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DEPARTMENT OF ECOLOGY

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January 4, 2024

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**Re: Comments on Investigation Reports and requirement for work plan**

**Site Name:** Taylor Way and Alexander Avenue Fill Area (TWAAGA)  
**Site Address:** 1500 Block Taylor Way E, Tacoma, Pierce County, WA 98409  
**Agreed Order:** DE 14260  
**Enforcement Order:** DE 19410  
**Facility/Site ID:** 1403183  
**Cleanup Site ID:** 4692

Dear Tasya Gray and Scott Hooton:

Thank you for submitting the Former Potter Property Tier II vapor intrusion assessment report,<sup>1</sup> Former Potter Property supplemental subsurface investigation report,<sup>2</sup> Port Parcel 110 supplemental investigation report,<sup>3</sup> Burlington Environmental (BE) Stabilization Building vapor sampling memorandum,<sup>4</sup> and the letter responding to Ecology's comments on the Data Gaps Data Report<sup>5</sup> for review to the Department of Ecology (Ecology). Ecology's comments on these documents are listed below, by document. **To address the data gaps identified in the comments, it is necessary that additional remedial investigation (RI) work be performed.** Therefore, Ecology

<sup>1</sup> Maul Foster & Alongi, Inc. (MFA), *Tier II Vapor Intrusion Assessment Report, Taylor Way and Alexander Avenue Fill Area, Former Potter Property*, August 23, 2023.

<sup>2</sup> MFA, *Supplemental Subsurface Investigation, Potter Property, Taylor Way and Alexander Avenue Fill Area*, August 16, 2023.

<sup>3</sup> MFA, *Supplemental Investigation, Port Parcel 110, Taylor Way and Alexander Avenue Fill Area*, August 18, 2023.

<sup>4</sup> Dalton, Olmsted, & Fuglevand (DOF), *TWAAGA Burlington Environmental Stabilization Building Vapor Sampling Memorandum*, July 26, 2023.

<sup>5</sup> DOF, *Ecology January 26, 2023, letter regarding "Comments on Data Gaps Data Report" Response to Comments*, February 27, 2023.

requires that a work plan be prepared and submitted for Ecology review and approval. Specific details regarding this work plan requirement are provided in the last section of this letter.

## Comments on Documents

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### Former Potter Property Tier II vapor intrusion assessment report

1. Sub-slab concentrations beneath Shop Building: As shown in the report, exceedances of tetrachloroethene (PCE) and/or trichloroethene (TCE) sub-slab vapor concentrations have been observed at TWA-SV-41, TWA-SV-42, TWA-SV-44, and TWA-SV-45. However, the source and areal extent of this contamination needs to be determined as part of the remedial investigation and feasibility study (RI/FS). This work needs to include the sampling of sub-slab soil vapor beneath the Emerald Services building complex along the adjacent property line with the Shop Building. If sub-slab concentrations above screening levels are found beneath the Emerald Services building complex, then follow-up indoor air assessment including differential pressure measurements will be required. The contingency for this sampling shall be included in the work plan.
2. FS Alternatives: Consistent with Ecology's vapor intrusion guidance, since sub-slab concentrations exceed screening levels and indoor air concentrations exceed cleanup levels, the cleanup action for this area should ensure the long-term protection of indoor receptors for current and potential future buildings.<sup>6</sup> Therefore, Ecology expects the FS alternatives for this area, as well as the northern portion of the CleanCare facility and portions of Burlington Environmental facility (for example Parcel A) that have elevated soil gas concentrations, will include active cleanup methods rather than only relying on institutional controls and/or an indoor air assessment protocol.
3. Table 4-3: Instances where laboratory reporting limits exceeded screening levels should have been considered an exceedance of the screening level in the table. Please ensure that future tables indicate an exceedance if laboratory reporting limits exceed screening levels.

