



July 3, 2025

Michelle L. (Hamilton) Rivera, Executor  
Estate of Cheryl A. Hamilton  
PO Box 7686  
Tacoma, Washington 9417

sent via email to [seashelley10atpb@icloud.com](mailto:seashelley10atpb@icloud.com)

Subject: Remedial Investigation, Feasibility Study and Planning Draft Cleanup Action Plan Scope and Costs for Property IDs 795500200201 and 795500200800 at Pacific Beach, Washington

Dear Ms. Rivera

Terraphase Engineering Inc. (Terraphase) is pleased to present this proposal to provide continued services at your property located in Pacific Beach, Washington, identified by the Grays Harbor County Assessor as Property IDs 795500200201 and 795500200800 (the subject property). The scope of work, cost estimate, schedule, and assumptions discussed below are intended to provide a completed remedial investigation and feasibility Study (RI/FS), along with a preliminary cleanup action plan with design and construction costs.

## Scope of Work

### Task 1: Pre-Field Activities

Prior to the investigation, Terraphase will conduct the following pre-field activities:

- Submit the proposed boring locations, sampling and analysis plan to the Washington Department of Ecology (Ecology) for their review and comment. Additionally, we will provide the planning level cleanup action plan for their review and comment as well.
- Acquire street use permits to advance borings in the adjoining right-of-way.
- Visit the subject property to pre-mark proposed drilling and sampling locations in the field for utility clearance purposes.
- Provide utility clearance using public location services (Washington Utility Notification Center) and private underground utility contractors to clear proposed drilling and sampling areas for the presence of underground utilities.

### Task 2: Subsurface Investigation

Terraphase will subcontract a licensed drilling subcontractor to three additional groundwater monitoring wells, and three additional soil borings as shown on Figure 8 our additional characterization report. . Traffic control devices and traffic management as required by Grays Harbor County will be placed prior to drilling the borings and groundwater monitoring wells.

Each boring will be advanced to an estimated depth of between 15 and 20 feet below ground surface (bgs). During drilling a Terraphase geologist will periodically collect soil samples for geologic evaluation

and field screening for contaminants using visual, olfactory and photoionization meter screening. Upon completion of the borings groundwater monitoring wells will be constructed and developed in the locations proposed. Borings, not completed as groundwater monitoring wells, will be decommissioned by the driller.. After development, the wells will be sampled using low-flow sampling techniques.

The collected soil and groundwater samples will be placed on ice in laboratory-supplied coolers and transported to a Washington accredited laboratory under chain of custody protocols. Laboratory analysis will include gasoline-range petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, EDB, EDC, and lead, along with petroleum hydrocarbon fractions and biological/chemical attenuation parameters.

Investigation-derived waste will be placed in drums which will remain on the subject property. We can arrange for disposal at your request on a time and expense basis.

### Task 3: Reporting

Upon completion of the field work, and review and interpretation of the collected laboratory data, Terraphase will prepare a remedial investigation and feasibility study report (RI/FS) and proposed cleanup action plan (CAP) suitable for review and approval by Ecology. The RI/FS will present all of the data collected to date and evaluate the possible cleanup methods on several factors outlined in WAC 173-340, including cost and technical implementability, permanence, protectiveness, and effectiveness. This evaluation will lead to a recommendation for the most appropriate remedy to be implemented. Included in the recommendation will be refined costs for implementation and post-implementation monitoring.

### RI/FS Cost Estimate

Terraphase proposes to complete the scope of work described herein as Tasks 1-3, on a time-and-materials basis. Our estimated cost is \$55,102. This cost includes our professional services, supplies, materials, and expenses along with subcontracted laboratory, surveying, drilling and utility location services. The following table shows the breakdown of our costs.

Item	Estimated Cost
Terraphase professional services, supplies, materials, equipment and expenses	\$25,766
Holocene Drilling - drilling subcontractor	\$10,175
Libby Environmental - laboratory	\$13,431
APS - Utility location	\$880
Additional Well elevation survey	\$1,000
TBD-traffic control	\$3,500
<b>Total Estimated Cost</b>	<b>\$55,102</b>

This work will be performed under our existing Master Services Agreement dated September 16, 2024, on a time and materials basis in accordance with our 2025 Rate Schedule.

## Schedule

We anticipate that completion of field work will require 3 to 4 days with issuance of the report within 45 days of the completion of field work.

