



# HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.

Environmental Consultants

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October 03, 2025

Petrodome Operating, LLC and Ichlor Energy (LA), LLC c/o  
Mr. Douglas Longman  
Jones Walker LLP  
600 Jefferson Street, Suite 1600  
Lafayette, Louisiana 70501

Re: **Alternate Plan Regarding  
the Site Investigation Report and Proposed Remediation Plan**  
Danny Paul Gastal and Ignatius Hoffpauir v. Petrodome Operating, LLC, et al.  
15th Judicial District Court; Docket No. 202210495-A  
Section 32, Township 10 South, Range 01 West  
Morse Oil and Gas Field  
Morse, Acadia Parish, Louisiana  
C&E Legacy Project No. 015-106

Dear Mr. Longman:

Hydro-Environmental Technology, Inc. (HET) has prepared this alternate plan as supplemental information to the Limited Admission Plan filed on behalf of Petrodome Operating, LLC and Ichlor Energy (LA) LLC. (collectively referred to for the purposes of this report as Petrodome) on September 12, 2025, regarding the above referenced Danny Paul Gastal property (the "Property"). This alternate plan is being submitted for the purpose of the administrative hearing only should the Louisiana Department of Conservation and Energy (C&E) find that such a supplemental plan is necessary to meet the requirements of 611.F.1 as supplemental information to the Site Investigation Report and Proposed Remediation Plan also dated September 16, 2025 (the "Plan"). The purpose of the alternate plan is to address EC concentrations at depths below the effective root zone. This alternate plan is not required by Statewide Order 29-B, nor is the alternate plan endorsed, suggested to be the most feasible plan, or warranted or necessary for the protection of human health, the environment, or the reasonably intended uses of the Property.

The alternate plan, as referred to in Section 1.8 of the Plan, seeks to present alternate options to those presented in Section 7.0 of the Plan to address ESP and SAR concentrations within the effective root zone only via a combination of targeted soil excavation and off-site disposal, as well as soil mixing and blending with potential addition of chemical amendments. This alternate plan is being submitted for administrative purposes only and in the event that the department finds that the Plan does not comply with Statewide Order 29-B, Sections 313.D, 313.E, and 611.F.1 despite the fact that the subsurface chloride concentrations do not meet the definition of contamination under Statewide Order 29-B, and the proposed Plan fully addresses the agronomic and vegetative components of Statewide Order 29-B. Finally, this alternate plan is not required based on the overall regulatory framework established by the C&E for the evaluation of sites pursuant to Statewide Order 29-B under LAC 43:XIX.313.D and 43:XIX.319, the second amended memorandum of understanding between C&E and the LDEQ dated February 23, 2023, and the provisions of Act 312 which include the use of all appropriate regulations.

The alternate plan offers an option for soil excavation plan to address concentrations of EC below the root zone to a depth upward of sixteen (16) feet below land surface (BLS), with soils beneath sixteen (16) feet BLS subject to monitored natural attenuation (MNA). Again, this alternate plan is not endorsed by the authors or suggested to be the most feasible plan, warranted, or necessary based on the evaluation of data below and the protection of human health, the environment, and the uses of the Property. Such a plan is not necessary based on the nature and extent of conditions at the LAA, would result in more harm than good for the property, and would render the property unusable during implementation. Figure 1 in Appendix A illustrates the general boundaries of the areas of soil remediation drawn to satisfy the potential requirements of the administrative hearing. Appendix B contains the supporting documentation for the costs associated with the unnecessary alternate soil remediation plan.

On behalf of Hydro-Environmental Technology, Inc. (HET), we appreciate the opportunity to provide these environmental services. Should you have any questions or need additional information, please feel free to contact us.

Sincerely,

HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.

