

**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:** 9

To: Sean Sheldrake, EPA **Date:** 3/10/2020

Field Change Request (FCR) Title: Nearshore Subsurface Sediment Sampling: Change of Core Sampling Depth

Description
<p>As discussed in Section 3.1.2 of the U.S. Environmental Protection Agency (EPA)-approved <i>Revised Pre-Remedial Design Data Gaps Work Plan (DGWP)</i>, the depth of contamination (DOC) at the Gasco Sediments Site will be determined by advancing cores to a maximum depth of 20 feet below mudline and identifying the bottom depth/elevation of subsurface sediments containing Record of Decision (ROD) Table 21 remedial action level (RAL) and principal threat waste (PTW)-highly toxic threshold exceedances.</p> <p>During the fall 2019 Pre-Design Investigation (PDI) sampling, 24 nearshore locations (Figure 1) could not be sampled using the 20-foot core sampling equipment due to insufficient river elevation for the equipment requirements. Although the river elevation during the spring 2020 PDI sampling efforts is expected to be approximately 6 feet higher than it was last fall (based on historical river level data collected by the transducers installed at the Gasco Sediments Site), our coring subcontractor has informed us that the target nearshore locations still cannot be completed safely using the 20-foot core sampling equipment. The coring subcontractor specifically rebuilt their coring gantry to accommodate the collection of more than ninety 20-foot core tubes identified in the DGWP. The rebuilt 20-foot coring gantry is approximately 4 feet longer than the coring subcontractor's standard coring gantry used for 16-foot and shorter cores. This additional depth below the vessel draft is a problem where there is insufficient water depth for maneuvering, which only occurs in the nearshore area. The coring subcontractor initially thought maneuverability would not be an issue in the nearshore area based on their previous experience at the Gasco Sediments Site and known site conditions. However, multiple coring attempts in the nearshore area during the fall 2019 PDI showed that the combination of steep nearshore slopes and limited water depth would not allow for safe maneuvering and deployment of the rebuilt 20-foot coring gantry. NW Natural does not want to relocate the stations further channelward to deeper water because that would adversely impact the data quality objectives.</p> <p>Instead, the coring subcontractor has 16-foot core sampling equipment that can be used based on the expected river elevations, allowing sampling in shallower drafts and maintaining the target nearshore locations.</p>

Recommended Change
<p>NW Natural proposes to mobilize revised core sampling equipment capable of penetrating 16 feet below mudline. This revised equipment will allow the collection of the target nearshore core locations identified in the EPA-approved DGWP.</p> <p>Although this equipment is different than the 20-foot core equipment used during the fall 2019 PDI, this revision will not affect the PDI sampling data quality objectives. Sixteen-foot cores will provide sufficient vertical chemistry data to support all remedial design evaluations identified in the EPA-approved <i>Final Pre-Remedial Basis of Design Technical Evaluations Work Plan</i>. The ROD specifies a maximum 5-foot dredge depth in the Shallow Region where PTW is not present or all PTW that cannot be reliably contained is removed to the feasible depth limit of excavation technology. Based on existing nearshore subsurface</p>

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sediment data, if the DOC in this area extends below 16 feet, it is likely to extend beneath 20 feet, which is deeper than both 5 feet and the feasible depth limit of excavation technology in this area. As previously agreed with EPA, if DOC is not bounded for RAL or PTW-highly toxic threshold exceedances, NW Natural will coordinate with EPA to perform future inventory evaluations using a separate coring technology during the remedial design process. There are no changes proposed for the vertical sampling density or analytical methods.

Nik Bacher, Anchor QEA

Respondent Field Coordinator (or Designee)



Signature

3/10/2020

Date

Approval:

