costs						
Mileage						\$0.00
	1	90.00	mi	\$0.56	\$50.40	
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00	
				Subtotal ODCs		\$550.40

SUBTOTAL - TASK 3.2 - Report Comments, Responses & Meetings	\$8,030.40
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Soil Alternative No. 2: Excavation and On-site Stabilization

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.3 - Report Preparation - Final						
Labor						
Program Manager	1	4.00	hr	\$175.00	\$700.00	
Project Manager	1	8.00	hr	\$150.00	\$1,200.00	
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00	
Technical Editor	1	4.00	hr	\$60.00	\$240.00	
Office Support	1	8.00	hr	\$55.00	\$440.00	
		Subtotal Labor				\$4,500.00
Other Direct Costs						
Document Delivery	1	5.00	each	\$95.00	\$475.00	\$0.00
		Subtotal ODCs				\$475.00
SUBTOTAL - TASK 3.3 - Report Preparation - Final					\$4,975.00	
Total for Task 3:					\$26,645.40	
CAPITAL COST TOTAL					\$1,076,245.10	

COST ESTIMATES

Soil Alternative No. 3: Excavation and Off-site Disposal

City of Huntington Park - Southland Steel Property (Eco-13-595)

TOTAL

TASK 1.1 - Contractor Selection	\$3,360.40
TASK 1.2 - Pre-Remediation Support	\$4,260.40
TASK 1.3 - Mobilization for Pre-Field Activities	\$4,730.40
TASK 2 - Field Activities	\$1,171,656.20
TASK 3.1 - Report Preparation - Draft	\$23,120.00
TASK 3.2 - Report Comments, Responses & Meetings	\$11,750.40
TASK 3.3 - Report Preparation - Final	\$6,895.00

CAPITAL COST TOTAL	\$1,226,000.00
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Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
N/A	0	0	EA	0	0

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$1,226,000.00	\$1,226,000.00	1	\$1,226,000.00

TOTAL RECURRING COSTS 0

TOTAL COST \$1,226,000.00

COST ESTIMATES

Soil Alternative No. 3: Excavation and Off-site Disposal

City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$3,310.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$3,360.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$3,710.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$550.40
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$4,260.40
TASK 1.3 - Mobilization for Pre-Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00
Field Technician	1	16.00	hr	\$75.00	\$1,200.00
Subtotal Labor					\$4,680.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.3 - Mobilization for Pre-Field Activities					\$4,730.40
Total for Task 1:					\$12,351.20

Soil Alternative No. 3: Excavation and Off-site Disposal

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities						
Labor						
Program Manager	1	12	hr	\$175.00	\$2,100.00	
Project Manager	1	8	hr	\$150.00	\$1,200.00	
Senior Scientist/Engineer/Geologist	1	60	hr	\$120.00	\$7,200.00	
Project Scientist/Engineer/Geologist	1	60	hr	\$100.00	\$6,000.00	
Field Technician	1	230	hr	\$75.00	\$17,250.00	
Office Support	1	24	hr	\$55.00	\$1,320.00	
Subtotal Labor					\$35,070.00	
Other Direct Costs						
Mileage	28	90	mi	\$0.56	\$1,411.20	
Subtotal ODCs					\$1,411.20	
Subcontractor Costs						
Contractor for Field Activities (Soil Vapor Probes)						
Geophysical Survey	1	1	ls	\$2,000.00	\$2,000.00	
Soil Vapor Boring Installations	1	1	ls	\$7,860.00	\$7,860.00	
Subtotal Contractor					\$9,860.00	
Contractor for Field Activities (Excavation)						
Mobilization	1	1	ls	\$6,000.00	\$6,000.00	
Sawcut, demolish, remove & dispose of paving	1	34730	sft	\$2.75	\$95,507.50	
Excavate and on-site temporary stockpile	1	3750	cyd	\$28.00	\$105,000.00	
Load soil for off-site disposal	1	5250	ton	\$13.00	\$68,250.00	
Transport & Dispose of non-hazardous soil (PAH-impacted)	1	1312.5	ton	\$45.00	\$59,062.50	
Transport & Dispose of non-RCRA soil (arsenic & lead-impacted)	1	3937.5	ton	\$84.00	\$330,750.00	
Backfill & compaction	1	5500	ton	\$13.00	\$71,500.00	
Compaction testing and Reporting	1	1	ls	\$9,200.00	\$9,200.00	
Clean soil import	1	5500	ton	\$23.00	\$126,500.00	
Re-pave excavated area with 4-inch AC & restriping for parking	1	34730	sft	\$5.50	\$191,015.00	
Subtotal Contractor					\$1,062,785.00	
Laboratory Support						
Arsenic - EPA 6020 (Confirmation)	1	143	each	\$25.00	\$3,575.00	
Cadmium - EPA 6010 (Confirmation)	1	143	each	\$25.00	\$3,575.00	
Polyaromatic Hydrocarbons (PAHs) - EPA 8310 (Confirmation)	1	143	each	\$180.00	\$25,740.00	
VOCs - EPA 8260B (Stockpile)	1	50	each	\$65.00	\$4,290.00	
PAHs - EPA 8310 (Stockpile)	1	50	each	\$65.00	\$4,290.00	
Metals - EPA 6010B (Stockpile)	1	50	ea	\$90.00	\$5,940.00	
TPH-g + TPH-d - EPA 8015 (Stockpile)	1	50	ea	\$70.00	\$4,620.00	
Field Kit for VOC sampling	1	3	days	\$50.00	\$150.00	
Volatile Organic Compounds - EPA TO-15	1	46	each	\$225.00	\$10,350.00	
Subtotal Laboratory					\$62,530.00	
SUBTOTAL - TASK 2 - Field Activities					\$1,171,656.20	
Total for Task 2:					\$1,171,656.20	

Soil Alternative No. 3: Excavation and Off-site Disposal

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.1 - Report Preparation - Draft

Labor						
Program Manager	1	8.00	hr	\$175.00		\$1,400.00
Project Manager	1	24.00	hr	\$150.00		\$3,600.00
Senior Scientist/Engineer/Geologist	1	120.00	hr	\$120.00		\$14,400.00
Technical Editor	1	40.00	hr	\$60.00		\$2,400.00
Office Support	1	24.00	hr	\$55.00		\$1,320.00
					Subtotal Labor	\$23,120.00

Other Direct Costs						
Document Delivery	1		each	\$95.00		
					Subtotal ODCs	

SUBTOTAL - TASK 3.1 - Report Preparation - Draft	\$23,120.00
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TASK 3.2 - Report Comments, Responses & Meetings

Labor						
Program Manager	1	8.00	hr	\$175.00		\$1,400.00
Project Manager	1	16.00	hr	\$150.00		\$2,400.00
Senior Scientist/Engineer/Geologist	1	50.00	hr	\$120.00		\$6,000.00
Technical Editor	1	16.00	hr	\$60.00		\$960.00
Office Support	1	8.00	hr	\$55.00		\$440.00
					Subtotal Labor	\$11,200.00

Other Direct Costs						
Mileage	1	90.00	mi	\$0.56		\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00		\$500.00
					Subtotal ODCs	\$550.40

SUBTOTAL - TASK 3.2 - Report Comments, Responses & Meetings	\$11,750.40
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TASK 3.3 - Report Preparation - Final

Labor						
Program Manager	1	4.00	hr	\$175.00		\$700.00
Project Manager	1	8.00	hr	\$150.00		\$1,200.00
Senior Scientist/Engineer/Geologist	1	30.00	hr	\$120.00		\$3,600.00
Technical Editor	1	8.00	hr	\$60.00		\$480.00
Office Support	1	8.00	hr	\$55.00		\$440.00
					Subtotal Labor	\$6,420.00

Other Direct Costs						
Document Delivery	1	5.00	each	\$95.00		\$475.00
					Subtotal ODCs	\$475.00

SUBTOTAL - TASK 3.3 - Report Preparation - Final	\$6,895.00
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Total for Task 3:	\$41,765.40
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CAPITAL COST TOTAL	\$1,225,772.80
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COST ESTIMATES

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

TOTAL

TASK 1.1 - Workplan	\$19,685.00
TASK 1.2 - Health & Safety Plan	\$5,535.00
TASK 1.3 - Sampling and Analysis Plan	\$11,700.00
TASK 1.4 - Quality Assurance Project Plan	\$5,425.00
TASK 1.5 - Spill and Discharge Plan	\$4,690.00
TASK 1.6 - Materials Handling Plan	\$3,970.00
TASK 1.7 - Project Management & Coordination	\$10,300.00
TASK 1.8 - Meetings	\$3,185.40
TASK 2.1 - Meetings & Coordination	\$5,685.40
TASK 2.2 - Field Testing	\$62,364.75
TASK 2.3 - Final Design	\$6,595.00
TASK 2.4 - System Installation & Permitting	\$110,907.06
TASK 2.5 - Initial Testing & Optimization	\$8,811.60
TASK 2.6.1 - O&M (Monthly Costs), First Year	\$73,320.80
TASK 2.6.2 - O&M (Quarterly Testing & Reporting	\$22,860.00
TASK 2.7 - Rebound Testing	\$8,396.60
TASK 2.8 - Soil Confirmation Sampling	\$16,011.20
TASK 3 - Reporting	\$27,750.00

CAPITAL COST TOTAL	\$407,000.00
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Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
O&M - Annual Cost	1 - 5	1	EA	\$96,180.80	\$96,180.80

