

2025-04-02_Gasco: DNAPL Prism Refinement

Meeting Title:	Gasco OU: DNAPL Prism Refinement RTCs/LOEs Meeting
Date/Time:	April 2, 2025 / 3:00 - 5:00 pm
Attendees:	NW Natural: Bob Wyatt AQ: Halah Voges, Ryan Barth, Matt Davis (remote) EE: Rob Ede DEQ: Wes Thomas, Heidi Nelson, Amber Lutey, Sarah Van Glubt (remote), Dan Hafley (remote)
Location:	DEQ NW Region Office

Meeting Notes:

- NW Natural Remarks
 - NW Natural received DEQ's comments on the ISS Prism Design Basis. NW Natural believes that DEQ's comments are requesting more analysis than was anticipated to finalize the ISS prisms. NW Natural is ultimately trying to advance the IRAM design in order to meet schedule commitments to EPA for the Gasco Sediments Site design, and is concerned that the level of analysis requested by DEQ will affect the overall design schedule. The IRAM design and Gasco Sediments Site design include overlapping elements and NW Natural needs design certainty about certain elements of the IRAM to move both designs forward. NW Natural suggests the possibility that the ISS barrier wall design to advance on a different track than the rest of the IRAM elements.
 - NW Natural expresses their understanding that the ISS prisms were intended to address the worst/highest risk hot spots in the upland area of interest. NW Natural believed those highest risk hot spots were potentially mobile DNAPL.
 - NW Natural's understanding is that DEQ had requested a lines of evidence (LOE) evaluation to see if there were other DNAPL observation (residual DNAPL) that presented a high risk and should be included in the ISS prisms.
- DEQ Remarks
 - DEQ does not share NW Natural's understanding of the LOE evaluation, and the approach described by NW Natural is not one we can approve. DEQ requires that all DNAPL observations be included in the ISS prisms. The purpose of the LOE evaluation is to determine if there are individual DNAPL observations that should be excluded from the ISS prisms. DNAPL is a hot spot, and the LOE evaluation should align with our hot spot rules. These rules are designed to require treatment of hot spots to the extent feasible. So the LOE evaluation should determine whether DNAPL treatment at individual locations is feasible/infeasible.
 - NW Natural's RTCs and the email transmittal express a sense of urgency and the desire to streamline the decision making process for delineating the ISS prisms. It appears that NW Natural is seeking flexibility (the ability to exclude DNAPL observations from the ISS prisms) and expediency in obtaining DEQ's approval to do so in order to advance the IRAM design in parallel with the in-water design. From DEQ's perspective, it will be necessary to balance flexibility and schedule. The more flexibility requested for the ISS prism delineation scope, the more time DEQ will need for review. Alternatively, NW Natural may make conservative decisions about the ISS prism delineation in order to advance the design more quickly. DEQ provides an example of another site that is also conducting an ISS IRAM in Portland Harbor. At the example site, the schedule has been consolidated due to conservative decision making about what is included in the ISS treatment zone, and frequent discussions between the Party's technical team and DEQ's technical team.
 - DEQ is not supportive of an approach that defers the ISS treatment to a future action or separates the ISS treatment design from the barrier wall design.
- NW Natural understands that NW Natural's framework (residual DNAPL is excluded unless treatment is justified) and DEQ's framework (residual DNAPL is included unless justified) may lead to the same result. NW Natural interested in understanding how the decisions to exclude locations will be made. NW Natural would like a flow chart that walks through the logic for how to determine whether DNAPL observations should screen in or out of the ISS prisms. NW Natural believes that the flow chart provided with the RTCs is intended to identify higher risk

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- From DEQ's perspective, the flow chart that was included in the RTCs does not appear to correlate with identifying DNAPL that would be considered infeasible to treat. It seems like DEQ and NW Natural understand that a LOE evaluation should provide the basis for justify excluding DNAPL from ISS treatment, but that there is some misunderstand on the scope of the evaluation that the LOEs need to support. Since the DNAPL constitutes a hot spot, approval of excluding individual DNAPL observations from the ISS prisms would need to be made based on the feasibility to treat it. We believe that the feasibility limit for ISS treatment is going to depend on a number of factors that may be unique to individual locations. So while we see the value in a flow chart that will govern the LOE evaluation process, it may be difficult to develop a detailed flow chart with enough specificity to anticipate all potential scenarios.
- NW Natural has to justify the cost of the cleanup work. In NW Natural's opinion, ISS treatment of residual DNAPL does not decrease risk, because the wall and hydraulic controls will be in place, and therefore does not justify the additional cost.
 - DEQ does not share NW Natural's opinion about risk and risk reduction associated with DNAPL or hot spot treatment. For DEQ, the DNAPL represents a hot spot of contamination, and by definition poses a higher risk. Our rules require treatment of these hot spots to the extent feasible. Treating the DNAPL does reduce risk by eliminating the hot spot.
 - NW Natural states that their evaluation in the FS concludes that even after treating the DNAPL, the groundwater risks will not be completely addressed and so hydraulic controls are needed regardless of the DNAPL treatment.
 - DEQ remarks that we think NW Natural's evaluation in the FS may show the opposite conclusion. We can discuss our feedback on the FS at a later time, but note that the FS evaluation does not consider where the point of compliance for the groundwater impairment created by the DNAPL is located. If that were considered, then we believe that it would show that groundwater beneficial use impairments can be restored after ISS treatment of the DNAPL. In addition, there are many portions of the Alluvium that are not currently impaired, or may have low-level contamination that could be feasibly treated and restored within a reasonable period of time.
 - The discussion suggest further discussion about how to discuss risk may be helpful.
- AQ pre-views the 3D DNAPL model.
 - DEQ asks about DNAPL data gaps and how they were considered when drawing the ISS prisms.
 - AQ shows pre-deisgn TarGOST locations relative to the ISS prism.
 - DEQ will meet with AQ and EE in a couple of weeks to discuss the model and data gaps in more detail.
- AQ discusses new methodology from Dakota to identify false positive TarGOST responses. The methodology involves a "Tau trend" analysis. AQ goes through examples and notes that Dakota recently republished all of the historical TarGOST logs with the new Tau trend evaluation.
 - DEQ requests any available literature. AQ will provide.
- The discussion revisits the LOE framework.
 - DEQ reiterates that the LOE framework in the RTC does not lead us to determining the feasible limit to ISS treatment.
 - EE notes that the LOE framework is intended to justify exclusion of DNAPL observations where it would cost \$millions to treat minor DNAPL observations at deep depths.
 - DEQ believes that the feasibility assessment should lend itself to that scenario. Since ISS treatment is more effective, more reliable, implementable and implementation risk will already be mitigated, cost reasonableness will be the feasibility balancing factor that will define the feasible limit for treatment. Ultimately the proposed flow chart appears arbitrary to us.
 - NW Natural acknowledge that the proposed LOE framework does not work for DEQ. AQ asks if DEQ can develop alternative criteria that would be acceptable.
 - DEQ thinks it will be very difficult to develop a LOE framework similar to the one NW Natural proposed because the DNAPL observations are unique and we do not think

there is a one-size-fits-all approach that can be reflected in a flow char. DEQ recommends assessing the unit costs for treating DNAPL and using a unit cost curve to support the feasibility assessment. We would envision something similar for the FS.

- DEQ and NW Natural agree to continue to discuss the LOE framework.