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**REDACTED**

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**From:** Jen Mott

**Sent:** Friday, November 3, 2023 11:02 AM

**To:** Young, Hunter <Young.Hunter@epa.gov>

**Cc:** Patricia Dost <pdost@pearllegalgroup.com>; Peterson, Lance <petersonle@cdmsmith.com>; Azhar, Wardah <azharw@cdmsmith.com>; Joe Smith <jsmith@anchorqea.com>; Ryan Barth <rbarth@anchorqea.com>; Billie-Jo Gauley <bgauley@anchorqea.com>; Bob Wyatt <rjw@nwnatural.com>; Crystal, Mike <mdcrystal@sevenson.com>; Rob Ede <robe@hahnenv.com>

**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Hunter,

The following email is provided on behalf of Ryan Barth.

Below please find the link to download the *Final Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan* (Work Plan) prepared on behalf of NW Natural for the Gasco Sediments Site Project Area. The following changes have been incorporated into this submittal:

1. The footprint where the four sampling ports will be installed is on a slope, and the locations where the sampling ports will be installed was graded to be approximately level during the pilot study construction. Due to this grading, there is potential for untreated sediments that are outside of the sampling port installation footprint to deposit onto the leveled area. Section 4 of the Work Plan has been revised to incorporate potential removal of deposited material from the localized area prior to sampling port installation.
2. The NW Natural Design Team determined through follow-up conversations with the identified material vendor that the habitat cover material previously identified for use as sampling port fill is no longer available. The NW Natural Design Team coordinated with regional vendors and identified a replacement material to be used as sampling port fill (additional evaluations will be performed when identifying a habitat cover material to be placed during full-scale remedy implementation). Appendix G has been revised to include

**GASCO0054460**

analytical chemistry and grain size results for the newly identified habitat material.

3. An *In Situ Stabilization and Solidification Field Pilot Study Post-Construction Sampling Field Sampling Plan* (Appendix K) and an *In Situ Stabilization and Solidification Field Pilot Study Post-Construction Sampling Quality Assurance Project Plan* (Appendix L) have been included in this submittal. These appendices detail the passive sampler preparation, deployment, retrieval, processing, and analytical methodologies to be followed during the post-construction sampling work.

[2023-11-03 Gasco Sediments Final Revised ISS FPSWP](#)

The NW Natural Design Team is very excited by the results of the pilot study and is eager to proceed to the post-construction sampling to gain additional valuable information to support the later phases of remedial design in the Project Area.

Regards,  
Ryan

Jen Mott  
Project Coordinator  
**Anchor QEA, LLC**  
[jmott@anchorqea.com](mailto:jmott@anchorqea.com)  
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(503) 972-5014

I will be traveling for work Monday, November 6 through Thursday, November 9. Responses to email may take longer during this period.

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**From:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>

**Sent:** Thursday, September 14, 2023 5:54 PM

**To:** Jen Mott <[jmott@anchorqea.com](mailto:jmott@anchorqea.com)>; Ryan Barth <[rbarth@anchorqea.com](mailto:rbarth@anchorqea.com)>; Bob Wyatt <[rjw@nwnatural.com](mailto:rjw@nwnatural.com)>

**Cc:** Patricia Dost <[pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)>; Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Azhar, Wardah <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; Joe Smith <[jsmith@anchorqea.com](mailto:jsmith@anchorqea.com)>; Billie-Jo Gauley <[bgauley@anchorqea.com](mailto:bgauley@anchorqea.com)>; Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; Rob Ede <[robe@hahnenv.com](mailto:robe@hahnenv.com)>

**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Bob, Ryan, Jen,

EPA has reviewed the Final Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan (FPSWP) for the Gasco Sediments Site Project Area and approves the document. EPA appreciates NW Natural's effort to move the Gasco cleanup forward by performing the ISS Pilot Study. For the record, EPA has the following clarifying statements (no response from NW Natural is necessary).

- Regarding the request to include the analysis of dioxins/furans (D/F) in Section 4.3 (EPA

**GASCO0054461**

Specific Comment 32k), EPA concurs this is not necessary for the ISS Pilot Study post-construction monitoring. While the rationale provided to exclude D/F may be true based on D/F sediment concentrations in the Gasco Project Area, EPA disagrees that D/F cannot be effectively measured in porewater using passive samplers within a reasonable timeframe. The low-density polyethylene passive samplers being used in the sampling ports have been employed effectively for D/F porewater sampling at other Portland Harbor Superfund Site project areas and/or other sediment sites nationwide.