*Matthew L. Greene*

Matthew L. Greene (CPSS #495789)  
Environmental Scientist



Certified Professional  
Soil Scientist  
MATTHEW L. GREENE  
495789

*Craig E. Cormier*

Craig E. Cormier, P.G. (LA #356)  
Principal Environmental Scientist



*Brent T. Pooler*

Brent T. Pooler, P.G. (LA #274)  
Principal Risk Analyst/Hydrogeologist

Stewart L. Stover, Jr., P.G. (LA#440)  
Director



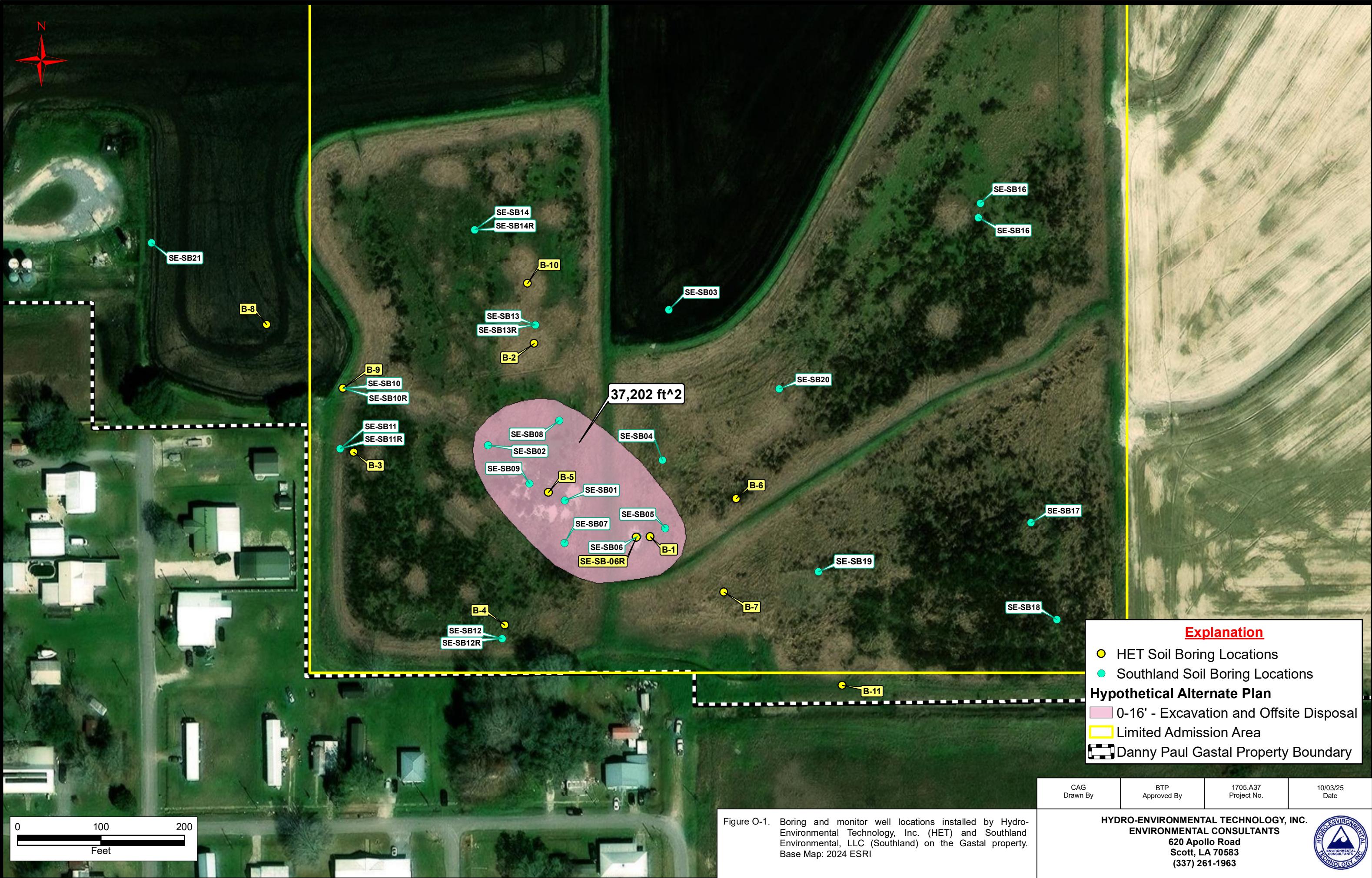
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## **APPENDIX A**