Ryan Barth, Anchor QEA

Respondent Project Lead



Signature

3/10/2020

Date

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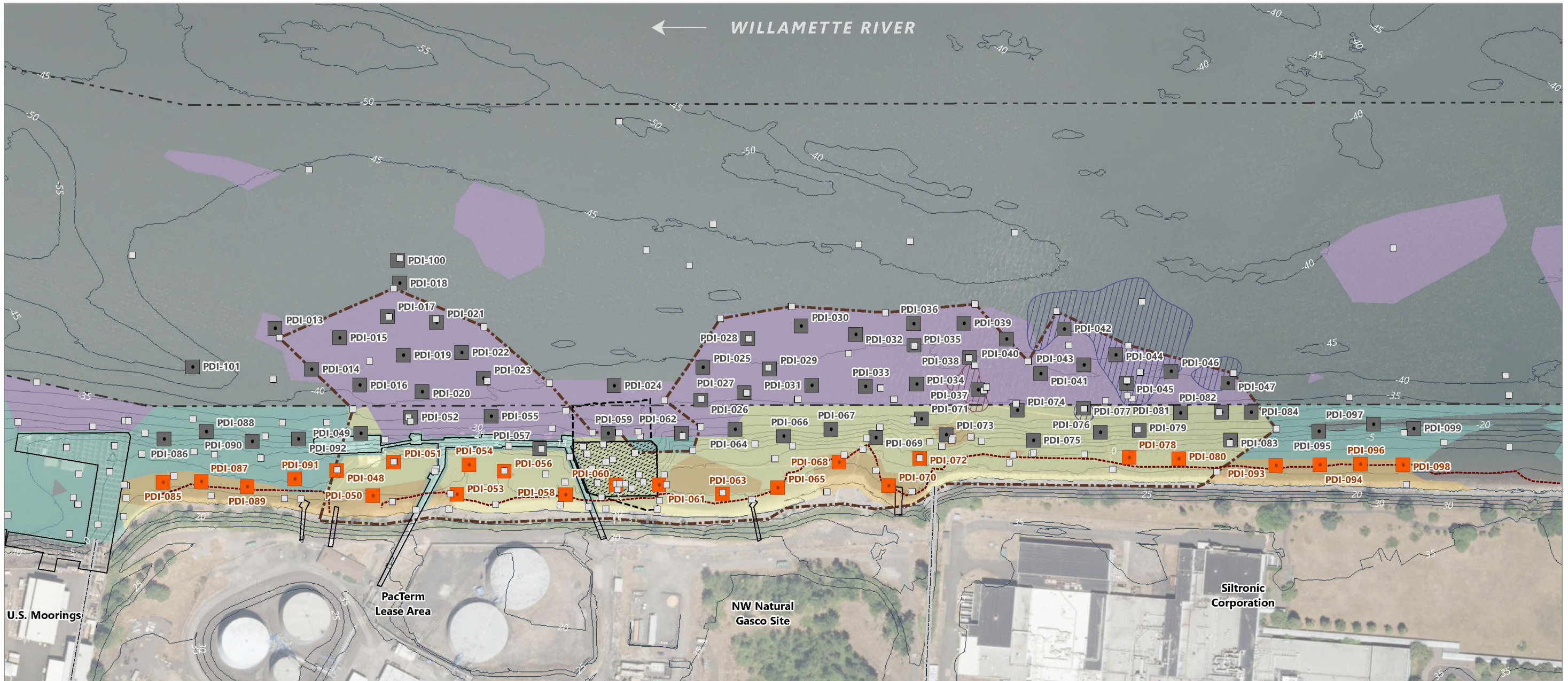
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Figure



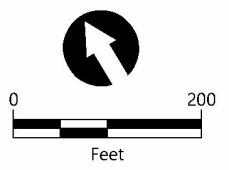
LEGEND:

Navigation Channel	ROD SMA Technology²	Existing Subsurface Sample Location
Structures	Cap	Fall 2019 PDI Sampling Location ⁵
Property Line	Dredge	Spring 2020 PDI Sampling Location ⁵
Tar Body Removal Action Area (RAPP, Anchor 2005)	Dredge in Nav-FMD	
Tar Body Removal Action Pilot Cap	Dredge with Cap	
PTW-NAPL Boundary	2010 Transition Zone Water Vinyl Chloride Area 1 Boundary (Anchor QEA 2012) ³	
Elevation (feet COP)	Area 2 - Detected CVOCs in TZW and One Subsurface Sediment Location ⁴	
Approximate Riprap Boundary ¹		

NOTES:

1. Estimated from 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 2018), which is not yet finalized.
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. Refer to Table A-3 in Appendix A of Pre-Remedial Design Data Gaps Work Plan (Anchor QEA 2019) for specific sampling program at each sampling location.
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.



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Figure 1
Remaining Spring 2020 Sediment Core Locations
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