## Cleanup Action Plan Final Design and Implementation Cost

Following the review of the RI/FS report and proposed draft cleanup action plan by Ecology, there are three remaining tasks that will need to be completed in order to receive a No Further Action Determination at the site. These tasks include the following:

### Task 4 Final CAP Design

Based on the data gathered to date, the nature of contamination and the location of the remaining soil and groundwater contamination it is likely that remediation of groundwater will be required. Given the proximity of remaining soil contamination to the roadway and the shallow nature of groundwater, excavation of impacted soils is unlikely to be effective except for possibly a small area of the subject. For the purposes of this document we are assuming that no soil excavation will be undertaken and that the CAP will focus on remediation of groundwater. The likely most appropriate cleanup technology will be the injection of a remediation chemistry system such as activated carbon and/or oxygen release compounds across the plume area.

### Task 5 Post Remediation/Performance Monitoring

After the implementation of the CAP, at least one year of quarterly groundwater monitoring will be needed to evaluate the effectiveness of the remediation efforts. It is not uncommon for additional monitoring to be needed beyond the first year, often at a reduced frequency and depending on the effectiveness of the remediation it may be possible to achieve a no further action determination with institutional controls even if groundwater is not below cleanup limits.

Below are planning level costs for completing Tasks 5 and 6. Keep in mind that these costs are for planning purposes. The RI/FS will allow for these costs to be refined and once a final CAP is designed and approved by Ecology, the actual costs will become clear. Our planning costs include a contingency of 25% for CAP design and implementation and 15% on post remediation monitoring.

	Item	Estimated Cost
Task 5 CAP Design and Implementation	Terraphase professional services, supplies, materials, equipment and expenses	\$23,226
	Holocene Drilling Regensis– drilling subcontractor and remediation chemicals	\$99,000
	APS – Utility location	\$880
	TBD-traffic control	\$3,850
	Estimated Cost-no contingency	\$126,956
	25% Contingency	\$31,739
	Total estimated Task 5	\$158,695
Task 6 Post Remediation / Performance Monitoring	Terraphase professional services, supplies, materials, equipment and expenses	\$26,201
	Libby Environmental – laboratory	\$22,685
	Estimated Cost-no contingency	\$48,886
	15% Contingency	\$7,332
	Total estimated 6 T	\$56,218
Estimated total For Tasks 5, and 6 (including contingency)		\$214,913

## Closing

Terraphase is grateful for the opportunity to offer our services on this important project. If you have any questions or comments regarding this submittal, please contact John Hildenbrand at 253-475-7711 ext. 107 or [John.Hildenbrand@terraphase.com](mailto:John.Hildenbrand@terraphase.com).

Sincerely,

for Terraphase Engineering Inc.



John F. Hildenbrand  
Principal Environmental Scientist

## Acceptance of Proposal

The cost, specifications, and conditions outlined herein for Tasks 1-3 only are satisfactory and are hereby accepted. Terraphase is authorized to proceed with the work, as specified.

*This proposal is hereby accepted by a duly authorized representative of the Client to whom it is addressed:*

*Signature:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Printed Name:* \_\_\_\_\_

*Title:* \_\_\_\_\_

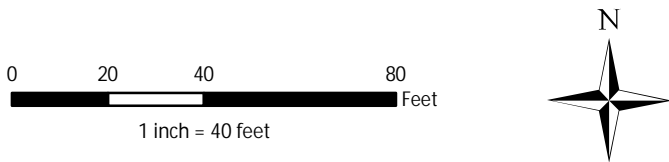
File: T:\Projects\W196 - Estate of Cheryl A. Hamilton\Technical\Figures\20250626) Figure 8\Proposed Boring and MW Map.mxd 6/26/2025 Created by: dawveller Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet



**Legend**

- Proposed Boring
- Proposed Boring and Monitoring Well
- Proposed Monitoring Well
- Previous Boring
- Existing Monitoring Well
- Subject Parcels

Notes: Imagery from ArcGIS, Date: July 29, 2023



<b>SAFETY FIRST</b>	CLIENT: Estate of Cheryl A. Hamilton	<b>Proposed Explorations</b>
	PROJECT: Phase II Main St, Pacific Beach, WA 98571 PROJECT NUMBER: W196.001.003	
		<b>FIGURE 8</b>