### **FIGURE**

**APPENDIX B**  
**COST ESTIMATE**



# Gastal Site - Alternate Plan - Remedial Activities - Estimated Costs



## I. Project Planning & Logistics

Planning, Scheduling, Logistics, Safety Preparation

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$180	30	\$5,400	HET Hourly Rates
Project Manager	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$140	30	\$4,200	HET Hourly Rates
GIS Cartographer	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$70	8	\$560	HET Hourly Rates
HSSE Director	Prepare and implement Safety Plans/Forms/Manuals/etc.	\$155	20	\$3,100	HET Hourly Rates
<b>Subtotal:</b>				<b>\$13,260</b>	<b>Subtotal</b>
<b>Onsite Kickoff Meetings, Initial Site Setup, Line Locates</b>					
Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Begin Remedial Activities, Initial Oversight, Observe Site Progress	\$180	10	\$1,800	HET Hourly Rates
Project Manager	Begin Remedial Activities, Initial Oversight, Observe Site Progress	\$140	10	\$1,400	HET Hourly Rates
Mileage, Per Diem, etc.	HET crew for one (1) day	\$265	1	\$265	HET Rates
Drone Rental, Pre-Remediation Photographs	\$125 per hour	\$125	1	\$125	HET Equipment Rates
EMC Third Party Line Locate	Subsurface survey @ \$3,500 per day	\$3,500	1	\$3,500	EMC - Subcontract Line Locate
5% MARKUP - Subcontracted labor (EMC)	Standard Subcontracted labor markup (5%)	\$175	1	\$175	Standard Mark-Up
<b>Subtotal:</b>				<b>\$7,265</b>	<b>Subtotal</b>
<b>Item I Total:</b>				<b>\$20,525</b>	<b>Total Costs for Item I</b>

## II. Remedial Activities: Excavation

Implementation of Remedial Activities

Subcontractor Items	Description	Unit Cost	Quantity	Cost	Source
Mobilization/Demobilization	Transportation of equipment and personnel	\$10,000	1	\$10,000	Standard Industry Rates
Equipment and Manpower for Excavation	Heavy equipment and operators charged at day rate (Excavator, Dozer, etc.)	\$470,100	1	\$470,100	Standard Industry Rates
Transportation Impacted Materials	Dump trucks necessary for transportation of excavated materials charged by the load	\$700	1325	\$927,500	Standard Industry Rates
Disposal Impacted Material	Disposal fees for off-site landfill and/or recycling charged by the ton	\$45	26455	\$1,190,475	Standard Industry Rates
Clean Backfill (including hauling)	Clean fill material obtained from offsite dirt pit charged by the cubic yard	\$17	20700	\$351,900	Standard Industry Rates
Clean Topsoil (including hauling)	Clean topsoil material obtained from offsite dirt pit charged by the cubic yard	\$26	1400	\$36,400	Standard Industry Rates
Mats	Transportation, laying, rental, and removal of 15,000 square feet of wooden mats	\$45,000	2	\$90,000	Standard Industry Rates
Rock	Rock material obtained from offsite supplier charged by the ton	\$55	250	\$13,750	Standard Industry Rates
Cooling Trailer	Equipment necessary for cooling of personnel	\$110	58	\$6,380	Standard Industry Rates
<b>Subtotal:</b>				<b>\$3,096,505</b>	<b>Subtotal</b>
<b>5% MARKUP - Subcontracted Items</b>				<b>\$154,825</b>	<b>Mark-Up - Subcontracted Items</b>

