

November 22, 2024

David Lamadrid
Oregon Department of Environmental Quality
Northwest Region Cleanup Program
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

Via email: David.lamadrid@deq.oregon.gov

Regarding: Revised Independent Cleanup Pathway Final Report – Summary of Changes
Emergency Veterinary Clinic of Tualatin
8250 SW Tonka Street
Tualatin, Oregon 97062
ECSI No: 6706
PBS Project 24504.000, Task 0003

Dear Mr. Lamadrid:

PBS is submitting this letter summarizing revisions to the Independent Cleanup Pathway Final Report in response to your letter dated November 14, 2024. In your letter, you requested a revised report that addressed clarifications or modifications to the original draft. Your comments have been reviewed and a revised report has been prepared for your review.

This letter documents your comments, and the resulting changes made to the subsequent report. The comments and summary of changes are as follows:

1. **DEQ Comment: Section 6.1, Contamination Discovery.** This section should acknowledge the detection of diesel-range petroleum hydrocarbons (TPH-D) in the SS-2 sample, particularly since it was the highest TPH-D concentration detected at the Site. DEQ notes that TPH-D was also detected in two excavation confirmation soil samples and two boring soil samples. Please explain the basis for not analyzing one or more of these samples for polycyclic aromatic hydrocarbons (PAHs), and whether this represents a data gap.
 - a. **PBS Response:** PBS has added supporting language to Section 6.1 documenting the TPH-D concentration in sample SS-2 was because of overlap from gasoline-range hydrocarbons. TPH-D was detected at other locations but was at low concentrations not indicative of a release and/or also flagged because of estimation by the laboratory. PBS followed the sampling and analysis recommendations of the DEQ Underground Storage Tank Cleanup Guidance and PAHs were not analyzed since the release was clearly from gasoline.
2. **DEQ Comment: Section 7.4, Additional Subsurface Soil Gas Sampling.** Please describe what is meant by a soil gas vapor implant (i.e., is it a device or simply a screen interval?). Also, it is unknown to DEQ how the vapor monitoring point was constructed. Please provide a vapor monitoring point construction diagram that identifies the materials used and depth intervals of the materials.
 - a. **PBS Response:** Soil vapor implants are pre-constructed stainless steel vapor monitoring wells manufactured by Geoprobe Systems. The implants are simple to install with direct-push drilling technology. Well construction details were added in 7.4, and a construction diagram that includes

information on screen interval, sand, and sealing was previously provided in the boring logs in Appendix F.