### Former Potter Property supplemental subsurface investigation report

1. Boring SB06: This boring was in Quonset Hut 2, adjacent to soil vapor sample location TWA- SV-35, and one of the purposes of this boring was to help determine if the source of elevated sub-slab total petroleum hydrocarbon (TPH) vapors at TWA-SV-35 was from a vadose zone source, or the water table, or both. The boring log for SB06 shows that the water table was at an approximate depth of 5 feet below ground surface (bgs) and

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<sup>6</sup> Ecology, *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action*, Toxics Cleanup Program Publication No. 09-09-047, March 2022.

strong TPH odor and strong oil sheen was observed. A soil sample was collected from this boring and analyzed from the 2.2 to 2.8 feet bgs interval and results for TPH gasoline range (TPH-G), diesel range (TPH-D), and oil range (TPH-O) exceeded MTCA Method A Soil Cleanup Levels for both Unrestricted and Industrial Uses. A deeper soil sample from 8.2 to 8.8 feet bgs did not exceed screening levels. However, there was no sample recovery for the 2.9 to 5.0 feet bgs and 9.5 to 10 feet bgs intervals. The lack of recovery for these intervals is a data gap for the remedial investigation (RI) because information on the extent of contamination will be needed in this area for the FS.

2. Boring SB08: This boring was in the Shop Building, adjacent to soil vapor sample location TWA- SV-41, and one of the purposes of this boring was to help determine if the source of elevated sub-slab TPH, PCE, and TCE vapors at TWA-SV-41 was from a vadose zone source, or the water table, or both. The boring log for SB08 shows that the water table was at an approximate depth of 5 feet below ground surface (bgs) and no TPH odor was observed. A soil sample was collected from this boring and analyzed from the 2.6 to 3.2 feet bgs interval and no results were detected above screening levels. However, there was no sample recovery for the 2.7 to 5.0 feet bgs and 9.3 to 10.0 feet intervals. **Ecology does not agree with the conclusion in the report** that the subsurface soil beneath the Shop Building does not appear to be a source associated with the elevated PCE or TCE sub-slab concentrations. A data gap remains regarding the source of the elevated sub-slab TPH, PCE, and TCE soil vapor concentrations observed beneath the Shop Building. Additional data must be collected to determine the source of the elevated soil vapor concentration in TWA-SV-41 and the other areas beneath the building. For example, is the TWA-SV-41 contamination located in the 2.7 to 5.0 feet bgs interval or is it from a deeper source?
3. Emerald Services Building vapor intrusion risk: As previously noted by Ecology, the sub-slab vapor results for TWA-SV-41 are of concern because of the proximity of the adjacent Emerald Services Building and if TPH and/or PCE/TCE/vinyl chloride soil vapor concentrations from the Site have the potential to exceed sub-slab screening levels beneath that building.<sup>7</sup> Elevated sub-slab concentrations were also observed in the recent locations closer to the property line with Emerald Services (TWA-SV-44 and -45). Therefore, as stated above, it is necessary that the potential for vapor intrusion risk in the adjacent Emerald Services building complex be evaluated as part of the RI/FS.

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<sup>7</sup> Ecology, *Comments on First and Second Quarter Groundwater Reports, Request for Work Plan, and Resolution of Informal Dispute*, December 6, 2022.

## Port Parcel 110 supplemental investigation report

1. Ecology concurs with the report conclusion that based on the investigation data to date, contaminated groundwater from the Site does not appear to pose a vapor intrusion risk to occupants of the building located on the Parcel 110 Property. However, groundwater concentrations can vary over time. Therefore, well TWA-11 should continue to be monitored as part of the Site groundwater monitoring program to verify this conclusion.

## BE Stabilization Building vapor sampling memorandum

1. Ecology concurs that there does not appear to be soil vapor concentrations beneath the Stabilization Building that are of concern for vapor intrusion.
2. The Conclusions Section mentions that DOF plans to begin preparation of a Site indoor air assessment protocol to be used as future development is planned and completed. As you prepare the protocol for Ecology review, please keep in mind the above comments that active cleanup methods will be required in areas of the Site that have elevated soil vapor concentrations.