HET Supervision and Direction of Remedial Activities

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Conduct remedial oversight; coordination of subcontractors, implementation of remedial plan	\$180	120	\$21,600	HET Hourly Rates
Project Manager	Conduct remedial oversight; coordination of subcontractors, implementation of remedial plan	\$140	670	\$93,800	HET Hourly Rates
HSSE Coordinator	Safety Oversight, Control of Work	\$135	670	\$90,450	HET Hourly Rates
Environmental Scientist I	Conduct remedial manifesting	\$70	540	\$37,800	HET Hourly Rates
Mileage, Per Diem, etc.	HET personnel mileage and per diem	\$19,600	1	\$19,600	HET Rates
Drone Rental, Post Remediation Photographs	\$125 per hour for twenty-five (25), one (1) hour uses	\$125	25	\$3,125	HET Equipment Rates
Laboratory Analysis	Laboratory Analysis of Backfill Material Pit	\$522	1	\$522	Subcontract Laboratory Estimate
5% MARKUP - Subcontracted Laboratory Analyses - Waypoint Analytical	Standard Subcontracted lab markup (5%)	\$26	1	\$26	Standard Mark-Up
Portable Restroom and Hand Wash Station	Rental @ \$500 per month	\$500	2	\$1,000	Subcontractor Estimate
5% MARKUP - Subcontracted Materials (Event Solutions)	Standard Subcontracted Materials markup (5%)	\$50	1	\$50	Standard Mark-Up
<b>Subtotal:</b>				<b>\$267,973</b>	<b>Subtotal</b>
<b>Item II Total:</b>				<b>\$3,519,303</b>	<b>Total Costs for Item II</b>

## Gastal Site - Alternate Plan - Remedial Activities - Estimated Costs

### III. Project Management, Regulatory Agency Negotiations, Site Closure Reporting

Office Support During Field Activities, Regulatory Correspondence, Reporting

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Project Overview and Management, Report Preparation	\$180	60	\$10,800	HET Hourly Rates
Principal Hydrogeologist	Project Management, Report Preparation	\$180	40	\$7,200	HET Hourly Rates
Hydrogeologist IV or Environmental Scientist IV	Project Management, Report Preparation	\$135	60	\$8,100	HET Hourly Rates
GIS Cartographer	GIS Mapping, Prepare Report Figures	\$70	40	\$2,800	HET Hourly Rates
<b>Subtotal:</b>				<b>\$28,900</b>	<b>Subtotal</b>
<b>Item III Total:</b>				<b>\$28,900</b>	<b>Total Costs for Item IVII</b>
<b>TOTAL ESTIMATED COSTS</b>					
Item				<b>Cost</b>	
I. Project Planning & Logistics				<b>\$20,525.00</b>	
II. Remedial Activities: Excavation				<b>\$3,519,303.35</b>	
III. Project Management, Regulatory Agency Negotiations, Site Closure Reporting				<b>\$28,900.00</b>	
<b>TOTAL ESTIMATED COSTS</b>				<b>\$3,568,728.35</b>	<b>TOTAL ESTIMATED COSTS</b>

10/3/2025

## ESTIMATED TIMELINE: MOST FEASIBLE PLAN

**Danny Paul Gastal Property**

**Morse Oil and Gas Field**

**Morse, Acadia Parish, Louisiana**

Reporting Requirements  
(Annual Groundwater Monitoring  
Report)

Groundwater Monitoring Program  
(1 Year)

Reporting Requirements, if necessary  
(Surface Restoration Report)

Surface Restoration Activities, if  
necessary

4/26/2025 7/26/2025 10/25/2025 1/24/2026 4/25/2026 7/25/2026 10/24/2026 1/23/2027 4/24/2027 7/24/2027

