



March 6, 2008

Washington State Department of Ecology  
Southwest Regional Office Toxics Cleanup Program  
P.O. Box 47775  
Olympia, Washington 98504-7775

Attn: Mr. Steve Teel

**RE: WORK PLAN  
SUPPLEMENTAL INVESTIGATION  
INDIAN POINT PROPERTY  
19 BLOCK, WATER STREET  
PORT TOWNSEND, WASHINGTON**

Dear Mr. Teel:

Landau Associates, on behalf of Heron's Nest Properties LLC (Heron's Nest), conducted an Interim Source Removal Action (ISRA) consistent with the requirements of the Model Toxics Control Act [MTCA; Chapter 173-340 Washington Administrative Code (WAC)] to address petroleum-impacted soil at the property located in the 19 block of Water Street in Port Townsend, Washington (subject property; Figure 1). The results of the ISRA were provided in our July 11, 2007 Agency Review Draft Report: *Interim Source Removal Action*, and supplemental information was provided via e-mail on August 28, September 12, and October 17, 2007. The Washington State Department of Ecology (Ecology) subsequently provided an Opinion Letter, dated October 17, 2007, indicating that "Ecology has determined that the remedial action described in the report is not sufficient to meet the specific substantive requirements contained in MTCA." This letter is being provided to notify you of the supplemental investigation activities planned to address Ecology's concerns about potential residual contamination at the subject property.

## **BACKGROUND**

The subject property consists of tax parcels #957301901 and #957301902 and is currently vacant. However, according to historical information, the subject property has been used for various industrial purposes including a fish-packing company, a lumber business, and as a petroleum storage and distribution facility. Heron's Nest conducted three rounds of investigative work at the subject property in advance of the ISRA as part of preparation for site development. The investigation work conducted at the subject property detected impacts to soil and shallow groundwater in the western portion of the property

and identified an area of heavily impacted soil along the southwestern property boundary that contained gasoline-range petroleum hydrocarbons (TPH-G) and/or benzene, toluene, ethylbenzene, and xylenes (BTEX) at concentrations greater than the MTCA Method A cleanup levels for unrestricted land use. The impacted soil in the western portion of the subject property was considered a potential ongoing source of contamination to groundwater at the property.

The ISRA was conducted from August to November 2006 as a source control measure and to address the known soil and shallow groundwater impacts due to historical bulk petroleum storage and distribution operations. A total of 2,630 cubic yards of petroleum hydrocarbon-impacted soil was excavated from the western portion of the subject property and transported off site to Rinker Materials for thermal desorption. Following receipt of the analytical results for the confirmation samples collected from the final extent of the excavation, the subject property was restored by backfilling the excavation with imported material and "clean" site soils.

The detected petroleum hydrocarbon concentrations in the soil confirmation samples collected from the final extent of the excavation were below the MTCA Method A soil cleanup levels in all areas except along the southern portion of the excavation (adjacent to the beach south of where the sheet pile wall was located). This area was inspected by Ecology during an onsite meeting on October 23, 2006 and further excavation of this area was deemed not practicable due to the risk of failure of the bank protecting the beach. Therefore, as agreed, no additional excavation was conducted. Follow-up groundwater sampling and analysis has subsequently been conducted for four rounds at six monitoring wells and there is no evidence of groundwater contamination due to any residual impacted soil.

However, the October 2007 Ecology Opinion Letter states that "Additional soil, sediment, and groundwater characterization is needed at the site." Additionally, the letter indicates that "the cleanup selected must use permanent solutions to the maximum extent practicable. Therefore, before Ecology can concur that it is appropriate to leave residual contaminated soil at the site, a disproportionate cost analysis would need to be submitted to Ecology for review and approval following adequate characterization of the site." Specifically, the following items were identified in the Ecology Opinion Letter regarding site characterization:

1. Additional soil characterization is needed west of the former location of the sheet pile wall. Soil samples should be collected west of the former wall emplacement at approximately 20-ft spacing and south of confirmation sample locations CONF-9 and CONF-11 to define the extent of contamination remaining.
2. Fuel additive and blending compounds 1-2 dibromoethane (EDB), dichloroethane (EDC), and methyl tertiary-butyl ether (MTBE) should be added to the constituent list for future groundwater sampling events in monitoring wells and in the location of the temporary monitoring wells (TWELLS).

