To: Steve Teel, Department of Ecology

From: Tasya Gray, Taylor Way and Alexander Avenue Fill Area (TWAAFA) Agreed Order Potentially Liable Parties Group Project Coordinator, ngray@dofnw.com

Date: November 3, 2022

Subject: Ecology October 13, 2022 email regarding "Comments on TWAAFA reports and request for work plan"

This letter has been prepared on behalf of Glenn Springs Holdings, Inc. (Occidental Chemical), General Metals of Tacoma (GMT), and Clean Earth Inc. (Clean Earth) formerly known as Stericycle Environmental Solutions, Inc. and Burlington Environmental (Burlington). These parties (collectively the "AO Parties") are performing activities at the Taylor Way and Alexander Avenue Fill Area (TWAAFA) Site under Agreed Order Number (AO) DE 14260 (effective December 4, 2020) with the Washington State Department of Ecology (Ecology).

On October 13, 2022 the AO Parties received an email from Ecology requesting a work plan be submitted by December 12, 2022 describing additional scope of work at the TWAAFA Site involving the installation of additional monitoring wells and further investigation of the TWAAFA Site at over 20 specific locations, including at locations outside the TWAAFA Site boundary (see Paragraphs 1, 2, and 5 of the email—enclosed). Ecology's request included coordinating the timing of the AO Parties' fourth quarter 2022 groundwater monitoring event with a RCRA groundwater monitoring event to be accomplished in the fourth quarter by Emerald Services on its property to the southeast of the TWAAFA Site.

The AO Parties believe this request for additional investigation is premature. Work under the 2020 Final Data Gaps Work Plan (DOF, 2020) is not yet complete. Three major deliverables are still outstanding, including:

- Soil, Groundwater, and Soil Vapor Data Report to be submitted November 2022.
- Third Quarter 2022 Groundwater Data Analysis Report to be submitted November 2022.
- Fourth Quarter 2022 Groundwater Data Analysis Report to be submitted in first quarter 2023 (after fourth quarter sampling is completed in December 2022).

The AO Parties request the opportunity to complete the currently approved scope of work under the Data Gaps Work Plan (active sampling through December 2022), including submittal of the above referenced forthcoming reports, prior to discussions between the AO Parties and Ecology regarding the scope and timing for additional investigatory work at the TWAAFA Site. The currently approved scope of work provides necessary data to assess seasonal fluctuations in groundwater conditions that would be beneficial in determining the need for and scope of any additional work.

Furthermore, the October 13 email from Ecology referenced certain technical documents for the Emerald Services, Inc. facility, adjacent to the TWAAFA Site, as relevant to the additional

investigation outlined in Ecology's email. The AO Parties were not aware of those documents and did not have access to them because they were not publicly available. The AO Parties need time to review the Emerald Services data, including other pertinent data that may be available since completion of the 2020 Data Gaps Work Plan, before discussing with Ecology any additional TWAAFA Site work and preparation of an appropriate work plan. We ask that Ecology share with us available reports and correspondence related to the Emerald Services facility from recent years (2020 to present) to better understand how it may have any significance to the ongoing investigations at the TWAAFA Site.

For the above stated reasons, the AO Parties request Ecology's agreement to: (1) a postpone the work plan sought by Ecology in Paragraphs 1, 2, and 5 of the October 13 email until after Ecology and the AO Parties meet during first quarter 2023 (following submittal of the Fourth Quarter 2022 Groundwater Data Analysis Report) to discuss additional scope and timing of work; and (2) the AO Parties' reserve their rights regarding the October 13 email and these matters under AO Section VIII(H) (Resolution of Disputes) pending the outcome of that meeting.

Meanwhile, as requested by Ecology in Paragraph 1(h) of the October 13 email, the AO Parties will endeavor to "coordinate the timing of the fourth quarter 2022 groundwater monitoring event [by the AO Parties] so that it occurs at the same time as the fourth quarter 2022 event for the Emerald Services facility."

The AO Parties also agree to address comments in Paragraphs 3 and 4 of Ecology's October 13 email that are specific to the Groundwater Analysis Reports as part of finalizing the upcoming Third and Fourth Quarter Groundwater Analysis Reports.

References

Washington State Department of Ecology (Ecology), 2022. Email, *Ecology comments on first and second quarter 2022 groundwater monitoring reports and the recent sub-slab vapor sampling results from the Former Potter Property.* October 13. (enclosed)

Dalton, Olmsted, & Fuglevand, Inc. (DOF), 2020. *Final Data Gaps Work Plan.* July.

