STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, WA 99205-1295 • 509-329-3400

April 21, 2021

Kyle Waldron
Marathon Petroleum
3450 South 344th Way, Suite 135
Auburn, WA 98001

Re: Comments on Draft Remedial Investigation and Feasibility Study:

- **Site Name:** Chevron Pipeline Company, Pasco Bulk Fuel Terminal
- **Site Address:** 2900 Sacajawea Park Road, Pasco, WA 99301
- **Cleanup Site ID:** 4867
- **Facility/Site ID:** 55763995

Dear Kyle Waldron:

Please find enclosed below the comments on the draft Remedial Investigation/Feasibility Study (RI/FS) report, sent to you via e-mail on February 24, 2021 and discussed during our meeting on April 15, 2020.

If you have any further questions about these comments, please contact me at (509) 329-3543 or clof461@ecy.wa.gov.

Sincerely,

Christer Loftenius, L.G. L.H.G.
Site Manager
Toxics Cleanup Program, Eastern Region

cc: Nicky Moody, AECOM
William J. Fees, Ecology WJF

Chevron (Tesoro) Fuel Line Leak, Pasco Site, CSID No. 1618

Draft Remedial Investigation/ Feasibility Study Report, Ecology Comments

Executive Summary

Comment No. 1: Page ES-2, Remedial Investigation Activities, third paragraph:
The point of compliance is selected by Ecology in the cleanup action plan. The standard groundwater point of compliance is the uppermost level of the saturated zone extending vertically to the lowest most depth, which could potentially be affected by the site. Since the soil cleanup levels will be set to be protective of groundwater, the soil point of compliance will be established in the soils throughout the site. With Ecology's approval, an empirical demonstration can be made by using groundwater data to show soil contaminant concentrations are protective of groundwater. Please add to the discussion with appropriate citations.

Comment No. 2: Page ES-2, Development and Evaluation of Cleanup Alternatives, second bullet:
The second threshold requirement is to comply with cleanup standards. Please revise.

Comment No. 3: Page ES-3, Development and Evaluation of Cleanup Action Alternatives, last bullet:
Please identify the acronym AC in AC-based in-situ treatment.

Section 1, Introduction

Comment No. 4: Page 1-1, Subsection 1-1, Site Summary, Local Requirements, third paragraph from last:
What was the Site use before 1950?

Comment No. 5: Page 1-2, Subsection 1-2, Regulatory Setting, Local Requirements, third paragraph from last:
Please change the order of discussion regarding the Agreed Orders to be in chronological order.

Section 2, Site History and Physical Characteristics

Comment No. 6: Page 2-1, Subsection 2-1, Land Use and Ownership, first paragraph:
Please check the AST sizes; a 250,000,000-gallon AST seems to be a rather large tank.

Comment No. 7: Page 2-2, Subsection 2.4, Site Geology, first paragraph:
At the Site, Hanford sediments were identified to a maximum depth of exploration of approximately 100 feet below ground surface (bgs), based on the interpretation of information provided in Site boring logs (Appendix B). Please add highlighted text.

Comment No. 8: Page 2-3, Subsection 2-5, Site Hydrogeology, last bullet:
Please provide both Darcy's groundwater velocity and the actual groundwater (seepage) velocity for clarity.

Comment No. 9: Page 2-3, Subsection 2-6, Site Hydrology, last bullet:
Please indicate the distance from the Site to the McNary dam, and indicate whether Lake Wallula is impounded by the McNary dam or not.

Comment No. 10: Page 2-3, Universal Comment:
Please include a new subsection discussing sensitive receptors around the Site such as residential neighborhoods, schools, daycare centers, wildlife refuges, parks, private water wells, public water wells, irrigation wells, wellhead protection areas, sensitive surface water bodies, etc. Important information such as distance and direction should be included in this subsection.

Section 3, Investigations and Cleanup Actions

Comment No. 11: Page 3-1, Subsection 3.1.1, Soil Excavations and other Remedial Activities, third bullet:
Do the reports identify the LNAPL in MW-3 whether it was gasoline or diesel, and whether the LNAPL in MW-3 was caused by a different spill than in MW-2?