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$407,000.00	\$407,000.00	1	\$407,000.00
Periodic Cost	2	\$96,180.80	\$96,180.80	0.935	\$89,929.05
Periodic Cost	3	\$96,180.80	\$96,180.80	0.873	\$83,965.84
Periodic Cost	4	\$96,180.80	\$96,180.80	0.816	\$78,483.53
Periodic Cost	5	\$96,180.80	\$96,180.80	0.763	\$73,385.95

TOTAL RECURRING COSTS \$422,000.00

TOTAL COST \$829,000.00

COST ESTIMATES

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	SUBTOTAL
TASK 1 - PROJECT PLANS					
1.1 Workplan (Draft & Final)					
Labor					
Program Manager	2	4.0	hrs	\$175.00	\$1,400.00
Project Manager	2	8.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	2	55.0	hrs	\$100.00	\$11,000.00
Drafting	2	12.0	hrs	\$60.00	\$1,440.00
Technical Editor	2	8.0	hrs	\$60.00	\$960.00
Office Support	2	16.0	hrs	\$55.00	\$1,760.00
Other Direct Costs					
Reproduction	1	5.0	units	\$50.00	\$250.00
Delivery	1	5.0	units	\$95.00	\$475.00
Subtotal					\$19,685.00
1.2 Health & Safety Plan					
Labor					
Program Manager	2	0.5	hrs	\$175.00	\$175.00
Project Manager	2	2.0	hrs	\$150.00	\$600.00
Certified Industrial Hygienist	2	4.0	hrs	\$150.00	\$1,200.00
Project Scientist/Engineer/Geologist	2	12.0	hrs	\$100.00	\$2,400.00
Drafting	2	2.0	hrs	\$60.00	\$240.00
Technical Editor	2	4.0	hrs	\$60.00	\$480.00
Office Support	2	4.0	hrs	\$55.00	\$440.00
Other Direct Costs					
Reproduction	1	0.0	units	\$30.00	\$0.00
Subtotal					\$5,535.00
1.3 Sampling and Analysis Plan					
Labor					
Program Manager	2	2.0	hrs	\$175.00	\$700.00
Project Manager	2	8.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	2	20.0	hrs	\$100.00	\$4,000.00
Staff Scientist/Engineer/Geologist	2	20.0	hrs	\$80.00	\$3,200.00
Technical Editor	2	8.0	hrs	\$60.00	\$960.00
Office Support	2	4.0	hrs	\$55.00	\$440.00
Other Direct Costs					
Reproduction	1	0.0	units	\$30.00	\$0.00
Subtotal					\$11,700.00
1.4 Quality Assurance Project Plan					
Labor					
Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	10.0	hrs	\$150.00	\$1,500.00
Project Scientist/Engineer/Geologist	1	30.0	hrs	\$100.00	\$3,000.00
Technical Editor	1	5.0	hrs	\$60.00	\$300.00
Office Support	1	5.0	hrs	\$55.00	\$275.00
Other Direct Costs					
Reproduction	1	0.0	units	\$30.00	\$0.00
Subtotal					\$5,425.00
1.5 Spill and Discharge Plan					
Labor					
Program Manager	2	1.0	hrs	\$175.00	\$350.00
Project Manager	2	2.0	hrs	\$150.00	\$600.00
Project Scientist/Engineer/Geologist	2	10.0	hrs	\$100.00	\$2,000.00
Staff Scientist/Engineer/Geologist	2	8.0	hrs	\$80.00	\$1,280.00
Technical Editor	2	2.0	hrs	\$60.00	\$240.00
Office Support	2	2.0	hrs	\$55.00	\$220.00
Other Direct Costs					
Reproduction	1	0.0	units	\$30.00	\$0.00
Subtotal					\$4,690.00

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

1.6 Materials Handling Plan						
Labor						
Program Manager	2	1.0	hrs	\$175.00		\$350.00
Project Manager	2	2.0	hrs	\$150.00		\$600.00
Project Scientist/Engineer/Geologist	2	8.0	hrs	\$100.00		\$1,600.00
Staff Scientist/Engineer/Geologist	2	6.0	hrs	\$80.00		\$960.00
Technical Editor	2	2.0	hrs	\$60.00		\$240.00
Office Support	2	2.0	hrs	\$55.00		\$220.00
 Other Direct Costs						
Reproduction	1	0.0	units	\$30.00		\$0.00
					Subtotal	\$3,970.00
1.7 Project Management & Coordination						
Program Manager	1	12.0	hrs	\$175.00		\$2,100.00
Project Manager	1	24.0	hrs	\$150.00		\$3,600.00
Project Scientist/Engineer/Geologist	1	24.0	hrs	\$100.00		\$2,400.00
Office Support	1	40.0	hrs	\$55.00		\$2,200.00
					Subtotal	\$10,300.00
1.8 Meetings (One coordination meeting at job site)						
Labor						
Program Manager	1	1.0	hrs	\$175.00		\$175.00
Project Manager	1	10.0	hrs	\$150.00		\$1,500.00
Project Scientist/Engineer/Geologist	1	10.0	hrs	\$100.00		\$1,000.00
Office Support	1	4.0	hrs	\$55.00		\$220.00
 Other Direct Costs						
Mileage	1	90.0	miles	\$0.56		\$50.40
Meeting Materials	1	8.0	ea.	\$30.00		\$240.00
					Subtotal	\$3,185.40
SUBTOTAL - TASK 1 - PROJECT PLANS						\$64,490.40

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - REMEDIAL ACTIONS

2.1 Meetings & Coordination

Labor

Program Manager	1	1.0	hrs	\$175.00	\$175.00
Project Manager	1	16.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	1	16.0	hrs	\$100.00	\$1,600.00
Office Support	1	4.0	hrs	\$55.00	\$220.00

Other Direct Costs

Mileage	1	90.0	units	\$0.56	\$50.40
Meeting Materials	1	8.0	ea.	\$30.00	\$240.00

Subcontractor

Meeting	1	1.0	meeting	\$1,000.00	\$1,000.00
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Subtotal **\$5,685.40**

2.2 Field Testing

Labor

Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	16.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	1	80.0	hrs	\$100.00	\$8,000.00
Field Technician	1	80.0	hrs	\$75.00	\$6,000.00
Office Support	1	24.0	hrs	\$55.00	\$1,320.00
Drafting	1	4.0	hrs	\$60.00	\$240.00

Other Direct Costs

Mileage	10	90.0	units	\$0.56	\$504.00
Truck	1	10.0	days	\$70.00	\$700.00
Monitoring Equipment (PID, etc.)	1	10.0	days	\$120.00	\$1,200.00
Field Supply and Sampling Equipment (PPE, Tedlar Bags, etc.)	1	10.0	days	\$40.00	\$400.00

Subcontractor - Vapor Extraction Well Installation

Vapor Extraction Well Installation	1	1.0	units	\$12,950.00	\$12,950.00
Analytical Laboratory - TPH (8015)	1	4.0	samples	\$75.00	\$300.00
Analytical Laboratory - Metals (6010B)	1	4.0	samples	\$100.00	\$400.00
Analytical Laboratory - VOCs (8260B)	1	4.0	samples	\$125.00	\$500.00
Drum Disposal	1	14.0	drums	\$300.00	\$4,200.00

Subcontractor - Remedation Test Equipment Rental

Equipment Rental (SVE + Generator)	1	1.0	units	\$4,500.00	\$4,500.00
Mobilize	1	1.0	units	\$732.00	\$732.00
Generator fuel use	1	1.0	units	\$1,000.00	\$1,000.00
Equipment set up and initial VES testing	1	1.0	units	\$1,560.00	\$1,560.00
Demobilize equipment and generator	1	1.0	units	\$738.75	\$738.75

Subcontractor - Laboratory

VOCs (TO-15) - Vapor	1	50.0	samples	\$225.00	\$11,250.00
Atmospheric gasses - CH ₄ , CO ₂ and O ₂	1	26.0	samples	\$120.00	\$3,120.00

Subtotal **\$62,364.75**

2.3 Final Design

Labor

Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	16.0	hrs	\$150.00	\$2,400.00
Project Engineer/Scientist	1	30.0	hrs	\$100.00	\$3,000.00
Office Support	1	4.0	hrs	\$55.00	\$220.00

Other Direct Costs

Reproduction	1	5.0	units	\$30.00	\$150.00
Delivery	1	5.0	units	\$95.00	\$475.00

Subtotal **\$6,595.00**

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

2.4 System Installation & Permitting

Labor - Oversight

Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	8.0	hrs	\$150.00	\$1,200.00
Project Scientist/Engineer/Geologist	2	60.0	hrs	\$100.00	\$12,000.00
Office Support	1	20.0	hrs	\$55.00	\$1,100.00
Drafting	1	8.0	hrs	\$60.00	\$480.00

Other Direct Costs

Mileage	7	90.0	units	\$0.56	\$352.80
Truck	1	7.0	days	\$70.00	\$490.00
Monitoring Equipment (PID, etc.)	1	7.0	days	\$120.00	\$840.00
Field Supplies and Equipment	1	7.0	days	\$40.00	\$280.00

Subcontractor - Building and other permits

City of Huntington Park/LA County DPW Building Permits	1	1.0	units	\$4,000.00	\$4,000.00
City of Huntington Park/LA County DPW Electrical Permits - Final system	1	1.0	units	\$700.00	\$700.00
SCAQMD Permit - Final System	1	1.0	units	\$2,000.00	\$2,000.00