3. Future groundwater sampling events should be conducted so that samples are collected during the lower tidal range; sampling should be sequenced such that the wells nearest the shore are collected closest to the lowest tide level; and low flow sampling methods should be used.
4. Additional soil and groundwater samples should be collected from locations near the former TWELLS 1 through 5 at or near low tide, as previous samples from these locations were not considered representative due to the timing with respect to tides and site dewatering activities. Groundwater samples should be analyzed for TPH-G, petroleum hydrocarbons in the diesel range (TPH-D) and oil range (TPH-O), BTEX, polycyclic aromatic hydrocarbons (PAHs), dissolved lead, EDB, EDC, and MTBE. Sediment samples should be collected concurrently and analyzed for TPH-G, TPH-D, TPH-O, BTEX, and lead.

This work plan has been developed to address Ecology's concerns, further characterize the subsurface at the subject property, and assess potential threats to human health and the environment. The data collected will be used to document, as appropriate, the need for and type of any additional focused remedial action, or that no additional remedial action is warranted, and to support a disproportionate cost analysis for any residual impacts, if needed.

## **SCOPE OF WORK**

The scope of work in this document is intended to address Ecology's concerns and further characterize subsurface conditions at the subject property. The tasks associated with this investigation consist of:

- Task 1: Mobilization and Preparation
- Task 2: Direct-Push Soil Investigation
- Task 3: Shoreline Groundwater and Soil/Sediment Investigation
- Task 4: Data Evaluation and Reporting.

The following describe each task in greater detail.

### **Task 1: Mobilization and Preparation**

Prior to mobilizing to the subject property to conduct the activities outlined in this work plan, Landau Associates and the Heron's Nest project team will work with the City of Port Townsend (City) to obtain the required permits and prepare for the planned activities.

Landau Associates will also schedule a private utility locate for the work areas to identify potential subsurface utilities that may be located within the planned investigation areas. The public

utilities will also be informed of the investigation activities and will be asked to mark public utilities in the rights-of-way or easements that exist on the subject property.

## **Task 2: Direct-Push Soil Investigation**

Landau Associates will advance up to six soil borings along the top of the bank to the west of the former sheet pile wall location using a truck-mounted, direct-push probe rig. The borings will be spaced at about 20-ft intervals to the northwest and southeast from existing monitoring well MW-5 and located as close to the edge of the bank as possible in an effort to investigate and document subsurface conditions in native soil that was “behind” the sheet pile wall. Additionally, two to three borings will be advanced to the south-southeast of confirmation sample locations CONF-9 and CONF-11. Borings will be advanced at locations selected to document the extent of residual soil contamination that may have been left in place following the ISRA excavation. The anticipated boring locations are shown on Figure 2.

Soil samples will be collected continuously (in 4-ft intervals) from each boring location to a maximum depth of 16 ft below ground surface (BGS) using a 2.5-inch hammer-driven, split-spoon sampler with an acrylic liner for soil classification and/or chemical analysis. The sampler will be driven up to 4 ft and retracted. The acrylic liner will be removed and cut open for visual observation. The sampled interval will be logged in accordance with Unified Soil Classification System (USCS) procedures. A portion of the sample interval will be field-screened for the possible presence of contamination visually (signs of sheen or staining) and with a photoionization detector (PID) to monitor for volatile organic compounds (VOCs). The portion of the sample with the highest PID detection will be retained in laboratory-supplied sampling jars and put on ice prior to transport to the analytical laboratory. If field-screening results do not indicate the presence of contamination, the portion of the sample selected for analysis will be based on the judgment of the field geologist or engineer. Samples selected for analyses will be placed into laboratory-supplied containers, stored in a chilled cooler, and transported to an Ecology-accredited laboratory under proper chain-of-custody protocols. All samples for VOCs will be collected using a disposable sampling device (EasyDraw Syringe<sup>®</sup>) consistent with U.S. Environmental Protection Agency (EPA) Method 5035A and Ecology policy.