Comment No. 12: Page 3-3, Subsection 3.3.1, Soil Vapor Investigations, Well Headspace Active Soil Vapor Sampling, last sentence:
Please add "to" between "used" and "assess".

Comment No. 13: Page 3-5, Subsection 3.4 Applicable Site Screening Levels:
A cleanup standard is the cleanup level at the point of compliance. Each of these can be proposed for the purpose of completing the FS. It is important to note Ecology will set the cleanup levels and select the point of compliance for the site in the cleanup action plan. Please revise discussion to include the cleanup standard definition.

Section 4, Remedial Investigation Results

Comment No. 14: Page 4-1, Section 4, Remedial Investigation Results:
Please include text stating the section summarizes the RI results.

Comment No. 15: Page 4-1, Subsection 4.1, Soil Vapor paragraph:
Please include a figure showing soil vapor probe locations and sampling results.

Comment No. 16: Page 4-2, Subsection 4.4 Groundwater, Southern Tank Area bullet:
Please indicate the TPH detected in well MW-11 whether it is TPH-g, TPH-d, or TPH-o and if the composition has changed over time.

Comment No. 17: Page 4-2, Subsection 4.4 Groundwater, Southern Tank Area bullet:
Is there an explanation to why the free product and dissolved TPH have changes from THP-g to TPH-d over time?

Section 5, Conceptual Site Model

Comment No. 18: Page 5-1, Section 5, Conceptual Site Model:
Please revise the citation WAC 173-340-357 to include a reference to the Model Toxics Control Act.

Comment No. 19: Page 5-2, Subsection 5.3 Exposure Pathways and Potential Receptors, last paragraph:
How does the groundwater data tie in with the riverbank soil data and the detections of THP-o? Is the detected TPH-o in the soil samples from a different source than groundwater potentially carrying TPH from an upgradient source such as the tank farm?

Comment No. 20: Page 5-2. Subsection 5.4, Graphical Illustrative Conceptual Site Model, item 1:
Depending on the source of the information, Pasco receives between 7.6 to 8 inches of precipitation per year. Please revise and add source.

Comment No. 21: Page 5-3. Subsection 5.4, Graphical Illustrative Conceptual Site Model, item 8a:
What are the arsenic concentrations and the probable arsenic valence states? Please discuss.

Comment No. 22: Page 5-3, Subsection 5.4, Graphical Illustrative Conceptual Site Model, bullet. 9:
The conceptual Site model needs to explain the presence of TPH-o in the riverbank samples. Is it a different source?

Section 6, Terrestrial Ecological Evaluation Analysis

Comment No. 23: Page 6-1, Subsection 6.1, Terrestrial Ecological Evaluation Analysis, fourth paragraph:
The presence of petroleum in deep soil at the water table suggests a relict smear zone. Is this the source of dissolved groundwater contamination and what remedial measures will address it?

Comment No. 24: Page 6-2, Subsection 6.1.2, Simplified Site Evaluation, last paragraph and Table A:
Please consider Ecology's sediment standards for TPH when performing the TEE analysis.

Section 7, Cleanup Standard Development

Comment No. 25: Page 7-1, Subsection 7-1, Applicable or Relevant and Appropriate Requirements, first paragraph:
As part of identifying ARARs, local requirements must be considered. The exemption does not preclude obtaining federal permits nor exempt from the costs for any of permits normally required. Please revise in document.

Comment No. 26: Page 7-1, Subsection 7-1, Applicable or Relevant and Appropriate Requirements, 7th bullet:
Groundwater Quality Standards (WAC 173-200) do not apply since this is a cleanup site. Please revise.

Comment No. 27: Page 7-1, Subsection 7-2, Proposed Cleanup Levels:
Method A cleanup levels do not normally take vapor intrusion and surface water pathways into account. Please add a discussion why the proposed Method A cleanup levels are still protective of indoor occupants from vapor intrusion as well as being protective of surface water receptors.

