

**NW Natural Pre-Remedial Design Data Gaps Sampling
Gasco Sediments Site – Spring 2020
Field Change Request Form**

Project Name: Gasco Sediments Cleanup Action **Subconsultant:** Anchor QEA, LLC

Field Activity: Subsurface Sediment Sampling **Request Number:** 16

To: Hunter Young, U.S. Environmental Protection Agency **Date:** May 20, 2020

Field Change Request (FCR) Title: Additional Perimeter Subsurface Sediment Core Collection and Analyses to Determine Final Project Area

Description
<p>Following completion of the perimeter cores surrounding the Gasco Sediments Site Project Area, NW Natural submitted and received U.S. Environmental Protection Agency (EPA) approvals on Field Change Request (FCR) Forms No. 10, 12, 13, 14, and 15 regarding the collection of additional perimeter subsurface sediment cores to determine the Final Project Area. The coring work was started on April 20, 2020, and the majority of these additional subsurface sediment cores have been successfully collected and processed with preliminary chemistry results received from the analytical laboratory for a subset of cores.</p> <p>Visual and olfactory inspection during core processing from two locations (PDI-166 and PDI-167 [Figure 1]) on May 19, 2020, identified sediment layers containing contamination that are considered likely to have concentrations that exceed the Record of Decision Table 21 total polycyclic aromatic hydrocarbon remedial action levels (RALs). Due to these observations, and in order to collect all necessary data for remedial design during this mobilization, NW Natural proposes to collect three additional sediment cores to bound potential RAL exceedances prior to the receipt of analytical data at these stations.</p>

Recommended Change
<p>NW Natural proposes to collect three additional sediment cores less than 150 feet from locations PDI-166 and PDI-167 at the stations shown in Figure 1 with the geographic coordinates provided in Table 1. The samples will be collected, processed, and submitted for chemical analysis consistent with FCR 10 except that chemical analyses will initially be triggered on a minimum three consecutive 1-foot intervals based on visual and olfactory observations made during core processing. The shallowest 1-foot interval sample will be collected from the deepest depth interval containing visual and/or olfactory signs of contamination, and then the next two underlying 1-foot consecutive depth intervals will also be sampled. If no visual or olfactory signs of contamination are present throughout the recovered core depth, the upper 3 feet of the core will be analyzed in consecutive 1-foot intervals and the remainder of the core archived in consecutive 1-foot intervals. If either of the bottom sampled depth intervals contain RAL exceedances, additional underlying archived 1-foot intervals will be triggered for analysis based on visual or olfactory observations made during core processing.</p>

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Nik Bacher, Anchor QEA

Respondent Field Coordinator (or Designee)



Signature

May 20, 2020

Date

Approval:

Ryan Barth, Anchor QEA

Respondent Project Lead



Signature

May 20, 2020

Date

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Table

Table 1

Additional Perimeter Interim Project Area Subsurface Sediment Core Sampling Locations