Subcontractor - Remediation Equipment

Equipment Purchase	1	1.0	units	\$40,191.88	\$40,191.88
Mobilize	1	1.0	units	\$724.00	\$724.00
Carbon	1	2000.0	units	\$2.00	\$4,000.00
Equipment set up	1	1.0	units	\$774.38	\$774.38
Equipment start up	1	1.0	units	\$724.00	\$724.00

Subcontractor - Temporary electrical service

100 amp 120/230V/single phase/+ meter + 3 poles	1	1.0	units	\$12,000.00	\$12,000.00
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Subcontractor - Equipment enclosure

Security enclosure, gated access for GAC changeout	1	1.0	units	\$4,500.00	\$4,500.00
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Subcontractor - Piping and manifold installation

Sawcut and remove existing paving	1000	1.0	feet	\$5.00	\$5,000.00
Install 2,000 feet of 4 inch PVC piping	2000	1.0	feet	\$4.00	\$8,000.00
Backfill and repave trenches	1000	1.0	feet	\$10.00	\$10,000.00
Construct manifold at SVE enclosure	1	1.0	units	\$1,200.00	\$1,200.00

Subtotal **\$110,907.06**

2.5 Initial Testing & Optimization

Labor

Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	4.0	hrs	\$150.00	\$600.00
Project Scientist/Engineer/Geologist	1	40.0	hrs	\$100.00	\$4,000.00
Office Support	1	12.0	hrs	\$55.00	\$660.00

Other Direct Costs

Monitoring Equipment (PID, etc.)	1	4.0	days	\$120.00	\$480.00
Mileage	4	90.0	units	\$0.56	\$201.60

Subcontractor

VOCs (TO-15) - Vapor	1	8.0	samples	\$225.00	\$1,800.00
Atmospheric gasses - CH ₄ , CO ₂ and O ₂	1	6.0	samples	\$120.00	\$720.00

Subtotal **\$8,811.60**

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

2.6.1 O&M (Weekly Costs), First Year

Labor

Project Manager	52	0.5	hrs	\$150.00	\$3,900.00
Project Scientist/Engineer/Geologist	52	4.0	hrs	\$100.00	\$20,800.00
Office Support	52	1.0	hrs	\$55.00	\$2,860.00

Other Direct Costs

Mileage	52	90.0	units	\$0.56	\$2,620.80
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Subcontractor - Remediation System O&M

Contract O&M Services	12	1.0	month	\$400.00	\$4,800.00
Consumables (oil, filters, misc.)	12	1.0	month	\$25.00	\$300.00
Charcoal change out service, assumes 2 refills per year + disposal	1	2.0	year	\$4,000.00	\$8,000.00
Monitoring Equipment (PID, etc.)	52	1.0	weeks	\$120.00	\$6,240.00
Misc.	52	1.0	week	\$25.00	\$1,300.00

Subcontractor - Laboratory

VOCs (TO-15) - Vapor	12	3.0	samples	\$225.00	\$8,100.00
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Electrical service

Electrical Consumption Charges - estimated	12	1.0	month	\$1,200.00	\$14,400.00
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Subtotal **\$73,320.80**

2.6.2 O&M (Quarterly Reporting), First Year

Labor

Program Manager	4	2.0	hrs	\$175.00	\$1,400.00
Project Manager	4	4.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	4	30.0	hrs	\$100.00	\$12,000.00
Drafting	4	2.0	hrs	\$60.00	\$480.00
Technical Editor	4	8.0	hrs	\$60.00	\$1,920.00
Office Support	4	8.0	hrs	\$55.00	\$1,760.00

Other Direct Costs

Reproduction	4	5.0	units	\$50.00	\$1,000.00
Delivery	4	5.0	units	\$95.00	\$1,900.00

Subtotal **\$22,860.00**

2.7 Rebound Testing

Labor

Program Manager	1	1.0	hrs	\$175.00	\$175.00
Project Manager	1	2.0	hrs	\$150.00	\$300.00
Project Scientist/Engineer/Geologist	1	32.0	hrs	\$100.00	\$3,200.00
Office Support	1	12.0	hrs	\$55.00	\$660.00
Drafting	1	4.0	hrs	\$60.00	\$240.00

Other Direct Costs

Mileage	4	90.0	units	\$0.56	\$201.60
Truck	1	4.0	days	\$70.00	\$280.00
Monitoring Equipment (PID, etc.)	1	4.0	days	\$120.00	\$480.00
Field Supply and Sampling Equipment (PPE, Tedlar Bags, etc.)	1	4.0	days	\$40.00	\$160.00

Subcontractor -Laboratory

VOCs (TO-15)	1	12.0	samples	\$225.00	\$2,700.00
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Subtotal **\$8,396.60**

Soil Vapor Alternative No. 2: Vapor Extraction

City of Huntington Park - Southland Steel Property (Eco-13-595)

2.8 Soil Confirmation Sampling

Labor

Program Manager	1	2.0	hrs	\$175.00	\$350.00
Project Manager	1	4.0	hrs	\$150.00	\$600.00
Project Scientist/Engineer/Geologist	1	28.0	hrs	\$100.00	\$2,800.00
Staff Scientist/Engineer/Geologist	1	28.0	hrs	\$80.00	\$2,240.00
Office Support	1	6.0	hrs	\$55.00	\$330.00

Other Direct Costs

Mileage	3	90.0	units	\$0.56	\$151.20
Truck	1	3.0	days	\$70.00	\$210.00
Monitoring Equipment (PID, etc.)	1	3.0	days	\$120.00	\$360.00
Field Supply	1	3.0	days	\$40.00	\$120.00

Subcontractor

Analytical Laboratory - VOCs (8260B)	1	24.0	samples	\$100.00	\$2,400.00
Drilling Subcontractor (Concrete Coring)	1	6.0	ea	\$200.00	\$1,200.00
Drilling Subcontractor (Hand Auger Borings)	1	6.0	ea	\$100.00	\$600.00
Drilling Subcontractor (Direct Push Borings)	1	1.0	day	\$2,050.00	\$2,050.00
Drilling Subcontractor (Containment Drums)	1	4.0	ea	\$50.00	\$200.00
Analytical Laboratory - TPH (8015)	1	4.0	samples	\$75.00	\$300.00
Analytical Laboratory - Metals (6010B)	1	4.0	samples	\$100.00	\$400.00
Analytical Laboratory - VOCs (8260B)	1	4.0	samples	\$125.00	\$500.00
Drum Disposal	1	4.0	drums	\$300.00	\$1,200.00

Subtotal **\$16,011.20**

SUBTOTAL - TASK 2 - REMEDIAL ACTIONS **\$314,952.41**

TASK 3 - REPORTING

Final Report and Request for Closure

Program Manager	2	4.0	hrs	\$175.00	\$1,400.00
Project Manager	2	8.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	2	80.0	hrs	\$100.00	\$16,000.00
Staff Scientist/Engineer/Geologist	2	20.0	hrs	\$80.00	\$3,200.00
Technical Editor	2	20.0	hrs	\$60.00	\$2,400.00
Office Support	2	20.0	hrs	\$55.00	\$2,200.00

Other Direct Costs

Reproduction	1	5.0	units	\$30.00	\$150.00
Delivery	1	5.0	units	\$95.00	\$475.00

SUBTOTAL - TASK 3 - REPORTING **\$27,750.00**

CAPITAL COST TOTAL **\$407,192.81**

COST ESTIMATES

Soil Vapor Alternative No. 2: Vapor Extraction City of Huntington Park - Southland Steel Property (Eco-13-595)

RECURRING COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	SUBTOTAL
O&M (Weekly Costs), Years 2-5					
Labor					
Project Manager	52	0.5	hrs	\$150.00	\$3,900.00
Project Scientist/Engineer/Geologist	52	4.0	hrs	\$100.00	\$20,800.00
Office Support	52	1.0	hrs	\$55.00	\$2,860.00
Other Direct Costs					
Mileage	52	90.0	units	\$0.56	\$2,620.80
Subcontractor - Remediation System O&M					
Contract O&M Services	12	1.0	month	\$400.00	\$4,800.00
Consumables (oil, filters, misc.)	12	1.0	month	\$25.00	\$300.00
Charcoal change out service, assumes 2 refills per year + disposal	1	2.0	year	\$4,000.00	\$8,000.00
Monitoring Equipment (PID, etc.)	52	1.0	weeks	\$120.00	\$6,240.00
Misc.	52	1.0	week	\$25.00	\$1,300.00
Subcontractor - Laboratory					
VOCs (TO-15) - Vapor	12	3.0	samples	\$225.00	\$8,100.00
Electrical service					
Electrical Consumption Charges - estimated	12	1.0	month	\$1,200.00	\$14,400.00
Subtotal					\$73,320.80
O&M (Quarterly Reporting), Years 2-5					
Labor					
Program Manager	4	2.0	hrs	\$175.00	\$1,400.00
Project Manager	4	4.0	hrs	\$150.00	\$2,400.00
Project Scientist/Engineer/Geologist	4	30.0	hrs	\$100.00	\$12,000.00
Drafting	4	2.0	hrs	\$60.00	\$480.00
Technical Editor	4	8.0	hrs	\$60.00	\$1,920.00
Office Support	4	8.0	hrs	\$55.00	\$1,760.00
Other Direct Costs					
Reproduction	4	5.0	units	\$50.00	\$1,000.00
Delivery	4	5.0	units	\$95.00	\$1,900.00
Subtotal					\$22,860.00
ANNUAL RECURRING COSTS					\$96,180.80