From:	Teel, Steve (ECY)
To:	Tasya Gray; Hooton, Scott
Cc:	"Robb Bakemeier"; Melinda Borgens; Greg Fink - Stericycle (gfink@harsco.com); "Mark M. Myers (MMyers@williamskastner.com)"; "Marlys Palumbo"; "Kim Seely (kseely@coastlinelaw.com)"; Rick Tackett; Waskom, Lisa P; Smith, Sheila; Brian.Culnan@safety-kleen.com; Victoria F Banks (ATG) (victoria.banks@atg.wa.gov); Lawson, Rebecca (ECY); Mullin, Tim (ECY); Graber, Kerry (ECY); Landskron, Jason (ECY); Furnish, Mark (ECY); Reed, Rob (ECY); Kaufmann, Ron (ECY)
Subject:	Comments on TWAAFA reports and request for work plan
Date:	Thursday, October 13, 2022 5:13:34 PM
Attachments:	TWAAFA_1-2QGWcommentsEmail.docx Fig1.pdf

Tasya and Scott,

Attached are Ecology's comments on the first and second quarter 2022 groundwater monitoring reports and the recent sub-slab soil vapor sampling results from the Former Potter Property. To address the data gaps identified in the comments, it is necessary that additional soil and soil vapor sampling and well installation work be performed. **Please provide Ecology with a work plan for this within 60 days of today's date.**

Ecology also requests that you provide your proposed indoor air sample locations for the Potter Property buildings. Please also let us know if you would like to schedule a meeting to discuss potential monitoring well locations.

We will also be documenting these comments in a formal letter. However, in order to meet the submittal deadline, you do not need to wait for the formal letter.

Thanks,

Steve

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10/13/2022

Ecology comments on first and second quarter 2022 groundwater monitoring reports and the recent sub-slab soil vapor sampling results from the Former Potter Property.

Dalton, Olmsted, & Fuglevand (DOF), *First Quarter 2022 Groundwater Data Analysis Report*, May 6, 2022.

DOF, *Second Quarter 2022 Groundwater Data Analysis Report*, August 10, 2022.

Port of Tacoma, *Sub-Slab Vapor Sampling Results, Additional Sampling Event*, Letter from Scott Francis, Port of Tacoma, to John Collecchi, Handan Container Services, Inc., August 24, 2022.

1. Need for additional shallow aquifer monitoring wells: Review of shallow aquifer groundwater analytical results and groundwater elevation data from the reports shows that the extent of the shallow aquifer contamination plume above data gap work plan screening levels is not completely defined. **Therefore, additional shallow aquifer groundwater monitoring wells need to be installed in the following areas (exceedance constituents shown in parentheses)**:

    a. Southeast of **CTMW-20** (total petroleum hydrocarbons, diesel range organics, TPH-D; TPH oil range organics, TPH-O; and manganese), **CCW-8B** (TPH-D; TPH-O; 1-methylnaphthalene; and manganese), and **CCW-1A** (tetrachloroethylene, PCE; trichloroethylene, TCE; vinyl chloride [VC]; and manganese) and **CCW-1B** (copper and manganese). Also, it appears that the TPH contamination above MTCA Method A Cleanup Levels for Ground Water that have been observed in Emerald Services wells MW-3R and MW-4 are originating from the TWAAFA Site.

    b. East of CCW-**7B** (TPH gasoline range organics, TPH-G; TPH-D; TPH-O; 1,4-dichlorobenzene; benzene; VC; 1-methylnaphthalene; and manganese).

    c. North-northeast of **TWA-1** (TPH-D; TPH-O; VC; benzene; and manganese), **TWA-2** (TPH-D + TPH-O; arsenic; copper; and manganese), and **TWA-3** (arsenic; copper; and manganese).

    d. North and northwest of **CCW-3A** (TPH-D; TPH-O; benzene; arsenic; nickel; and zinc) and **CCW-3B** (TPH-G; TPH-D; TPH-O; benzene; VC; 1-methylnaphthalene; and manganese).

    e. Halfway between **CTMW-15** and **CTMW-20**. An additional well is needed here to define groundwater concentrations of chlorinated volatile organic compounds (cVOCs), including PCE, TCE, and VC due to elevated sub-slab vapor concentrations detected beneath the Shop Building on the Former Potter Property (Port of Tacoma, 2022). Soil samples shall be collected during well installation to determine if soil contamination is affecting groundwater in this area.

    f. Southwest of **SB-1A** (copper and manganese), **SB-2A** (manganese), and **CTMW-14** (copper).

    g. Existing wells that are currently not part of the groundwater monitoring network should be evaluated to see if they can be utilized to partially meet this need in selected areas (for example Emerald Services wells MW-1, MW-2R, MW-3R, and

MW-4; and Burlington Environmental wells PZ-7, PZ-8, and PZ-9). For more information on the Emerald Services well network, see Trihydro (2022).[1]

h. Please coordinate the timing of the fourth quarter 2022 groundwater monitoring event so that it occurs at the same time as the fourth quarter 2022 event for the Emerald Services facility. This will enable the groundwater elevation map from this quarter to include data from both the TWAAFA Site and Emerald Services wells.