- Regarding the request to include monitoring of pH and temperature within the moon pool (EPA Comment 13 in the Conditional Approval), the revised text in Appendix C Section 3.3.2 also states that, "NW Natural requests that EPA reconsider its requirement that we collect this information because it does not represent the conditions at the point of compliance and is, therefore, not useful for remedial decision making." EPA has considered this request and deems it appropriate to collect pH and temperature data for the ISS Pilot Study as indicated in the FPSWP.
- Based on verbal and email correspondence between EPA and NW Natural on September 13, 2023, EPA understands NW Natural agrees to have free cyanide analyzed in the water quality sampling program for the ISS Pilot Study for informational purposes only on standard laboratory turnaround times. These data will be reported separately from the data collected under the approved water quality monitoring program.

Thanks,

Hunter Young  
U.S. Environmental Protection Agency  
Region 10 - Oregon Operations Office  
[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)  
(503)-326-5020

---

**From:** Jen Mott <[jmott@anchorqea.com](mailto:jmott@anchorqea.com)>  
**Sent:** Tuesday, September 12, 2023 3:32 PM  
**To:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>  
**Cc:** [pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com); Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Azhar, Wardah <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; Joe Smith <[jsmith@anchorqea.com](mailto:jsmith@anchorqea.com)>; [rbarth@anchorqea.com](mailto:rbarth@anchorqea.com); [rjw@nwnatural.com](mailto:rjw@nwnatural.com); Billie-Jo Gauley <[bgauley@anchorqea.com](mailto:bgauley@anchorqea.com)>; Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; [robe@hahnenv.com](mailto:robe@hahnenv.com)  
**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

**Caution:** This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

**GASCO0054462**

Hunter,

The following email is provided on behalf of Ryan Barth.

Below please find the link to download the *Final Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan* (Work Plan) prepared on behalf of NW Natural for the Gasco Sediments Site Project Area. The Work Plan was revised to address EPA's conditional approval comments dated September 8, 2023, on the *Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan* dated June 9, 2023. Please confirm the revisions adequately address the EPA's final conditions.

 [2023-09-12 Gasco Sediments Final Revised ISS FPSWP](#)

The NW Natural Design-build Team is very excited to initiate this pilot study and gain valuable information to support the later phases of remedial design in the Project Area.

Regards,  
Ryan

Jen Mott  
Project Coordinator  
**Anchor QEA, LLC**  
[jmott@anchoragea.com](mailto:jmott@anchoragea.com)  
6720 S Macadam Ave, Suite 300, Portland, OR 97219  
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**From:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>  
**Sent:** Friday, September 8, 2023 2:14 PM  
**To:** Jen Mott <[jmott@anchoragea.com](mailto:jmott@anchoragea.com)>; Bob Wyatt <[rjw@nwnatural.com](mailto:rjw@nwnatural.com)>; Ryan Barth <[rbarth@anchoragea.com](mailto:rbarth@anchoragea.com)>  
**Cc:** Patricia Dost <[pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)>; Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Azhar, Wardah <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; Joe Smith <[jsmith@anchoragea.com](mailto:jsmith@anchoragea.com)>; Billie-Jo Gauley <[bgauley@anchoragea.com](mailto:bgauley@anchoragea.com)>; Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; Rob Ede <[robe@hahnenv.com](mailto:robe@hahnenv.com)>  
**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Bob, Ryan, Jen,

See attached for EPA's Conditional Approval and Responsiveness Comments on the *Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan* for the Gasco Sediments Project Area within the Portland Harbor Superfund Site. Note that Approval is conditioned on NW Natural adequately addressing EPA's responses and providing a final version of the document.

Let me know if you have any questions.

**GASCO0054463**

Thank you,

Hunter Young  
U.S. Environmental Protection Agency  
Region 10 - Oregon Operations Office  
[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)  
(503)-326-5020

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**From:** Jen Mott <[jmott@anchoragea.com](mailto:jmott@anchoragea.com)>  
**Sent:** Monday, August 21, 2023 3:48 PM  
**To:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>  
**Cc:** [pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com); Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Azhar, Wardah <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; [rbarth@anchoragea.com](mailto:rbarth@anchoragea.com); Joe Smith <[jsmith@anchoragea.com](mailto:jsmith@anchoragea.com)>; Billie-Jo Gauley <[bgauley@anchoragea.com](mailto:bgauley@anchoragea.com)>; [rjw@nwnatural.com](mailto:rjw@nwnatural.com); Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; [robe@hahnenv.com](mailto:robe@hahnenv.com)  
**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Hunter,

The following email is provided on behalf of Ryan Barth.

Below please find the link to download the *Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan* (Work Plan) prepared on behalf of NW Natural. The Work Plan was revised to address EPA's comments dated July 27, 2023, on the *In Situ Stabilization and Solidification Field Pilot Study Work Plan* dated June 9, 2023, for the Gasco Sediments Site Project Area.