COST ESTIMATES

Soil Vapor Alternative No. 3: Excavation and Removal

City of Huntington Park - Southland Steel Property (Eco-13-595)

TOTAL

TASK 1 - Pre-Remediation Support	\$4,260.40
TASK 2 - Field Activities	\$111,073.90

CAPITAL COST TOTAL	\$115,334.30
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Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
N/A	0	0	EA	0	0

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$115,334.30	\$115,334.30	1	\$115,334.30

TOTAL RECURRING COSTS 0

TOTAL COST \$115,000.00

Soil Vapor Alternative No. 3: Excavation and Removal

City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$3,710.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$550.40
SUBTOTAL - TASK 1 - Pre-Remediation Support					\$4,260.40
TASK 2 - Field Activities					
Labor					
Program Manager	1	12	hr	\$175.00	\$2,100.00
Project Manager	1	8	hr	\$150.00	\$1,200.00
Senior Scientist/Engineer/Geologist	1	60	hr	\$120.00	\$7,200.00
Project Scientist/Engineer/Geologist	1	60	hr	\$100.00	\$6,000.00
Field Technician	1	120	hr	\$75.00	\$9,000.00
Office Support	1	24	hr	\$55.00	\$1,320.00
Subtotal Labor					\$26,820.00
Other Direct Costs					
Mileage	16	90	mi	\$0.56	\$806.40
Subtotal ODCs					\$806.40
Subcontractor Costs					
Contractor for Field Activities (Soil Vapor Probes)					
Geophysical Survey	1	1	ls	\$2,000.00	\$2,000.00
Soil Vapor Boring Installations	1	1	ls	\$7,860.00	\$7,860.00
Subtotal Contractor					\$9,860.00
Contractor for Field Activities					
Mobilization	1	1	ls	6,000.00	\$6,000.00
Sawcut, demolish, remove & dispose of paving	1	1000	sft	2.75	\$2,750.00
Excavate and on-site temporary stockpile	1	250	cyd	28.00	\$7,000.00
Load soil for off-site disposal	1	350	ton	13.00	\$4,550.00
Transport & Dispose of non-hazardous soil (PAH-impacted)	1	87.5	ton	45.00	\$3,937.50
Transport & Dispose of non-RCRA soil (arsenic & lead-impacted)	1	262.5	ton	84.00	\$22,050.00
Backfill & compaction	1	350	ton	13.00	\$4,550.00
Compaction testing and Reporting	1	1	ls	9,200.00	\$9,200.00
Clean soil import	1	350	ton	23.00	\$8,050.00
Re-pave excavated area with 4-inch AC & restriping for parking	1	1000	sft	5.50	\$5,500.00
Subtotal Contractor					\$73,587.50
Laboratory Support					
Subtotal Laboratory					
SUBTOTAL - TASK 2 - Field Activities					\$111,073.90
CAPITAL COST TOTAL					\$115,334.30

Soil Vapor Alternative No. 4: Active or Passive Soil Venting in Building Areas

City of Huntington Park - Southland Steel Property (Eco-13-595)

Capital Costs

TASK 1.1 - Contractor Selection	\$3,360.40
TASK 1.2 - Pre-Remediation Support	\$4,260.40
TASK 1.3 - Mobilization for Pre-Field Activities	\$4,730.40
TASK 2 - Field Activities	\$1,895,886.40
TASK 3.1 - Report Preparation - Draft	\$14,960.00
TASK 3.2 - Report Comments, Responses & Meetings	\$9,810.40
TASK 3.3 - Report Preparation - Final	\$6,175.00
CAPITAL COST TOTAL	\$1,939,000.00

Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
N/A	0	0	EA	0	0

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$1,939,000.00	\$1,939,000.00	1	\$1,939,000.00

TOTAL RECURRING COSTS 0

TOTAL COST \$1,939,000.00

Soil Vapor Alternative No. 4: Active or Passive Soil Venting in Building Areas
City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$3,310.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$3,360.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$3,710.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$550.40
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$4,260.40
TASK 1.3 - Mobilization for Pre-Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00
Field Technician	1	16.00	hr	\$75.00	\$1,200.00
Subtotal Labor					\$4,680.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.3 - Mobilization for Pre-Field Activities					\$4,730.40
Total for Task 1:					\$12,351.20

Soil Vapor Alternative No. 4: Active or Passive Soil Venting in Building Areas

City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities

Labor						
Program Manager	1	12	hr	\$175.00		\$2,100.00
Project Manager	1	8	hr	\$150.00		\$1,200.00
Senior Scientist/Engineer/Geologist	1	30	hr	\$120.00		\$3,600.00
Project Scientist/Engineer/Geologist	1	30	hr	\$100.00		\$3,000.00
Field Technician	1	120	hr	\$75.00		\$9,000.00
Office Support	1	24	hr	\$55.00		\$1,320.00
					Subtotal Labor	\$20,220.00
Other Direct Costs						
Mileage						\$0.00
	12	90	mi	\$0.56		\$604.80
					Subtotal ODCs	\$604.80
Subcontractor Costs						
Contractor for Field Activities						
Mobilization	1	1	ls	\$10,000.00		\$10,000.00
Sawcut, demolish, remove & dispose of paving	1	167270	sft	\$2.75		\$459,993.60
Excavate and on-site temporary stockpile	1	24781	cyd	\$28.00		\$693,862.40
Installation of Liquid Boot Vapor Barrier	1	167270	sqft	\$1.50		\$250,905.60
Backfill & compaction	1	34700	ton	\$13.00		\$451,100.00
Compaction testing and Reporting	1	1	ls	\$9,200.00		\$9,200.00
					Subtotal Contractor	\$1,875,061.60

SUBTOTAL - TASK 2 - Field Activities \$1,895,886.40

Total for Task 2: \$1,895,886.40

TASK 3.1 - Report Preparation - Draft

Labor						
Program Manager	1	8.00	hr	\$175.00		\$1,400.00
Project Manager	1	24.00	hr	\$150.00		\$3,600.00
Senior Scientist/Engineer/Geologist	1	60.00	hr	\$120.00		\$7,200.00
Technical Editor	1	24.00	hr	\$60.00		\$1,440.00
Office Support	1	24.00	hr	\$55.00		\$1,320.00
					Subtotal Labor	\$14,960.00
Other Direct Costs						
Document Delivery						\$0.00
	1		each	\$95.00		\$95.00
					Subtotal ODCs	\$0.00

SUBTOTAL - TASK 3.1 - Report Preparation - Draft \$14,960.00

TASK 3.2 - Report Comments, Responses & Meetings

Labor						
Program Manager	1	8.00	hr	\$175.00		\$1,400.00
Project Manager	1	16.00	hr	\$150.00		\$2,400.00
Senior Scientist/Engineer/Geologist	1	32.00	hr	\$120.00		\$3,840.00
Technical Editor	1	16.00	hr	\$60.00		\$960.00
Office Support	1	12.00	hr	\$55.00		\$660.00
					Subtotal Labor	\$9,260.00
Other Direct Costs						
Mileage						\$0.00
	1	90.00	mi	\$0.56		\$50.40
Misc Office Supplies	1	1.00	ls	\$500.00		\$500.00
					Subtotal ODCs	\$550.40

SUBTOTAL - TASK 3.2 - Report Comments, Responses & Meetings \$9,810.40

Soil Vapor Alternative No. 4: Active or Passive Soil Venting in Building Areas
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.3 - Report Preparation - Final

Labor						
	Program Manager	1	4.00	hr	\$175.00	\$700.00
	Project Manager	1	8.00	hr	\$150.00	\$1,200.00
	Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00
	Technical Editor	1	8.00	hr	\$60.00	\$480.00
	Office Support	1	8.00	hr	\$55.00	\$440.00
	Subtotal Labor					\$5,700.00
Other Direct Costs						
	Document Delivery	1	5.00	each	\$95.00	\$475.00
	Subtotal ODCs					\$475.00

SUBTOTAL - TASK 3.3 - Report Preparation - Final **\$6,175.00**

Total for Task 3: **\$30,945.40**

CAPITAL COST TOTAL **\$1,939,183.00**

Assumes 80% lot used for building footprint
 Excavation of Footprint to 4' for vapor barrier installation

Groundwater Alternative No. 2: In-situ treatment by Dechlorination
City of Huntington Park - Southland Steel Property (Eco-13-595)

Capital Costs

TASK 1.1 - Contractor Selection	\$4,310.40
TASK 1.2 - Pre-Remediation Support	\$12,920.40
TASK 1.3 - Mobilization for Field Activities	\$14,521.60
TASK 2 - Field Activities	\$262,117.76
TASK 3.1 - Report Preparation - Draft	\$59,280.00
TASK 3.2 - Report Comments, Responses & Meetings	\$41,512.40
TASK 3.3 - Report Preparation - Final	\$30,690.00
CAPITAL COST TOTAL	
	\$425,000.00

Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
Semi-Annual Groundwater Monitoring	2 - 3	1	EA	\$39,829.40	\$39,829.40
Annual Groundwater Monitoring	4 - 15	1	EA	\$20,274.70	\$20,274.70