# Gastal Site - Remedial Activities - Estimated Costs



## I. Project Planning & Logistics

### Planning, Scheduling, Logistics, Safety Preparation

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$180	20	\$3,600	HET Hourly Rates
Project Manager	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$140	20	\$2,800	HET Hourly Rates
GIS Cartographer	Remedial Planning; Coordination/Planning/Scheduling with subcontractors	\$70	8	\$560	HET Hourly Rates
HSSE Director	Prepare and implement Safety Plans/Forms/Manuals/etc.	\$155	20	\$3,100	HET Hourly Rates
<b>Subtotal:</b>				<b>\$10,060</b>	<b>Subtotal</b>

### Onsite Kickoff Meetings, Initial Site Setup, Line Locates

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Begin Remedial Activities, Initial Oversight, Observe Site Progress	\$180	10	\$1,800	HET Hourly Rates
Project Manager	Begin Remedial Activities, Initial Oversight, Observe Site Progress	\$140	10	\$1,400	HET Hourly Rates
Mileage, Per Diem, etc.	HET crew for one (1) day	\$265	1	\$265	HET Rates
Drone Rental, Pre-Remediation Photographs	\$125 per hour	\$125	1	\$125	HET Equipment Rates
EMC Third Party Line Locate	Subsurface survey @ \$3,500 per day	\$3,500	1	\$3,500	EMC - Subcontract Line Locate
5% MARKUP - Subcontracted labor (EMC)	Standard Subcontracted labor markup (5%)	\$175	1	\$175	Standard Mark-Up
<b>Subtotal:</b>				<b>\$7,265</b>	<b>Subtotal</b>
<b>Item I Total:</b>				<b>\$17,325</b>	<b>Total Costs for Item I</b>

## II. Remedial Activities: Excavation

### Implementation of Remedial Activities

Subcontractor Items	Description	Unit Cost	Quantity	Cost	Source
Mobilization/Demobilization	Transportation of equipment and personnel	\$10,000	1	\$10,000	Standard Industry Rates
Equipment and Manpower for Excavation	Heavy equipment and operators charged at day rate (Excavator, Dozer, etc.)	\$39,330	1	\$39,330	Standard Industry Rates
Transportation Impacted Materials	Dump trucks necessary for transportation of excavated materials charged by the load	\$700	43	\$30,100	Standard Industry Rates
Disposal Impacted Material	Disposal fees for off-site landfill and/or recycling charged by the ton	\$45	866	\$38,970	Standard Industry Rates
Clean Backfill (including hauling)	Clean fill material obtained from offsite dirt pit charged by the cubic yard	\$17	560	\$9,520	Standard Industry Rates
Clean Topsoil (including hauling)	Clean topsoil material obtained from offsite dirt pit charged by the cubic yard	\$26	280	\$7,280	Standard Industry Rates
Mats	Transportation, laying, rental, and removal of 12,000 square feet of wooden mats	\$36,000	1	\$36,000	Standard Industry Rates
Cooling Trailer	Equipment necessary for cooling of personnel	\$1,224	1	\$1,224	Standard Industry Rates
<b>Subtotal:</b>				<b>\$172,424</b>	<b>Subtotal</b>
<b>5% MARKUP - Subcontracted Items</b>				<b>\$8,621</b>	<b>Mark-Up - Subcontracted Items</b>

