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Sent: Thursday, November 2, 2023 1:08 PM

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Subject: Gasco OU Revised Source Control Addendum

Wes,

On behalf of NW Natural, we are pleased to submit a revised Source Control Addendum for DEQ review and approval. The attached revision significantly updates the draft document that was submitted to DEQ in November 2022.

The revised addendum incorporates significant updates to the source control approach as provided in the 2022 draft document. These updates are based on DEQ comments, discussions and agreement on path forward, as well as extensive technical design team evaluations. As previously discussed with DEQ, a few of the more notable revisions to this document, all of which have been thoroughly vetted by the design team, include:

- The document makes it clear that evaluation and design of the recommended source control measure (SCM) enhancements will be performed under DEQ oversight and approval (as an interim remedial action measure), with the intention that the recommended additions be constructed concurrently with, and physically integrated into, the in-water remedy being designed with the EPA. The approved SCM enhancements would then be incorporated into the upland remedy through the

ongoing upland FS process.

- Based on feedback from DEQ and additional evaluations, NW Natural has modified the recommended source control approach to fully retain the existing HC&C system, which is already achieving source control objectives for the Alluvium Water Bearing Zones (WBZs). The recommended approach expands the existing HC&C system to include Fill and additional Alluvium WBZ controls and adds a shoreline deep in-situ stabilization and solidification (ISS) barrier wall to prevent potential future dense non-aqueous phase liquid (DNAPL) migration past the shoreline.
- The construction method for the ISS barrier wall has been updated based on further design evaluations and detailed discussions with equipment vendors. The barrier wall installation will be performed with the Bauer Cutter Soil Mixing (CSM) approach to deep soil mixing. This approach uses low impact, proven and available technology that will meet project design objectives. Detailed means and methods for construction of the barrier wall and other IRAM components will be developed by NWN and DEQ in future IRAM design deliverables.

Significant time and effort have gone into evaluating and developing the recommended SCM path forward and as we have discussed, many of the comments provided from DEQ's review of the 2022 draft document are no longer material. However, responses to these comments are included as an appendix to the revised addendum. We also feel that NW Natural and DEQ have made significant progress on an agreed upon approach for moving this critical work forward in a manner that facilitates necessary integration with the in-water project as well as the upland FS and remedy selection process.

Thank you,

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