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$425,000.00	\$425,000.00	1	\$425,000.00
Periodic Cost	2	\$224,179.60	\$224,179.60	0.935	\$209,607.93
Periodic Cost	3	\$224,179.60	\$224,179.60	0.873	\$195,708.79
Periodic Cost	4	\$224,179.60	\$224,179.60	0.816	\$182,930.55
Periodic Cost	5	\$224,179.60	\$224,179.60	0.763	\$171,049.03
Periodic Cost	6	\$224,179.60	\$224,179.60	0.713	\$159,840.05
Periodic Cost	7	\$224,179.60	\$224,179.60	0.666	\$149,303.61
Periodic Cost	8	\$224,179.60	\$224,179.60	0.623	\$139,663.89
Periodic Cost	9	\$224,179.60	\$224,179.60	0.582	\$130,472.53
Periodic Cost	10	\$224,179.60	\$224,179.60	0.508	\$113,883.24

TOTAL RECURRING COSTS \$1,452,000.00

TOTAL COST \$1,877,000.00

Groundwater Alternative No. 2: In-situ treatment by Dechlorination
City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	4.00	hr	\$175.00	\$700.00
Project Manager	1	8.00	hr	\$150.00	\$1,200.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$4,260.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$4,310.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Field Technician	1	20.00	hr	\$75.00	\$1,500.00
Subtotal Labor					\$4,370.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
RWQCB Permit	1	1	permit	\$8,000.00	\$8,000.00
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$8,550.40
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$12,920.40
TASK 1.3 - Mobilization for Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$4,320.00
Other Direct Costs					
Mileage	4	90.00	mi	\$0.56	\$201.60
Chemical Analyses (pre-injection sampling)	1	1.00	event	\$10,000.00	\$10,000.00
Subtotal ODCs					\$10,201.60
SUBTOTAL - TASK 1.3 - Mobilization for Field Activities					\$14,521.60
Total for Task 1:					\$31,752.40

Groundwater Alternative No. 2: In-situ treatment by Dechlorination
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities - HRC Injection (2 events)

Labor

Program Manager (injection)	2	8	hr	\$175.00	\$2,800.00
Project Manager (injection)	2	16	hr	\$150.00	\$4,800.00
Senior Scientist/Engineer/Geologist (injection)	2	160	hr	\$120.00	\$38,400.00
Field Technician (injection)	2	160	hr	\$75.00	\$24,000.00
Office Support (injection)	2	24	hr	\$55.00	\$2,640.00
Program Manager (GWM Installation)	1	2	hr	\$175.00	\$350.00
Project Manager (GWM Installation)	1	6	hr	\$150.00	\$900.00
Senior Scientist/Engineer/Geologist (GWM Installation)	1	30	hr	\$120.00	\$3,600.00
Field Technician (GWM Installation)	1	30	hr	\$75.00	\$2,250.00
Office Support (GWM Installation)	1	8	hr	\$55.00	\$440.00
Program Manager (Groundwater Sampling), 1st year	4	1	hr	\$175.00	\$700.00
Project Manager (Groundwater Sampling), 1st year	4	2	hr	\$150.00	\$1,200.00
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 1st year	4	24	hr	\$120.00	\$11,520.00
Field Technician (Groundwater Sampling), 1st year	4	24	hr	\$75.00	\$7,200.00
Office Support (Groundwater Sampling), 1st year	4	4	hr	\$55.00	\$880.00
Subtotal Labor					\$101,680.00

Other Direct Costs

Field Supplies	42	1	ea	\$100.00	\$4,200.00
Well Permit Fees	1	4	ea	\$519.00	\$2,076.00
Mileage	42	90	mi	\$0.56	\$2,116.80
Subtotal ODCs					\$8,392.80

Subcontractor Costs

Contractor for Field Activities

Mobilization	1	1	ls	6,000.00	\$6,000.00
Geophysical Survey	1	1	ls	2,000.00	\$2,000.00
Installation of 4 groundwater wells to 150'	1	1	ls	34,020.00	\$34,020.00
Well Development	1	1	ls	3,000.00	\$3,000.00
Soil Drum Disposal (Drilling)	1	62	ea	300.00	\$18,600.00
Decon Drum Disposal	1	6	ea	300.00	\$1,800.00
Well Development Drum Disposal	1	16	ea	300.00	\$4,800.00
Water Sampling Drum Disposal (First Year)	4	2	ea	300.00	\$2,400.00
Tank rental (four 500-gallon tanks)	1	4	months	4,000.00	\$16,000.00
Trailers, pumps, generators, and misc. equipment	1	4	months	4,000.00	\$16,000.00
Demobilization	1	1	ls	3,000.00	\$3,000.00
Subtotal Contractor					\$107,620.00

Laboratory Support

Soil VOCs (8260B) Analysis during Well Installation	1	124	ea	65.00	\$10,639.20
Soil Moisture Content Analysis	1	124	ea	32.00	\$5,237.76
Soil PAH (8310) Analysis	1	16	ea	100.00	\$2,112.00
Soil Metals (EPA 6010B) Analysis	1	72	ea	90.00	\$8,553.60
Groundwater Sampling (1st year of quarterly) - VOCs + TPHg (8260B)	4	13	ea	85.00	\$5,834.40
Groundwater Sampling (1st year of quarterly) - Perchlorate (314)	4	12	ea	75.00	\$4,752.00
Groundwater Sampling (1st year of quarterly) - Hexavalent Chromium (7199)	4	12	ea	100.00	\$6,336.00
Groundwater Sampling (1st year of quarterly) - Metals (6010B)	4	2	ea	85.00	\$680.00
Groundwater Sampling (1st year of quarterly) - TPHd (M8015D)	4	2	each	35.00	\$280.00
Subtotal Laboratory					\$44,424.96

SUBTOTAL - TASK 2 - Field Activities - HRC Injection (2 events) \$262,117.76

Total for Task 2: \$262,117.76

Groundwater Alternative No. 2: In-situ treatment by Dechlorination
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.1 - Report (GW Installation, HC Injection, GW Monitoring) Preparation - Draft

Labor						
Program Manager	6	4.00	hr	\$175.00	\$4,200.00	
Project Manager	6	12.00	hr	\$150.00	\$10,800.00	
Senior Scientist/Engineer/Geologist	6	50.00	hr	\$120.00	\$36,000.00	
Technical Editor	6	12.00	hr	\$60.00	\$4,320.00	
Office Support	6	12.00	hr	\$55.00	\$3,960.00	
				Subtotal Labor		\$59,280.00

Other Direct Costs						
Document Delivery	6		each	\$95.00	\$0.00	
				Subtotal ODCs		\$0.00

SUBTOTAL - TASK 3.1 - Report (GW Installation, HC Injection, GW Monitoring) Preparation - Draft \$59,280.00

TASK 3.2 - Report (GW Installation, HC Injection, GW Monitoring) Comments, Responses & Meetings

Labor						
Program Manager	6	3.00	hr	\$175.00	\$3,150.00	
Project Manager	6	10.00	hr	\$150.00	\$9,000.00	
Senior Scientist/Engineer/Geologist	6	32.00	hr	\$120.00	\$23,040.00	
Technical Editor	6	8.00	hr	\$60.00	\$2,880.00	
Office Support	6	8.00	hr	\$55.00	\$2,640.00	
				Subtotal Labor		\$40,710.00

Other Direct Costs						
Mileage	6	90.00	mi	\$0.56	\$302.40	
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00	
				Subtotal ODCs		\$802.40

SUBTOTAL - TASK 3.2 - Report (GW Installation, HC Injection, GW Monitoring) Comments, Responses & Meetings \$41,512.40

TASK 3.3 - Report (GW Installation, HC Injection, GW Monitoring) Preparation - Final

Labor						
Program Manager	6	2.00	hr	\$175.00	\$2,100.00	
Project Manager	6	8.00	hr	\$150.00	\$7,200.00	
Senior Scientist/Engineer/Geologist	6	20.00	hr	\$120.00	\$14,400.00	
Technical Editor	6	6.00	hr	\$60.00	\$2,160.00	
Office Support	6	6.00	hr	\$55.00	\$1,980.00	
				Subtotal Labor		\$27,840.00

Other Direct Costs						
Document Delivery	6	5.00	each	\$95.00	\$2,850.00	
				Subtotal ODCs		\$2,850.00

SUBTOTAL - TASK 3.3 - Report (GW Installation, HC Injection, GW Monitoring) Preparation - Final \$30,690.00

Total for Task 3: \$131,482.40

CAPITAL COST TOTAL \$425,352.56

Groundwater Alternative No. 2: In-situ treatment by Dechlorination
City of Huntington Park - Southland Steel Property (Eco-13-595)

RECURRING COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
Field Activities - Field Maintenance of System and Periodic Costs (annual cost)					
Labor					
Program Manager (Groundwater Sampling), 2-3 year	12	1	hr	\$175.00	\$2,100.00
Project Manager (Groundwater Sampling), 2-3 year	12	2	hr	\$150.00	\$3,600.00
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 2-3 year	12	24	hr	\$120.00	\$34,560.00
Field Technician (Groundwater Sampling), 2-3 year	12	30	hr	\$75.00	\$27,000.00
Office Support (Groundwater Sampling), 2-3 year	12	24	hr	\$55.00	\$15,840.00
Subtotal Labor					\$83,100.00
Other Direct Costs					
Field Supplies (estimate for dechlorination fluid to be injected @ \$7/lb)	12	1000	month	\$7.00	\$84,000.00
Mileage	24	90	mi	\$0.56	\$1,209.60
Subtotal ODCs					\$85,209.60
Subcontractor Costs					
Laboratory Support					
TBD	12	1	ls	2,500.00	\$39,600.00
Subtotal Laboratory					\$39,600.00
Field Activities - GW Sampling (2 years of semi-annual events)					\$207,909.60
Remedial System Reporting - Monthly					
Labor					
Program Manager	12	2.00	hr	\$175.00	\$4,200.00
Project Manager	12		hr	\$150.00	\$0.00
Senior Scientist/Engineer/Geologist	12	4.00	hr	\$120.00	\$5,760.00
Technical Editor	12	2.00	hr	\$60.00	\$1,440.00
Office Support	12	2.00	hr	\$55.00	\$1,320.00
Subtotal Labor					\$12,720.00
Other Direct Costs					
Document Delivery	12		each	\$95.00	\$0.00
Subtotal ODCs					\$0.00
Remedial System Reporting - Monthly					\$12,720.00
Remedial System Reporting - Annual					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Technical Editor	1	4.00	hr	\$60.00	\$240.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$3,550.00
Other Direct Costs					
Mileage	1		mi	\$0.56	\$0.00
Misc Office Supplies	1		ls		\$0.00
Subtotal ODCs					\$0.00
Remedial System Reporting - Annual					\$3,550.00
RECURRING ANNUAL COSTS					\$224,179.60

