



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Eastern Region Office

4601 North Monroe St., Spokane, WA 99205-1295 • 509-329-3400

March 27, 2025

Jon Welge
Tetra Tech
1212 North Washington Street, Suite 10
Spokane, WA 99201

Re: Ecology Comments on Draft Remedial Investigation Work Plan

Site Name: Whitten Oil 1
Site Address: 370 W 5th Ave
Facility/Site ID: 49354232
Cleanup Site ID: 9440

Dear Jon Welge:

Thank you for providing the Washington State Department of Ecology (Ecology) the opportunity to review and comment on your January 29, 2025 Draft Remedial Investigation Work Plan for the Whitten Oil 1 facility (Site). This letter provides our opinion under the authority of the Model Toxics Control Act (MTCA), [Chapter 70A.305 RCW](#)¹.

Ecology Comments:

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.
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

¹ <https://app.leg.wa.gov/rcw/default.aspx?cite=70A.305>

hydrogeologic unit. 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.

3. 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 the Terrestrial Ecological Evaluations [webpage](#)². 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.
4. 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.
5. 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](#)³ 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.
6. 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

² <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>

³ <https://apps.ecology.wa.gov/publications/documents/1009057.pdf>

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.

7. 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⁻, Mn²⁺, Fe²⁺, SO₄²⁻, 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.
8. To date no environmental data collected at the Site has been uploaded to Ecology's [Environmental Information Management](#) database⁶ as is required per [Ecology Policy 840: Data Submittal Requirements](#)⁷. All data, including new and previously collected shall be 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.

Thank you for working with Ecology on your cleanup. If you have any questions, please contact me at 509-342-5564 or ted.uecker@ecy.wa.gov.

Sincerely,



Ted M. Uecker
Eastern Region Office, Toxics Cleanup Program

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⁴ <https://apps.ecology.wa.gov/publications/documents/0909047.pdf>

⁵ <https://apps.ecology.wa.gov/publications/documents/0509091.pdf>

⁶ <https://ecology.wa.gov/research-data/data-resources/environmental-information-management-database>

⁷ <https://apps.ecology.wa.gov/publications/documents/1609050.pdf>

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cc: Travis Trent, Fulcrum Environmental Consulting
Ankur and Aditi Sood, Whitty's, LLC
Jeff Whitten, Whitten Oil, Inc.
Nicholas Acklam, Ecology 