 [2023-08-21 Gasco Sediments Revised ISS FPSWP](#)

NW Natural appreciates the U.S. Environmental Protection Agency's (EPA's) willingness to expedite review of the revised Work Plan. To achieve completion of the Work Plan in-water scope of work by the end of the in-water construction window on October 31, NW Natural requests EPA approval of the Work Plan by Friday September 8. NW Natural's Design-build Team is available to discuss any questions or comments during EPA's review period to facilitate EPA's approval by that deadline.

Please let us know if you have any questions during your review or if you would like to hold a call to discuss anything.

Regards,  
Ryan

Jen Mott  
Project Coordinator  
Anchor QEA, LLC  
[jmott@anchoragea.com](mailto:jmott@anchoragea.com)  
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**GASCO0054464**

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**From:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>  
**Sent:** Thursday, July 27, 2023 10:22 AM  
**To:** Jen Mott <[jmott@anchoragea.com](mailto:jmott@anchoragea.com)>; Bob Wyatt <[rjw@nwnatural.com](mailto:rjw@nwnatural.com)>  
**Cc:** Patricia Dost <[pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)>; Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Azhar, Wardah <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; Ryan Barth <[rbarth@anchoragea.com](mailto:rbarth@anchoragea.com)>; Joe Smith <[jsmith@anchoragea.com](mailto:jsmith@anchoragea.com)>; Billie-Jo Gauley <[bgauley@anchoragea.com](mailto:bgauley@anchoragea.com)>; Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; Rob Ede <[robe@hahnenv.com](mailto:robe@hahnenv.com)>; THOMAS Wesley \* DEQ <[wesley.thomas@deq.oregon.gov](mailto:wesley.thomas@deq.oregon.gov)>  
**Subject:** RE: Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Bob,

See attached for EPA's comments on the *In Situ Stabilization and Solidification Field Pilot Study Work Plan*.

Let me know if you have any questions.

Hunter Young  
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Region 10 - Oregon Operations Office  
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---

**From:** Jen Mott <[jmott@anchoragea.com](mailto:jmott@anchoragea.com)>  
**Sent:** Friday, June 9, 2023 3:37 PM  
**To:** Young, Hunter <[Young.Hunter@epa.gov](mailto:Young.Hunter@epa.gov)>  
**Cc:** [rjw@nwnatural.com](mailto:rjw@nwnatural.com); [pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com); Peterson, Lance <[peterstone@cdmsmith.com](mailto:peterstone@cdmsmith.com)>; Wardah Azhar <[azharw@cdmsmith.com](mailto:azharw@cdmsmith.com)>; [rbarth@anchoragea.com](mailto:rbarth@anchoragea.com); Joe Smith <[jsmith@anchoragea.com](mailto:jsmith@anchoragea.com)>; Billie-Jo Gauley <[bgauley@anchoragea.com](mailto:bgauley@anchoragea.com)>; Crystal, Mike <[mdcrystal@sevenson.com](mailto:mdcrystal@sevenson.com)>; [robe@hahnenv.com](mailto:robe@hahnenv.com)  
**Subject:** Gasco Sediments: In Situ Stabilization and Solidification Field Pilot Study Work Plan

Hunter,

The following email is provided on behalf of Ryan Barth.

NW Natural appreciates the U.S. Environmental Protection Agency's (EPA's) willingness to expedite a field pilot study for detailed evaluation of in situ stabilization and solidification (ISS) treatment technology at the Gasco Sediments Site Project Area (Project Area). Below please find the link to


**GASCO0054465**

download the *In Situ Stabilization and Solidification Field Pilot Study Work Plan* (Work Plan) prepared on behalf of NW Natural for EPA review. This Work Plan has been prepared by NW Natural's Design Team, which includes Anchor QEA, Severson Environmental Services, and Hahn and Associates. This Work Plan summarizes the proposed in situ stabilization and solidification field pilot study within a representative portion of the Project Area. The pilot study data and lessons learned will be used to allow the treatment technology, ISS, to be fully developed during remedial design. NW Natural would like to implement this field pilot study as soon as possible to 1) incorporate more detailed design information earlier in the design process (i.e., in the Interim Design) to support EPA's review and minimize the potential for substantive design changes during development of the Final Design; and 2) inform the means and methods elements of design and ensure Interim and Final Design documents can be produced without delay. To achieve implementation during the forthcoming 2023 in-water work window, we request EPA's feedback by the middle of July.

As always, please let us know if you have any questions during your review and/or would like to have a call/meeting to discuss anything.

Regards

Ryan

 [2023-06-09 Gasco Sediments ISS Field Pilot Study Work Plan](#)

Jen Mott

Project Coordinator

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**GASCO0054466**