Groundwater Alternative No. 3: Pump & Treat City of Huntington Park - Southland Steel Property (Eco-13-595)

Capital Costs

TASK 1.1 - Contractor Selection	\$4,320.40
TASK 1.2 - Pre-Remediation Support	\$4,961.20
TASK 1.3 - Mobilization for Field Activities	\$12,692.00
TASK 2 - Field Activities (Pump & Treat System Setup and 10-Year Operation), 1st year	\$477,661.76
TASK 3.1 - Report Preparation - Draft (monthly), 1st year	\$86,000.00
TASK 3.2 - Report Comments, Responses & Meetings (monthly), 1st year	\$45,531.80
TASK 3.3 - Report Preparation - Final	\$25,895.00
CAPITAL COST TOTAL	\$657,000.00

Recurring Costs

Description	Year	Qty	Unit	Unit Cost	Total
O&M - Years 2 - 10	2 - 10	1	EA	\$363,844.80	\$363,844.80
Semi-Annual Groundwater Monitoring	2 - 3	1	EA	\$39,829.40	\$39,829.40
Annual Groundwater Monitoring	4 - 10	1	EA	\$20,274.70	\$20,274.70

Present Value Analysis

Cost Type	Year	Total Cost	Total Cost Per Year	Discount Factor (%)	Present Value
Capital Cost	1	\$657,000.00	\$657,000.00	1	\$657,000.00
Periodic Cost	2	\$147,489.60	\$147,489.60	0.935	\$137,902.78
Periodic Cost	3	\$147,489.60	\$147,489.60	0.873	\$128,758.42
Periodic Cost	4	\$147,489.60	\$147,489.60	0.816	\$120,351.51
Periodic Cost	5	\$147,489.60	\$147,489.60	0.763	\$112,534.56
Periodic Cost	6	\$147,489.60	\$147,489.60	0.713	\$105,160.08
Periodic Cost	7	\$147,489.60	\$147,489.60	0.666	\$98,228.07
Periodic Cost	8	\$147,489.60	\$147,489.60	0.623	\$91,886.02
Periodic Cost	9	\$147,489.60	\$147,489.60	0.582	\$85,838.95
Periodic Cost	10	\$147,489.60	\$147,489.60	0.508	\$74,924.72

TOTAL RECURRING COSTS \$956,000.00

TOTAL COST \$1,613,000.00

Groundwater Alternative No. 3: Pump & Treat
City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	24.00	hr	\$120.00	\$2,880.00
Office Support	1	8.00	hr	\$55.00	\$440.00
Subtotal Labor					\$4,270.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$4,320.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	32.00	hr	\$75.00	\$2,400.00
Subtotal Labor					\$4,310.00
Other Direct Costs					
Mileage	3	90.00	mi	\$0.56	\$151.20
Misc Office Supplies	1	1.00	ls	\$500.00	\$500.00
Subtotal ODCs					\$651.20
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$4,961.20
TASK 1.3 - Mobilization for Pre-Field Activities					
Labor					
Project Manager	1	12.00	hr	\$150.00	\$1,800.00
Senior Scientist/Engineer/Geologist	1	32.00	hr	\$120.00	\$3,840.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$7,440.00
Other Direct Costs					
Water disposal permit	1	1.00	ls	\$5,000.00	\$5,000.00
Mileage	5	90.00	mi	\$0.56	\$252.00
Subtotal ODCs					\$5,252.00
SUBTOTAL - TASK 1.3 - Mobilization for Pre-Field Activities					\$12,692.00
Total for Task 1:					\$21,973.60

Groundwater Alternative No. 3: Pump & Treat
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities (Pump & Treat System Setup and 10-Year Operation), 1st year

Labor (Well Installation)						
Program Manager (GWM Installation)	1	2	hr	\$175.00	\$350.00	
Project Manager (GWM Installation)	1	6	hr	\$150.00	\$900.00	
Senior Scientist/Engineer/Geologist (GWM Installation)	1	30	hr	\$120.00	\$3,600.00	
Field Technician (GWM Installation)	1	30	hr	\$75.00	\$2,250.00	
Office Support (GWM Installation)	1	8	hr	\$55.00	\$440.00	
Program Manager (Groundwater Sampling), 1st year	4	1	hr	\$175.00	\$700.00	
Project Manager (Groundwater Sampling), 1st year	4	2	hr	\$150.00	\$1,200.00	
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 1st year	4	24	hr	\$120.00	\$11,520.00	
Field Technician (Groundwater Sampling), 1st year	4	24	hr	\$75.00	\$7,200.00	
Office Support (Groundwater Sampling), 1st year	4	4	hr	\$55.00	\$880.00	
Labor (Remediation)						
Project Manager (set up)	1	24	hr	\$150.00	\$3,600.00	
Project Manager (O&M)	52	0.5	hr	\$150.00	\$3,900.00	
Project Scientist/Engineer/Geologist (set up)	1	40	hr	\$120.00	\$4,800.00	
Field Technician (set up)	1	100	hr	\$75.00	\$7,500.00	
Field Technician (O&M)	52	6	hr	\$75.00	\$23,400.00	
Office Support	52	2	hr	\$55.00	\$5,720.00	
				Subtotal Labor		\$77,960.00
Other Direct Costs						
Field Supplies	77	1	days	\$100.00	\$7,700.00	
Well Permit Fees	1	4	ea	\$519.00	\$2,076.00	
Mileage	77	90	mi	\$0.56	\$3,880.80	
				Subtotal ODCs		\$13,656.80
Subcontractor Costs						
Contractor for Field Activities (Well Installation - Install 4 additional wells for pumping water)						
Geophysical Survey	1	1	ls	2,000.00	\$2,000.00	
Installation of 3 groundwater wells to 155'	1	1	ls	34,020.00	\$34,020.00	
Well Development	1	1	ls	3,000.00	\$3,000.00	
Soil Drum Disposal (Drilling)	1	62	ea	300.00	\$18,600.00	
Decon Drum Disposal	1	6	ea	300.00	\$1,800.00	
Well Development Drum Disposal	1	16	ea	300.00	\$4,800.00	
Water Sampling Drum Disposal (First Year)	4	2	ea	300.00	\$2,400.00	
				Subtotal Drilling Contractor		\$66,620.00
Laboratory Support						
Soil VOCs (8260B) Analysis during Well Installation	1	124	ea	65.00	\$10,639.20	
Soil Moisture Content Analysis	1	124	ea	32.00	\$5,237.76	
Soil PAH (8310) Analysis	1	16	ea	100.00	\$2,112.00	
Soil Metals (EPA 6010B) Analysis	1	72	ea	90.00	\$8,553.60	
Groundwater Sampling (1st year of quarterly) - VOCs + TPHg (8260B)	4	13	ea	85.00	\$5,834.40	
Groundwater Sampling (1st year of quarterly) - Perchlorate (314)	4	12	ea	75.00	\$4,752.00	
Groundwater Sampling (1st year of quarterly) - Hexavalent Chromium (7199)	4	12	ea	100.00	\$6,336.00	
Groundwater Sampling (1st year of quarterly) - Metals (6010B)	4	2	ea	85.00	\$680.00	
Groundwater Sampling (1st year of quarterly) - TPHd (M8015D)	4	2	each	35.00	\$280.00	
				Subtotal Laboratory		\$44,424.96
Contractor for Field Activities (Remediation)						
Mobilization	1	1	ls	10,000.00	\$10,000.00	
Mob/install/remove/demob treatment system	1	1	ls	25,000.00	\$25,000.00	
Monthly operation of pump & treat system	1	12	month	20,000.00	\$240,000.00	
				Subtotal Contractor		\$275,000.00
SUBTOTAL - TASK 2 - Field Activities (Pump & Treat System Setup and 10-Year Operation), 1st year						\$477,661.76
Total for Task 2:						\$477,661.76

Groundwater Alternative No. 3: Pump & Treat
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.1 - Report Preparation - Draft (monthly), 1st year