Soil samples submitted to the laboratory will be analyzed for TPH-G, TPH-D, and TPH-O by Ecology-approved Methods NWTPH-Gx and NWTPH-Dx; BTEX, EDB, EDC, and MTBE by EPA Method 8260; PAHs by EPA Method 8270 SIM; and total lead by EPA Method 6000/7000 Series.

The borings will be abandoned by filling the boreholes with hydrated bentonite chips, and the surface will be patched with like material. Investigation-derived waste (IDW), such as soil cuttings and drilling decontamination water, will be containerized in Washington State Department of Transportation (WSDOT)-approved 55-gal drums, labeled, and stored on site. Upon receipt of analytical data,



#### **Task 4: Data Evaluation and Reporting**

After completion of the field tasks, a draft supplemental investigation report will be prepared and submitted for review and comment. The draft report will document the investigation activities and include an assessment of the field and analytical data relative to the nature and extent of contamination. After a review for quality control and quality assurance (QA/QC), the analytical results will be tabulated and compared to applicable MTCA cleanup levels. Boring logs and analytical data reports will be included as appendices. The report will also include groundwater monitoring data collected since submittal of the ISRA and will address the available data in the context of questions/concerns raised in the October 17, 2007 Ecology Opinion Letter.

The additional groundwater data collected since submittal of the ISRA included analysis for the fuel additives and blending compounds requested by Ecology. The data were collected to represent conditions during low tide conditions and/or when impacts due to upland contamination would be evident in samples collected from the monitoring wells along the bank above the shoreline.

The report will provide an overall assessment of soil and shallow groundwater conditions, including estimates of the quantity and location(s) of any impacted soil remaining at the subject property, an evaluation of the potential threat the subject property poses to human health and the environment based on the data collected to date, and plans, as appropriate, for additional remedial action or a disproportionate costs analysis for any contaminated material that will remain in place.

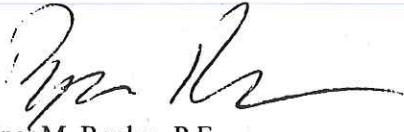
#### **SCHEDULE**

The proposed investigation is anticipated to require about 3 to 4 field days and, as noted above, the shoreline sampling will be planned to coincide with a low tidal stage. The work is planned to be conducted in March 2008, dependent on Ecology review time and drilling contractor availability.

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If you have any questions regarding the proposed investigation, please give us a call at (425) 778-0907.

LANDAU ASSOCIATES, INC.



Piper M. Roelen, P.E.  
Senior Engineer



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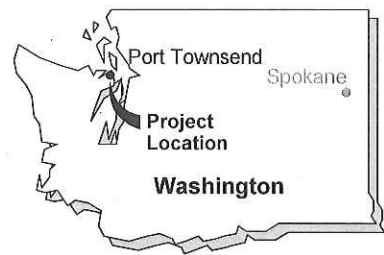
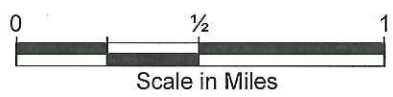
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**ATTACHMENTS**