3. **DEQ Comment: Section 8.2.1, Initial Response and Remedial Excavation Results.** This section does not discuss the TPH-D results. Refer to comment 1 for a response.
 - a. **PBS Response:** TPH-D concentration in sample SS-2 was because of overlap from gasoline-range hydrocarbons. See PBS response above in 1a.
4. **DEQ Comment: Section 8.5, Quality Control Samples.**
 - a. Please described the basis for the flagged TPH-D result for soil sample SS-2.
 - i. **PBS Response:** The basis for TPH-D being flagged by the laboratory in sample SS-2 is because the result was caused by overlap from the elevated concentration of TPH-G. Additional supporting language is provided in Section 8.5.
 - b. This section states "Results for helium less than 5% of the concentration in the vapor shroud are considered acceptable. Results indicate that all soil gas samples passed the leak check test." Relative to Table 5, DEQ notes that 1) the percentages for samples SV-3, SV-4, SV-4-S, and SV-4D are incorrect, and 2) the results for samples SV-4-S and SV-4-D were slightly greater than 5.0%. Please correct the discrepancies and explain whether the results for the samples SV-4-S and SV-4-D affect interpretation of the data.
 - i. **PBS Response:** The percentages listed for SV-3 and SV-4 are correct. The previously reported concentrations of helium for samples SV-4-S and SV-4-D were listed incorrectly. PBS has corrected the transcription error. No helium was detected by laboratories for any soil vapor samples. Calculations have been fixed for samples SV-4-S and SV-4-D. All vapor samples pass quality control criteria.
5. **DEQ Comment: Section 9.3.2, Groundwater (also applies to Sections 11.3, 12.2, and 12.4.1.2).** Describe the basis, or cite a source, for determining that boring SB1 is upgradient of the remedial excavation.
 - a. **PBS Response:** PBS has updated these sections to include language describing a shallow topographical slope toward the south, toward Nyberg Creek. Groundwater flow direction in shallow soils is expected to follow the surface topography. PBS observed contamination during the remedial excavation that also appeared to migrate south from a shallow release point. PBS used these observations to support the estimated flow direction.
6. **DEQ Comment: Section 10.1, Potentially Complete Soil Exposure Pathways, and Section 10.2, Potentially Complete Groundwater Exposure Pathways.** Residential receptors are cited as applicable for the Site.; however, as described in Section 12.1 (Current and Future Land Use), the Site and adjacent properties could be reclassified as Mixed-Use Commercial (MUC) allowing for high density, urban residential development. Therefore, urban residential receptors are applicable for the Site, and residential receptors can be excluded. DEQ notes that the ICP Final Report would benefit from discussing land and water use determinations (Section 12 of the report) before Section 10 because elements of exposure pathway evaluation and risk assessment are based on this information.
 - a. **PBS Response:** PBS understands DEQ intends to revise the guidelines in 2025 by eliminating the urban residential pathway and only include residential pathways. This report was completed with that in mind, understanding that residential pathways are the most conservative. Furthermore, PBS agrees that the report could benefit from discussing the land and water use determinations prior to Section 10; however, was following the ICP cleanup report template guidelines as they are provided by DEQ.

7. **DEQ Comment: Section 10.1.2, Volatilization to Outdoor Air.** This exposure pathway is generally not dependent on the depth of contamination, particularly at the shallow depths of contamination encountered at the Site. Consequently, this section should identify this exposure pathway is potentially complete for current/future occupational and future urban residential receptors, and Figure 4 should be modified to reflect this information.
 - a. **PBS Response:** PBS has revised this section.
8. **DEQ Comment: Section 10.3, Potentially Complete Soil Gas Exposure Pathways.** Figure 4 should be modified to reflect that the vapor intrusion into buildings exposure pathway is potentially complete for current/future occupational and future urban residential receptors.
 - a. **PBS Response:** PBS has revised this section.
9. **DEQ Comment:** Section 11.5.2, Ecological Receptors. Please provide a completed Appendix A1 checklist in DEQ’s Conducting Ecological Risk Assessment guidance document (September 14, 2020).
 - a. **PBS Response:** PBS has provided the checklist in Appendix I.
10. **DEQ Comment:** Section 12.4.1.1, Soil Risk Assessment. This section should be modified to reflect the changes requested in Comments 6, 7, and 8.
 - a. **PBS Response:** PBS has revised these sections accordingly.
11. **DEQ Comment: Figure 4, Conceptual Site Model.** In addition to the changes to Figure 4 noted in Comments 6, 7, and 8, this figure should remove the two groundwater exposure pathways for future construction/excavation workers as potentially complete. These pathways/receptors can be eliminated as potentially complete for the same reason other groundwater exposure pathways were eliminated because groundwater contamination was not encountered.
 - a. **PBS Response:** Noted. Figure 4 has been updated.

PBS also wants to note that we modified the recommendations. Based on the low concentrations of residual contamination and limited extent, and the fact that there is no unacceptable risk, PBS has removed the recommendation for a Contaminated Media Management Plan and Health and Safety Plan.

Please feel free to contact me at 503.935.5514 or bret.waldron@pbsusa.com with any questions or comments.

Sincerely,

Bret Waldron, RG
Senior Geologist

cc: Jonathan Wisniewski – Emergency Veterinary Clinic of Tualatin
Carson Bowler – Law Office of Bowler

Attachment(s): Revised Independent Cleanup Pathway Final Report

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