Labor (Well Installation + Quarterly Reports)						
Program Manager	5	4.00	hr	\$175.00	\$3,500.00	
Project Manager	5	24.00	hr	\$150.00	\$18,000.00	
Senior Scientist/Engineer/Geologist	5	40.00	hr	\$120.00	\$24,000.00	
Technical Editor	5	10.00	hr	\$60.00	\$3,000.00	
Office Support	5	12.00	hr	\$55.00	\$3,300.00	
						Subtotal Labor
						\$51,800.00
Labor (Remediation Progress Reports)						
Program Manager	12	2.00	hr	\$175.00	\$4,200.00	
Project Manager	12	4.00	hr	\$150.00	\$7,200.00	
Senior Scientist/Engineer/Geologist	12	12.00	hr	\$120.00	\$17,280.00	
Technical Editor	12	4.00	hr	\$60.00	\$2,880.00	
Office Support	12	4.00	hr	\$55.00	\$2,640.00	
						Subtotal Labor
						\$34,200.00
Other Direct Costs						
Document Delivery	17		each	\$95.00	\$0.00	\$0.00
						Subtotal ODCs
						\$0.00

SUBTOTAL - TASK 3.1 - Report Preparation - Draft (monthly), 1st year **\$86,000.00**

TASK 3.2 - Report Comments, Responses & Meetings (monthly), 1st year

Labor (Well Installation + Quarterly Reports)						
Program Manager	5	3.00	hr	\$175.00	\$2,625.00	
Project Manager	5	6.00	hr	\$150.00	\$4,500.00	
Senior Scientist/Engineer/Geologist	5	20.00	hr	\$120.00	\$12,000.00	
Technical Editor	5	8.00	hr	\$60.00	\$2,400.00	
Office Support	5	8.00	hr	\$55.00	\$2,200.00	
						Subtotal Labor
						\$23,725.00
Labor (Remediation Progress Reports)						
Program Manager	12	1.00	hr	\$175.00	\$2,100.00	
Project Manager	12	4.00	hr	\$150.00	\$7,200.00	
Senior Scientist/Engineer/Geologist	12	6.00	hr	\$120.00	\$8,640.00	
Technical Editor	12	2.00	hr	\$60.00	\$1,440.00	
Office Support	12	2.00	hr	\$55.00	\$1,320.00	
						Subtotal Labor
						\$20,700.00
Other Direct Costs						
Mileage	17	90.00	mi	\$0.56	\$856.80	
Misc Office Supplies	1	1.00	ls	\$250.00	\$250.00	
						Subtotal ODCs
						\$1,106.80

SUBTOTAL - TASK 3.2 - Report Comments, Responses & Meetings (monthly), 1st year **\$45,531.80**

TASK 3.3 - Report Preparation - Final, 1st year

Labor (Well Installation + Quarterly Reports)						
Program Manager	5	2.00	hr	\$175.00	\$1,750.00	
Project Manager	5	4.00	hr	\$150.00	\$3,000.00	
Senior Scientist/Engineer/Geologist	5	12.00	hr	\$120.00	\$7,200.00	
Technical Editor	5	6.00	hr	\$60.00	\$1,800.00	
Office Support	5	6.00	hr	\$55.00	\$1,650.00	
						Subtotal Labor
						\$15,400.00
Labor (Remediation Progress Reports)						
Program Manager	12	1.00	hr	\$175.00	\$2,100.00	
Project Manager	12	4.00	hr	\$150.00	\$7,200.00	
Senior Scientist/Engineer/Geologist	12	4.00	hr	\$120.00	\$5,760.00	
Technical Editor	12	2.00	hr	\$60.00	\$1,440.00	
Office Support	12	2.00	hr	\$55.00	\$1,320.00	
						Subtotal Labor
						\$17,820.00
Other Direct Costs						
Document Delivery	17	5.00	each	\$95.00	\$8,075.00	
						Subtotal ODCs
						\$8,075.00

SUBTOTAL - TASK 3.3 - Report Preparation - Final, 1st year **\$25,895.00**

Total for Task 3: \$157,426.80

CAPITAL COST TOTAL \$657,062.16

Groundwater Alternative No. 2: Pump & Treat
City of Huntington Park - Southland Steel Property (Eco-13-595)

RECURRING COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
Field Activities - Field Maintenance of System and Periodic Costs (annual cost)					
Labor					
Program Manager	12	4	hr	\$175.00	\$8,400.00
Project Manager	12	4	hr	\$150.00	\$7,200.00
Senior Scientist/Engineer/Geologist	12	24	hr	\$120.00	\$34,560.00
Field Technician	12	40	hr	\$75.00	\$36,000.00
Office Support	12	12	hr	\$55.00	\$7,920.00
Subtotal Labor					\$94,080.00
Other Direct Costs					
Field Supplies (estimate for field supplies)	12	1	ls	\$500.00	\$6,000.00
Periodic Cost for Treatment Supplies and Disposal	1	1	ls	\$20,000.00	\$20,000.00
Mileage	24	90	mi	\$0.56	\$1,209.60
Subtotal ODCs					\$27,209.60
Subcontractor Costs					
Laboratory Support					
TBD	12	1	ls	500.00	\$7,920.00
Subtotal Laboratory					\$7,920.00
Field Activities - GW Sampling (2 years of semi-annual events)					\$129,209.60
Remedial System Reporting - Monthly					
Labor					
Program Manager	12	0.00	hr	\$175.00	\$0.00
Project Manager	12	0.00	hr	\$150.00	\$0.00
Senior Scientist/Engineer/Geologist	12	0.00	hr	\$120.00	\$0.00
Technical Editor	12	0.00	hr	\$60.00	\$0.00
Office Support	12	0.00	hr	\$55.00	\$0.00
Subtotal Labor					\$0.00
Other Direct Costs					
Document Delivery	12		each	\$95.00	\$0.00
Subtotal ODCs					\$0.00
Remedial System Reporting - Monthly					\$0.00
Remedial System Reporting - Annual					
Labor					
Program Manager	1	16.00	hr	\$175.00	\$2,800.00
Project Manager	1	40.00	hr	\$150.00	\$6,000.00
Senior Scientist/Engineer/Geologist	1	60.00	hr	\$120.00	\$7,200.00
Technical Editor	1	16.00	hr	\$60.00	\$960.00
Office Support	1	24.00	hr	\$55.00	\$1,320.00
Subtotal Labor					\$18,280.00
Other Direct Costs					
Mileage	1		mi	\$0.56	\$0.00
Misc Office Supplies	1		ls		\$0.00
Subtotal ODCs					\$0.00
Remedial System Reporting - Annual					\$18,280.00
RECURRING ANNUAL COSTS					\$147,489.60

Pre-Remediation Investigations and Reporting
City of Huntington Park - Southland Steel Property (Eco-13-595)

Capital Costs

Soil Vapor Investigations	\$83,355.80
Groundwater - Installation of 4 new wells and Two Sampling Events	\$163,760.96
CAPITAL COST TOTAL	
	\$247,116.76

TOTAL RECURRING COSTS \$0.00

TOTAL COST \$247,000.00

Soil Vapor Investigation and Reporting
City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1 - Mobilization for Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	10.00	hr	\$120.00	\$1,200.00
Field Technician	1	10.00	hr	\$75.00	\$750.00
Subtotal Labor					\$2,550.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1 - Mobilization for Field Activities					\$2,600.40
Total for Task 1:					\$2,600.40
TASK 2 - Field Activities					
Labor					
Program Manager	1	12	hr	\$175.00	\$2,100.00
Project Manager	1	8	hr	\$150.00	\$1,200.00
Senior Scientist/Engineer/Geologist	1	60	hr	\$120.00	\$7,200.00
Project Scientist/Engineer/Geologist	1	60	hr	\$100.00	\$6,000.00
Field Technician	1	120	hr	\$75.00	\$9,000.00
Office Support	1	24	hr	\$55.00	\$1,320.00
Subtotal Labor					\$26,820.00
Other Direct Costs					
Mileage	16	90	mi	\$0.56	\$806.40
Subtotal ODCs					\$806.40
Subcontractor Costs					
Contractor for Field Activities (Soil Vapor Probes)					
Geophysical Survey	1	1	ls	\$2,000.00	\$2,000.00
Soil Vapor Boring Installations	1	1	ls	\$10,000.00	\$10,000.00
Subtotal Contractor					\$12,000.00
Laboratory Support					
Arsenic - EPA 6020 (Confirmation)	1	15	each	25.00	\$375.00
Cadmium - EPA 6010 (Confirmation)	1	15	each	25.00	\$375.00
Polyaromatic Hydrocarbons (PAHs) - EPA 8310 (Confirmation)	1	15	each	180.00	\$2,700.00
VOCs - EPA 8260B (Stockpile)	1	5	each	65.00	\$429.00
PAHs - EPA 8310 (Stockpile)	1	5	each	65.00	\$429.00
Metals - EPA 6010B (Stockpile)	1	5	ea	90.00	\$594.00
TPH-g + TPH-d - EPA 8015 (Stockpile)	1	5	ea	70.00	\$462.00
Field Kit for VOC sampling	1	3	days	50.00	\$150.00
Volatile Organic Compounds - EPA TO-15	1	46	each	225.00	\$10,350.00
Subtotal Laboratory					\$15,864.00
SUBTOTAL - TASK 2 - Field Activities					\$55,490.40
Total for Task 2:					\$55,490.40

Soil Vapor Investigation and Reporting
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.1 - Report Preparation - Draft

Labor						
Program Manager	1	8.00	hr	\$175.00	\$1,400.00	
Project Manager	1	24.00	hr	\$150.00	\$3,600.00	
Senior Scientist/Engineer/Geologist	1	72.00	hr	\$120.00	\$8,640.00	
Technical Editor	1	24.00	hr	\$60.00	\$1,440.00	
Office Support	1	16.00	hr	\$55.00	\$880.00	
						Subtotal Labor
						\$15,960.00
Other Direct Costs						
Document Delivery	1		each	\$95.00		
						Subtotal ODCs
						\$95.00