- Figure 1: Vicinity Map
- Figure 2: Proposed Boring Location Map



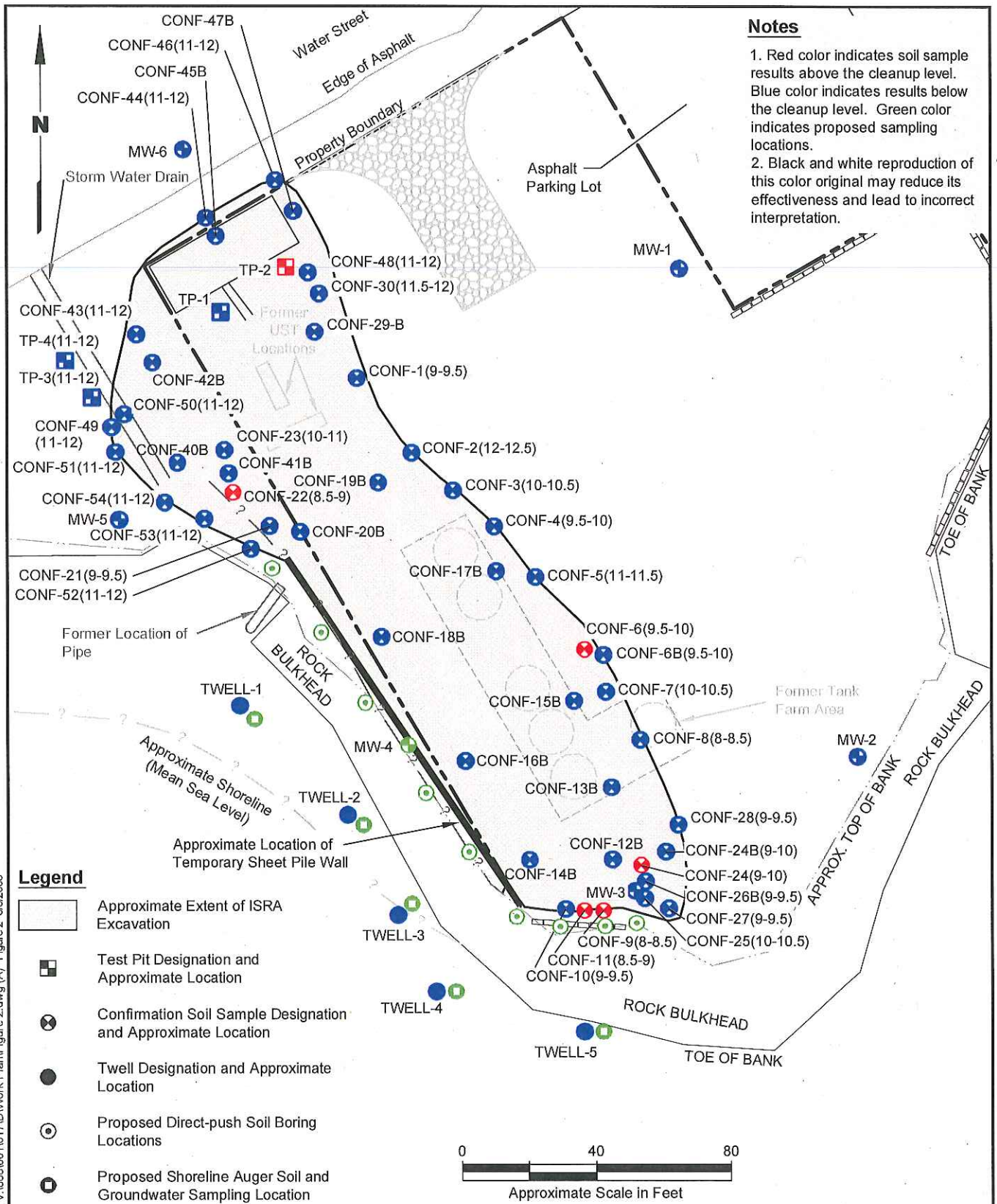
Map from DeLorme Street Atlas USA, 2002



Indian Point  
Port Townsend, Washington

Vicinity Map

Figure  
1



Work Plan | V:\688001\017\DW\Work Plan\Figure 2.dwg (A) | Figure 2 | 3/6/2008



Indian Point  
Port Townsend, Washington

**Proposed Boring  
Sampling Locations-  
Supplemental Investigation**

Figure  
**2**