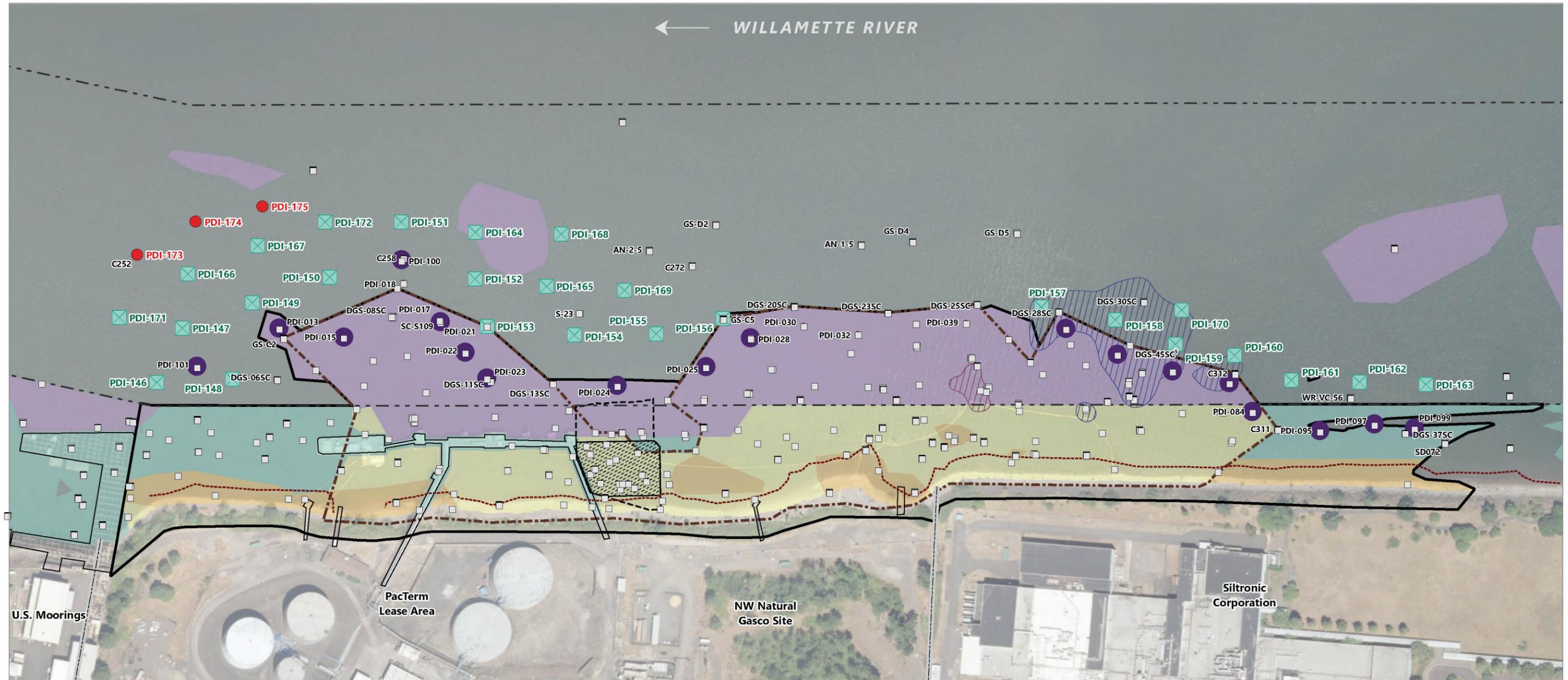
Location ID	Easting (X)	Northing (Y)
PDI-173	7623371.33	706488.74
PDI-174	7623505.4	706485.1
PDI-175	7623635.31	706442.65

Notes:

Coordinates are in North American Datum of 1983 (HARN91), Oregon State Plane North, International Feet.

HARN91: High Accuracy Reference Network 91

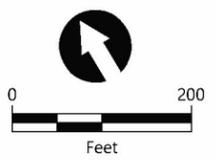
Figure



- LEGEND:**
- Navigation Channel
 - Structures
 - Property Line
 - Tar Body Removal Action Area (RAPP, Anchor 2005)
 - Tar Body Removal Action Pilot Cap
 - PTW-NAPL Boundary
 - Approximate Riprap Boundary¹
 - ROD-Identified SMAs (EPA 2017) Included in the Gasco Sediment Site Interim Project Area²
 - ROD SMA Technology²**
 - Cap
 - Dredge
 - Dredge in Nav-FMD
 - Dredge with Cap
 - 2010 Transition Zone Water Vinyl Chloride Area 1 Boundary (Anchor QEA 2012)³
 - Area 2 – Detected CVOCs in TZW and One Subsurface Sediment Location⁴
 - Existing Subsurface Sample Location
 - Additional Collected Perimeter Subsurface Core
 - Recommended Core Step Out Location
 - Core Location Contains One or More Laterally Unbounded RAL Exceedances On Perimeter of Interim Project Area

- NOTES:**
1. Estimated from side scan sonar survey conducted by Blue Water Engineering April 2011.
 2. All depicted SMA technology and PTW contours taken from the Portland Harbor Superfund Site Record of Decision (2017) without application of the EPA Explanation of Significant Differences (ESD; EPA 2019).
 3. Boundary taken from Draft Engineering Evaluation/Cost Analysis, Appendix A, Figure 4.2. Transition zone water screening level exceedances of cis-1,2-dichloroethene identified within this vinyl chloride boundary.
 4. Boundary taken from Gasco Sediments Site Statement of Work, Figure 1 (EPA 2009).
 5. Only visual observations of PTW-NAPL were

6. Bathymetry surveyed by DEA 2018. Topography surveyed by Geometrix 2011.
7. Arrow indicates direction of flow of river.
8. Horizontal datum is NAD83 (HARN 91) Oregon State Plane North, International Feet.
9. Vertical datum is City of Portland (COP), Feet.
10. Aerial imagery from City of Portland 2018.
11. BML: below mudline



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Figure 1
Proposed Additional Subsurface Sediment Core Locations
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