SUBTOTAL - TASK 3.1 - Report Preparation - Draft **\$15,960.00**

TASK 3.2 - Report Comments, Responses & Meetings

Labor						
Program Manager	1	8.00	hr	\$175.00	\$1,400.00	
Project Manager	1	10.00	hr	\$150.00	\$1,500.00	
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00	
Technical Editor	1	4.00	hr	\$60.00	\$240.00	
Office Support	1	4.00	hr	\$55.00	\$220.00	
						Subtotal Labor
						\$5,280.00
Other Direct Costs						
Mileage	1		mi	\$0.56		
Misc Office Supplies	1		ls	\$500.00		
						Subtotal ODCs
						\$500.56

SUBTOTAL - TASK 3.2 - Report Comments, Responses & Meetings **\$5,280.00**

TASK 3.3 - Report Preparation - Final

Labor						
Program Manager	1	2.00	hr	\$175.00	\$350.00	
Project Manager	1	4.00	hr	\$150.00	\$600.00	
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00	
Technical Editor	1	4.00	hr	\$60.00	\$240.00	
Office Support	1	8.00	hr	\$55.00	\$440.00	
						Subtotal Labor
						\$3,550.00
Other Direct Costs						
Document Delivery	1	5.00	each	\$95.00	\$475.00	
						Subtotal ODCs
						\$475.00

SUBTOTAL - TASK 3.3 - Report Preparation - Final **\$4,025.00**

Total for Task 3: **\$25,265.00**

CAPITAL COST TOTAL **\$83,355.80**

Groundwater Installation of 4 Wells and Reporting
City of Huntington Park - Southland Steel Property (Eco-13-595)

CAPITAL COSTS

DESCRIPTION	EVENT	UNITS	UNIT	UNIT RATE	TOTAL
TASK 1.1 - Contractor Selection					
Labor					
Program Manager	1	1.00	hr	\$175.00	\$175.00
Project Manager	1	2.00	hr	\$150.00	\$300.00
Senior Scientist/Engineer/Geologist	1	4.00	hr	\$120.00	\$480.00
Office Support	1	0.00	hr	\$55.00	\$0.00
Subtotal Labor					\$955.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.1 - Contractor Selection					\$1,005.40
TASK 1.2 - Pre-Remediation Support					
Labor					
Program Manager	1	2.00	hr	\$175.00	\$350.00
Project Manager	1	2.00	hr	\$150.00	\$300.00
Senior Scientist/Engineer/Geologist	1	8.00	hr	\$120.00	\$960.00
Field Technician	1	10.00	hr	\$75.00	\$750.00
Subtotal Labor					\$2,360.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Misc Office Supplies	1	1.00	ls	\$100.00	\$100.00
Subtotal ODCs					\$150.40
SUBTOTAL - TASK 1.2 - Pre-Remediation Support					\$2,510.40
TASK 1.3 - Mobilization for Field Activities					
Labor					
Project Manager	1	4.00	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist	1	16.00	hr	\$120.00	\$1,920.00
Field Technician	1	24.00	hr	\$75.00	\$1,800.00
Subtotal Labor					\$4,320.00
Other Direct Costs					
Mileage	1	90.00	mi	\$0.56	\$50.40
Subtotal ODCs					\$50.40
SUBTOTAL - TASK 1.3 - Mobilization for Field Activities					\$4,370.40
Total for Task 1:					\$7,886.20

Groundwater Installation of 4 Wells and Reporting City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 2 - Field Activities - GW Well Installation

Labor

Program Manager (GWM Installation)	1	2	hr	\$175.00	\$350.00
Project Manager (GWM Installation)	1	6	hr	\$150.00	\$900.00
Senior Scientist/Engineer/Geologist (GWM Installation)	1	30	hr	\$120.00	\$3,600.00
Field Technician (GWM Installation)	1	30	hr	\$75.00	\$2,250.00
Office Support (GWM Installation)	1	8	hr	\$55.00	\$440.00
Program Manager (Groundwater Sampling), 1st event	2	1	hr	\$175.00	\$350.00
Project Manager (Groundwater Sampling), 1st event	2	2	hr	\$150.00	\$600.00
Senior Scientist/Engineer/Geologist (Groundwater Sampling), 1st event	2	24	hr	\$120.00	\$5,760.00
Field Technician (Groundwater Sampling), 1st event	2	24	hr	\$75.00	\$3,600.00
Office Support (Groundwater Sampling), 1st event	2	4	hr	\$55.00	\$440.00
Subtotal Labor					\$18,290.00

Other Direct Costs

Field Supplies	16	1	ea	\$100.00	\$1,600.00
Well Permit Fees	1	4	ea	\$519.00	\$2,076.00
Mileage	24	90	mi	\$0.56	\$1,209.60
Subtotal ODCs					\$4,885.60

Subcontractor Costs

Contractor for Field Activities

Mobilization	1	1	ls	1,000.00	\$1,000.00
Geophysical Survey	1	1	ls	2,000.00	\$2,000.00
Installation of 4 groundwater wells to 150'	1	4	ls	8,505.00	\$34,020.00
Well Development	1	4	ls	750.00	\$3,000.00
Soil Drum Disposal (Drilling)	1	62	ea	300.00	\$18,600.00
Decon Drum Disposal	1	6	ea	300.00	\$1,800.00
Well Development Drum Disposal	1	16	ea	300.00	\$4,800.00
Water Sampling Drum Disposal (First Year)	2	4	ea	300.00	\$2,400.00
Demobilization	1	1	ls	500.00	\$500.00
Subtotal Contractor					\$68,120.00

Laboratory Support

Soil VOCs (8260B) Analysis during Well Installation	1	124	ea	65.00	\$10,639.20
Soil Moisture Content Analysis	1	124	ea	32.00	\$5,237.76
Soil PAH (8310) Analysis	1	16	ea	100.00	\$2,112.00
Soil Metals (EPA 6010B) Analysis	1	72	ea	90.00	\$8,553.60
Groundwater Sampling (1st event) - VOCs + TPHg (8260B)	2	13	ea	85.00	\$2,917.20
Groundwater Sampling (1st event) - Perchlorate (314)	2	12	ea	75.00	\$2,376.00
Groundwater Sampling (1st event) - Hexavalent Chromium (7199)	2	12	ea	100.00	\$3,168.00
Groundwater Sampling (1st event) - Metals (6010B)	2	2	ea	85.00	\$340.00
Groundwater Sampling (1st event) - TPHd (M8015D)	2	2	each	35.00	\$140.00
Subtotal Laboratory					\$35,483.76

SUBTOTAL - TASK 2 - Field Activities - HRC Injection (2 events)	\$126,779.36
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Total for Task 2:	\$126,779.36
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Groundwater Installation of 4 Wells and Reporting
City of Huntington Park - Southland Steel Property (Eco-13-595)

TASK 3.1 - Report (GW Installation & GW Monitoring) Preparation - Draft

Labor						
Program Manager	1	8.00	hr	\$175.00	\$1,400.00	
Project Manager	1	32.00	hr	\$150.00	\$4,800.00	
Senior Scientist/Engineer/Geologist	1	80.00	hr	\$120.00	\$9,600.00	
Technical Editor	1	12.00	hr	\$60.00	\$720.00	
Office Support	1	16.00	hr	\$55.00	\$880.00	
						Subtotal Labor
						\$17,400.00

Other Direct Costs						
Document Delivery	1		each	\$95.00	\$0.00	
						Subtotal ODCs
						\$0.00

SUBTOTAL - TASK 3.1 - Report (GW Installation & GW Monitoring) Preparation - Draft \$17,400.00

TASK 3.2 - Report (GW Installation & GW Monitoring) Comments, Responses & Meetings

Labor						
Program Manager	1	4.00	hr	\$175.00	\$700.00	
Project Manager	1	10.00	hr	\$150.00	\$1,500.00	
Senior Scientist/Engineer/Geologist	1	32.00	hr	\$120.00	\$3,840.00	
Technical Editor	1	2.00	hr	\$60.00	\$120.00	
Office Support	1	4.00	hr	\$55.00	\$220.00	
						Subtotal Labor
						\$6,380.00

Other Direct Costs						
Mileage	1	90.00	mi	\$0.56	\$50.40	
Misc Office Supplies	1	1.00	ls	\$150.00	\$150.00	
						Subtotal ODCs
						\$200.40

SUBTOTAL - TASK 3.2 - Report (GW Installation & GW Monitoring) Comments, Responses & Meetings \$6,580.40

TASK 3.3 - Report (GW Installation & GW Monitoring) Preparation - Final

Labor						
Program Manager	1	2.00	hr	\$175.00	\$350.00	
Project Manager	1	8.00	hr	\$150.00	\$1,200.00	
Senior Scientist/Engineer/Geologist	1	20.00	hr	\$120.00	\$2,400.00	
Technical Editor	1	6.00	hr	\$60.00	\$360.00	
Office Support	1	6.00	hr	\$55.00	\$330.00	
						Subtotal Labor
						\$4,640.00

Other Direct Costs						
Document Delivery	1	5.00	each	\$95.00	\$475.00	
						Subtotal ODCs
						\$475.00

SUBTOTAL - TASK 3.3 - Report (GW Installation, HC Injection, GW Monitoring) Preparation - Final \$5,115.00

Total for Task 3: \$29,095.40

CAPITAL COST TOTAL \$163,760.96