### HET Supervision and Direction of Remedial Activities

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Conduct remedial oversight, coordination of subcontractors, implementation of remedial plan	\$180	12	\$2,160	HET Hourly Rates
Project Manager	Conduct remedial oversight, coordination of subcontractors, implementation of remedial plan	\$140	60	\$8,400	HET Hourly Rates
HSSE Coordinator	Safety Oversight, Control of Work	\$135	20	\$2,700	HET Hourly Rates
Environmental Scientist I	Conduct remedial manifesting	\$70	20	\$1,400	HET Hourly Rates
Mileage, Per Diem, etc.	HET personnel for six (6) days	\$2,100	1	\$2,100	HET Rates
Drone Rental, Post Remediation Photographs	\$125 per hour for four (4), one (1) hour uses	\$125	4	\$500	HET Equipment Rates
Laboratory Analysis	Laboratory Analysis of Backfill Material Pit	\$522	1	\$522	Subcontract Laboratory Estimate
5% MARKUP - Subcontracted Laboratory Analyses - Waypoint Analytical	Standard Subcontracted lab markup (5%)	\$26	1	\$26	Standard Mark-Up
Portable Restroom and Hand Wash Station	Rental @ \$350 per month	\$350	1	\$350	Subcontractor Estimate
5% MARKUP - Subcontracted Materials (Event Solutions)	Standard Subcontracted Materials markup (5%)	\$18	1	\$18	Standard Mark-Up
<b>Subtotal:</b>				<b>\$18,176</b>	<b>Subtotal</b>
<b>Item II Total:</b>				<b>\$199,221</b>	<b>Total Costs for Item II</b>

## Gastal Site - Remedial Activities - Estimated Costs

### III. Remedial Activities: Soil Amendments

#### Implementation of Remedial Activities

Item	Description	Unit Cost	Quantity	Cost	Source
Equipment	Tractors and implements required to prepare the site and apply soil amendments	\$14,000	1	\$14,000	HET Rates
Slurry and Irrigation Costs (if needed)	Equipment and irrigation costs if slurring of the remedial area is warranted	\$15,000	1	\$15,000	HET Rates
Laser leveling and contouring	Equipment and manpower	\$10,000	1	\$10,000	HET Rates
Mobe/Demobe	Transportation of equipment	\$1,500	1	\$1,500	HET Rates
Soil Amendments	Appropriate soil amendments	\$6,500	1	\$6,500	Supplies Estimate
Principal Environmental Scientist	Conduct remedial activities (application of soil amendments)	\$150	15	\$2,250	HET Hourly Rates
Hydrogeologist IV or Environmental Scientist IV	Conduct remedial activities (application of soil amendments)	\$120	32	\$3,840	HET Hourly Rates
Environmental Specialist III	Conduct remedial activities (application of soil amendments)	\$75	32	\$2,400	HET Hourly Rates
Laboratory Analysis	Laboratory Analysis of Soil Samples	\$298	6	\$1,788	Subcontract Laboratory Estimate
Mileage - 1/2 ton Truck	Round trip of 80 miles for six (6) trips	\$1	480	\$480	HET Rates
<b>Subtotal:</b>				<b>\$57,758</b>	<b>Subtotal</b>
<b>Item III Total:</b>				<b>\$57,758</b>	<b>Total Cost for Item III</b>

### IV. Project Management, Regulatory Agency Negotiations, Site Closure Reporting

#### Office Support During Field Activities, Regulatory Correspondence, Reporting

Item	Description	Unit Cost	Quantity	Cost	Source
Principal Environmental Scientist	Project Overview and Management, Report Preparation	\$180	30	\$5,400	HET Hourly Rates
Principal Hydrogeologist	Project Management, Report Preparation	\$180	10	\$1,800	HET Hourly Rates
Hydrogeologist IV or Environmental Scientist IV	Project Management, Report Preparation	\$135	30	\$4,050	HET Hourly Rates
GIS Cartographer	GIS Mapping, Prepare Report Figures	\$70	16	\$1,120	HET Hourly Rates
<b>Subtotal:</b>				<b>\$12,370</b>	<b>Subtotal</b>
<b>Item IV Total:</b>				<b>\$12,370</b>	<b>Total Costs for Item IV</b>

### TOTAL ESTIMATED COSTS

Item	Cost
I. Project Planning & Logistics	\$17,325.00
II. Remedial Activities: Excavation	\$57,758.00
III. Remedial Activities: Soil Amendments	\$199,220.80
IV. Project Management, Regulatory Agency Negotiations, Site Closure Reporting	\$12,370.00
<b>TOTAL ESTIMATED COSTS</b>	<b>\$286,673.80</b>
	<b>TOTAL ESTIMATED COSTS</b>

10/3/2025