Comment No. 28: Page 7-2, Subsection 7-3, Proposed Point of Compliance:
Please revise discussion to be consistent with MTCA. In particular, WAC 173-340-720 (8) for groundwater and WAC 173-340-740 (6) for soil.

Section 8, Remedial Action Objectives, Remedial Technologies, and Development of Alternatives

Comment No. 29: Page 8-1, Source Areas Identified for Remediation, Table C:
Silica gel can be used to support or demonstrate contaminant degradation discussions. However, silica gel is not accepted for use in cleanup level compliance. Please revise in the document.

Comment No. 30: Page 8-2, Subsection 8.2.1 Southern Tank Area, first bullet:
Why have THP-d concentrations increased in well MW-3 since 2014?

Comment No. 31: Page 8-2, Subsection 8.2.1 Southern Tank Area, last paragraph:
Please identify the media from which TPH is being desorbed.

Comment No. 32: Page 8.2, Subsection 8.2.2 Northern Tank Area, second paragraph:
This discussion should be included as part of the CSM. Please add.

Comment No. 33: Page 8-3, Subsection 8.3.3.1 Monitored Natural Attenuation:
Please describe monitored natural attenuation in more detail such as parameters to be monitored, frequency of monitoring, and anticipated wells to be monitored.

Comment No. 34: Page 8-3, Subsection 8.3.3.2 Natural Source Zone Depletion:
Please describe natural source zone depletion in more detail such as parameters to be monitored, frequency of monitoring, and anticipated wells to be monitored.

Comment No. 35: Page 8-5, Subsection 8.3.6.1 No Action Alternative:
The remedial alternative evaluation is conducted under MTCA WAC 173-340 not SEPA WAC 197-11. Please revise.

Comment No. 36: Page 8-6, Subsection 8.3.6.3 Alternative 2 – ICs, MNA, NSZD Monitoring, and Oxygen-Releasing Compounds:
Ecology does not like to use wells that are part of the monitoring network as injection or oxygen release points since it may skew the results and not be representative of groundwater conditions beyond the monitoring well.

Section 9, Remedial Action Objectives, Remedial Technologies, and Development of Alternatives

Comment No. 37: Page 9-3, Subsection 9.2.1 No Action Alternative:
The no action alternative does not meet threshold requirements and should not be evaluated. Please revise. Please include the no action alternative with a statement that it does not meet cleanup criteria and will not be considered further.

Comment No. 38: Page 9-5, Subsection 9.2.3.1 [Alternative 2] Threshold Criteria, second bullet, Complies with Cleanup Standards and ARARs:
How will the effectiveness of the oxygen-releasing compounds (ORC) be quantified if only the well containing the “socks” will be monitored; how will the aquifer outside the wells be evaluated that the ORCs are effective?

Section 10, Recommended Remedial Action Alternative

Comment No. 39: Page 10-1, Third bullet:
Ecology agrees interim actions have reduced the contaminant source, but we continue to observe contamination at the site that has not had a reported release in over 30 years. Please provide context to the statement.

Comment No. 40: Page 10-1, last paragraph:
Ecology supports the use of various metrics to assist PLPs in selecting a preferred remedial alternative, but Ecology will use the criteria in WAC 173-340 (360-390) to select the final cleanup action.

Figures

Comment No. 41: Figure 17, Constituents Exceeding Cleanup Levels in Soil
Please show which borings and monitoring well locations that soil samples were collected and analyzed and reference the appropriate Table(s) for the results.

Comment No. 42: Figure 19, Graphical Conceptual Site Model
Please reference where to find the CSM components, or preferably identify them in a separate legend.

Comment No. 43: Figure 19, Graphical Conceptual Site Model
Please include the riverbank TPH-o in the conceptual model.

Comment No. 44: Figures 23, 25, and 26, Graphical Conceptual Site Model
These three figures have missing or blank numbers.

Tables

Comment No. 45: Table 11, Comparative Analysis of Cleanup Action Alternatives
Please rename Table 11 to Disproportionate Analysis.

Comment No. 46: Table 11, Comparative Analysis of Cleanup Action Alternatives
Please try to simplify the ranking system; it is a little hard to follow.