## DOF letter regarding Ecology's comments on the Data Gaps Data Report

1. Ecology concurs with the letter's responses to Ecology's comments on the Data Gaps Data Report.<sup>8</sup>

## Work Plan Requirement

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**Ecology requires that a work plan be submitted for Ecology review within 60 days to address the data gaps identified in the above comments.** Please consider the following recommendations as you prepare the work plan:

1. **Method** for determining the source and extent of contamination beneath the former Potter Property: Some of the data gaps described above were caused by lack of soil sample recovery during direct-push drilling. To prevent this data gap from reoccurring, we suggest that advanced site characterization tools be used for the data gap investigation rather than the traditional direct-push drilling approach used previously.<sup>9</sup> Specific tools you should consider include the membrane interface hydraulic profiling tool (MiHPT) with multiple detectors (for example photoionization detector, flame ionization detector, halogen specific detector, and electron capture detector) and the ultraviolet optical screening tool (UVOST) with follow-up soil confirmation samples

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<sup>8</sup> Ecology, *Comments on Data Gaps Data Report*, January 26, 2023.

<sup>9</sup> Interstate Technology Regulatory Council (ITRC), *Implementing Advanced Site Characterization Tools*, available at: <https://asct-1.itrcweb.org/>

analyzed by a laboratory, as needed. These tools would be very helpful for non-aqueous phase liquid (NAPL) source type and distribution.

2. **NAPL** characterization needed on CleanCare parcels: As illustrated on Figure 11 of the Final Data Gaps Work Plan, NAPL has historically been present in the northern portion of the former CleanCare parcels.<sup>10</sup> Recent soil vapor sampling results from locations SV-1 through -4, SV-10 through -14, SV-16, SV-19, SV-22, SV-24, and SV-25 show significantly elevated concentrations of TPH and/or chlorinated volatile organic compounds (CVOCs).<sup>11</sup> These soil vapor concentrations indicate that NAPL is still present in this area. This NAPL is also a source of the groundwater contamination in several wells including CCW-2A, -2B, -3A, -3B, -3C, -5B, -5C, and -7B. However, information from the previous borings in this area (SCO series borings) do not define the vertical extent of contamination because they were only installed to a depth of 4 feet bgs. Ecology recommends that advanced site characterization tools (for example MiHPT and UVOST) be used to define in more detail the composition and extent of the NAPL source areas. This information would be very helpful for the feasibility study's evaluation of remedial technologies for this NAPL area. For example, would mass recovery (such as excavation) be effective? Or would phase change remedial technologies be a more effective option (for example soil vapor extraction, air sparging, biosparge/bioventing, in-situ chemical oxidation, or enhanced biological degradation)? Or does there need to be a combination set of technologies?
3. **FS data** needs NAPL area on BE and CleanCare parcels: The above-mentioned Figure 11 also shows a large historic NAPL area in the southern portion of the Site. Selected groundwater monitoring wells downgradient of this area in the shallow and intermediate aquifers have combined diesel- and oil-range TPH and/or benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations that exceed MTCA Method A Cleanup Levels and/or MTCA Method B concentrations that are protective of aquatic receptors in marine surface waters.<sup>12</sup> These wells include MW-1, CTMW-20, CCW-8B, CTMW-7, CTMW-9, and CTMW-25D. The work plan should also consider if the use of advanced site characterization tools as mentioned above (for example MiHPT and UVOST) to define in more detail the composition and extent of the NAPL source area for the FS. The FS will need to include active remedies for this area because the existing groundwater data show exceedances in potential cleanup levels at potential points of compliance.

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<sup>10</sup> DOF, *Final Data Gaps Work Plan*, July 2020.

<sup>11</sup> DOF, *Data Gaps Data Report*, November 2022.

<sup>12</sup> Ecology, *Concentrations of Gasoline and Diesel Range Organics Predicted to be Protective of Aquatic Receptors in Surface Waters*. Toxics Cleanup Program Implementation Memorandum No. 23, August 25, 2021.

If you have any questions regarding this letter, please contact me at 360-890-0059 or [steve.teel@ecy.wa.gov](mailto:steve.teel@ecy.wa.gov).

Sincerely,



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Cleanup Project Manager/Hydrogeologist  
Toxics Cleanup Program  
Southwest Region Office

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Ecology Site File