TETRA TECH

May 2, 2025

Ted M. Uecker
Eastern Region Office
Toxics Cleanup Program
Washington Department of Ecology
4601 North Monroe Street
Spokane, WA 99205-1295

Re: Response to Ecology Comments on Draft Remedial Investigation Work Plan
Site Name: Witten Oil #1
Site Address: 370 W. 5th Avenue, Colville, WA
Facility/Site ID: 49354232
Cleanup Site ID: 9440

Dear Mr. Uecker,

Thank you for the comments on the Draft Remedial Investigation Work Plan for the Witten Oil #1 facility (the Site). This letter along with our edited Remedial Investigation Work Plan address Washington Department of Ecology's (Ecology's) comments. We have provided the edited Remedial Investigation Work Plan as a Word document that documents changes made in response to Ecology's comments. Please review these electronically-submitted documents and let us know if you have further questions or would like to discuss changes made.

1. The information in Sections 2.3.2 through 2.4 is already included in Tetra Tech's 2024 Historical Site Review report, which is referenced in the work plan. This information may be omitted from the work plan unless it includes data relevant to Site characterization or updating the Conceptual Site Model.

   Tetra Tech deleted most of the historical review documentation in Sections 2.3.2 through 2.4, as per Ecology's comment.

2. There are unresolved hydrogeologic data gaps that should be included in the Conceptual Site Model, including identification of all hydrogeologic units, relative porosity, permeability, and preferential flow pathways, vertical and horizontal hydraulic conductivity, and updated potentiometric mapping of each hydrogeologic unit.

   Tetra Tech has added additional information to Section 3.4 Geology and Hydrogeology and Section 4.2 Contaminant Fate and Transport.

3. The proposed monitoring well depths and screened intervals may not be sufficient to evaluate these parameters in all hydrogeologic units potentially impacted by the Site. Please revise the work plan to evaluate these parameters and incorporate them along with the updated stratigraphic data into a groundwater flow model to further evaluate the mass flux of contaminants.

   Tetra Tech is unaware of impacts to an underlying hydrogeologic unit at the Site. Further interim discussions with Ecology indicated it is appropriate to drill into the shallow aquifer only at this time.

4. A Terrestrial Ecological Evaluation (TEE) is required per WAC 173 340 7490 to determine if cleanup levels protective of terrestrial species are applicable to the Site. The first step is to determine if the Site is excluded from having to conduct a TEE. The TEE form is available on the Terrestrial Ecological Evaluations webpage. If the Site does not qualify for an exclusion, then the process outlined in WAC 173-340-7490 must be followed to determine protective cleanup levels for the Site.

   Tetra Tech has added the completion of a TEE to the work plan. See Section 5.11.

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5. While the proposed soil boring and monitoring well locations appear sufficient to delineate the lateral extent of soil and groundwater impacts on the source property, the previous investigations by Fulcrum discussed the potential that contaminated groundwater had migrated offsite. If the furthest distal monitoring wells exceed MTCA Method A cleanup levels, additional downgradient monitoring wells will be required to delineate plume boundaries prior to selecting and implementing any cleanup actions.

   Tetra Tech agrees with Ecology. We understand that additional wells, vapor monitoring points, or other efforts may be needed to further define the nature, extent, and magnitude of contamination. Additional work efforts will be defined by preparing addendums to the Remedial Investigation Work Plan. The addendums will guide future efforts along with the work plan.

6. The source and age of the release or releases presents an unresolved data gap. The toxicity and mobility of petroleum compounds can vary based on the presence of fuel additives and blending compounds including methyl tertiary-butyl ether (MTBE). Please include analyses for any fuel additive listed in Table 7.2 of Ecology's Guidance for Remediation of Petroleum Contaminated Sites that may be present in soil or groundwater, until the age and nature of the petroleum product are better defined. The toxicity can also vary based on fresh versus weathered product, and evaluating the weathered state of the product may inform the selection of appropriate cleanup standards and upcoming cleanup actions for the Site. Please update the work plan to provide chromatograms for all soil and groundwater samples and an evaluation of whether diesel-and gasoline-range organics in each sampling location represent fresh or weathered petroleum products via chromatographic pattern matching.

   Tetra Tech included analysis for these parameters in Table 6-2 of Section 6. Tetra Tech will request the laboratory provide chromatograms with laboratory reports and use the chromatograms to inform on whether product present is weathered or fresh, as discernible.

7. The proposed soil boring and monitoring well locations are not within the 30-foot lateral inclusion zone required to evaluate petroleum vapor intrusion to downgradient residential and commercial sources, and the work plan does not include steps to evaluate vapor intrusion. Please include a plan for conducting a Tier 1 VI evaluation using Ecology's Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action[4] (Publication No. 09-09 047) including lateral and vertical inclusion zones, screening levels for petroleum and VOCs, and criteria for further evaluation.

   Tetra Tech included an assessment of soil vapor in Section 5.6 of the work plan and referenced Ecology's document. We included additional text in Section 5.6 to include sampling of soil vapor in the area of wells MW-6 and MW-7 to assess potential vapors along the property boundary. Tetra Tech proposes assessment of nearby residential properties based on results of this initial remedial investigation. This additional assessment would be presented as a work plan addendum.

8. In addition to geochemical parameters including dissolved oxygen, redox potential, pH, conductivity, and temperature, data should be collected from source and distal monitoring wells to evaluate monitored natural attenuation (MNA) as a potential remedial alternative in the upcoming feasibility study. These data include electron acceptors and metabolic by-products for both aerobic and anaerobic microbial respiration including O2, $NO3^-$, Mn^{2+}, Fe^{2+}, $SO4^{2-}$, CH4, redox potential, and alkalinity. Please refer to Ecology's Guidance on Remediation of Petroleum-Contaminated Groundwater by Natural Attenuation[5] for more information on assessing plume behavior, calculating attenuation rates, identifying attenuation mechanisms, and estimating a restoration timeframe.

   Tetra Tech agrees and has included natural attenuation parameters to the analytical list. See Table 6.3 in the Remedial Investigation Work Plan.

9. To date no environmental data collected at the Site has been uploaded to Ecology's Environmental Information Management database[6] as is required per Ecology Policy 840: Data Submittal Requirements[7]. All data, including new and previously collected shall by entered into EIM at the time of the next report

deliverable. If applicable data is not submitted in compliance with this Policy, the report shall be deemed incomplete.

Tetra Tech will upload existing and future data to the EIM database.

Tetra Tech looks forward to working with Ecology on behalf the PRP group to resolve contamination present at the Site. Please contact us if you wish to discuss the changes made to the accompanying Word document or the above responses to Ecology's comments.

Sincerely,

Tetra Tech, Inc.

	
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