2. Need for additional intermediate ("deep") aquifer monitoring wells: Review of the underlying intermediate[2] aquifer (referred to as the "deep" aquifer in the report) groundwater analytical results and groundwater elevation data shows that the extent of the intermediate aquifer contamination plume above data gap work plan screening levels is not completely defined. **Therefore, additional intermediate aquifer groundwater monitoring wells need to be installed in the following areas**:

    a. South-southeast of **TWA-8D** (arsenic and manganese) and **CTMW-25D** (TPH-D; TPH-O; arsenic; chromium; and manganese).

    b. South of **CCW-1C** (TPH-D + TPH-O and manganese), **TWA-6D** (arsenic, copper, chromium, and manganese), and **TWA-10D** (arsenic).

    c. South-southwest of **TWA-7D** (arsenic, copper, and manganese).

    d. Water level data from both quarters indicate that there is northerly groundwater flow from the northern portion of the Site. **Therefore, additional downgradient intermediate aquifer groundwater monitoring wells are needed in the following northern areas to further define the groundwater flow direction and contaminant concentrations**:

        - North-northeast of **CCW-3C** (TPH-D + TPH-O and manganese), **CCW-5C** (TPH-D + TPH-O and manganese), **CCW-6C** (TPH-D + TPH-O), **TWA-4D** (arsenic, copper, and manganese), and **TWA-5D** (TPH-D + TPH-O; copper; and manganese).

3. Groundwater elevation contour lines on figures should not stop at a parcel boundary but should be connected with a solid or dashed line when possible. Please ensure that this is done on future report figures. Examples where contour lines should have been connected are shown below:

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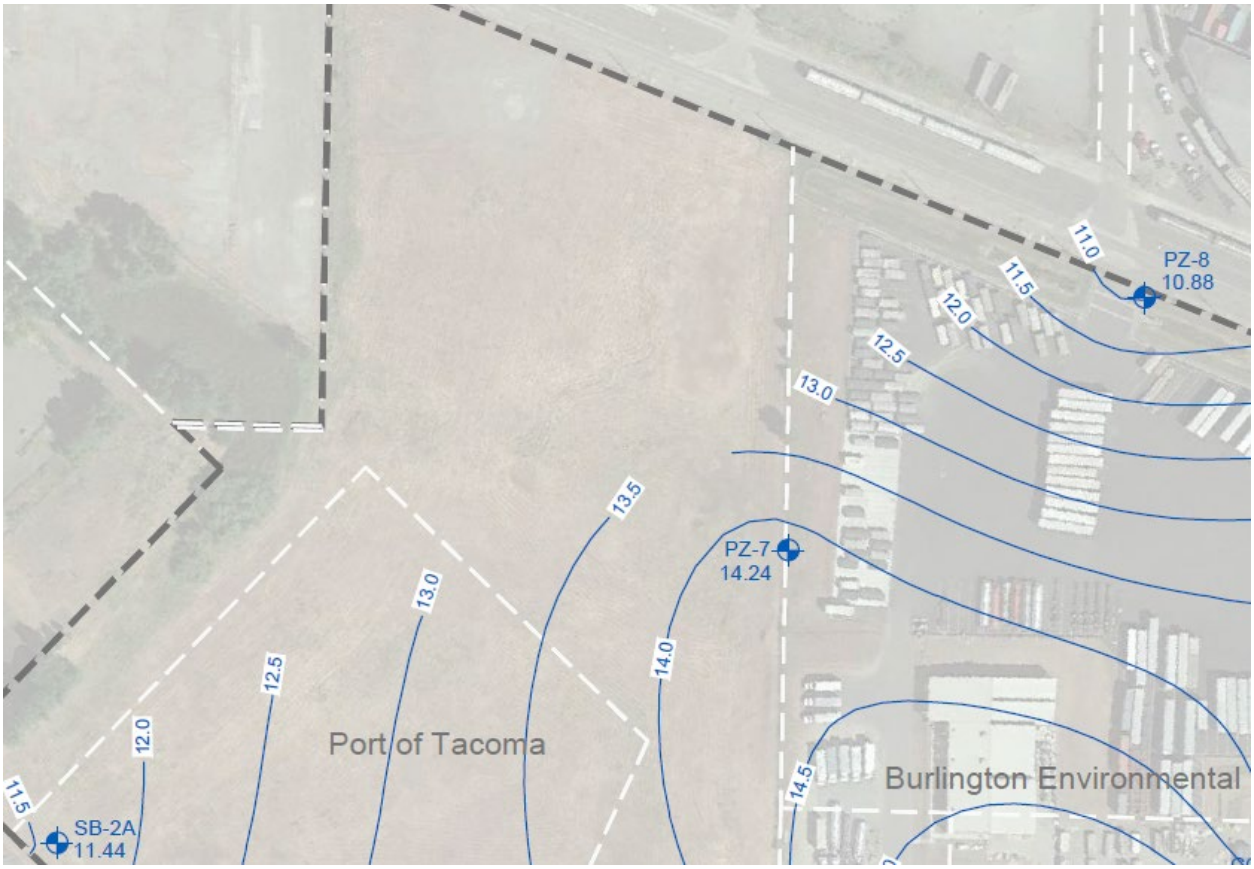
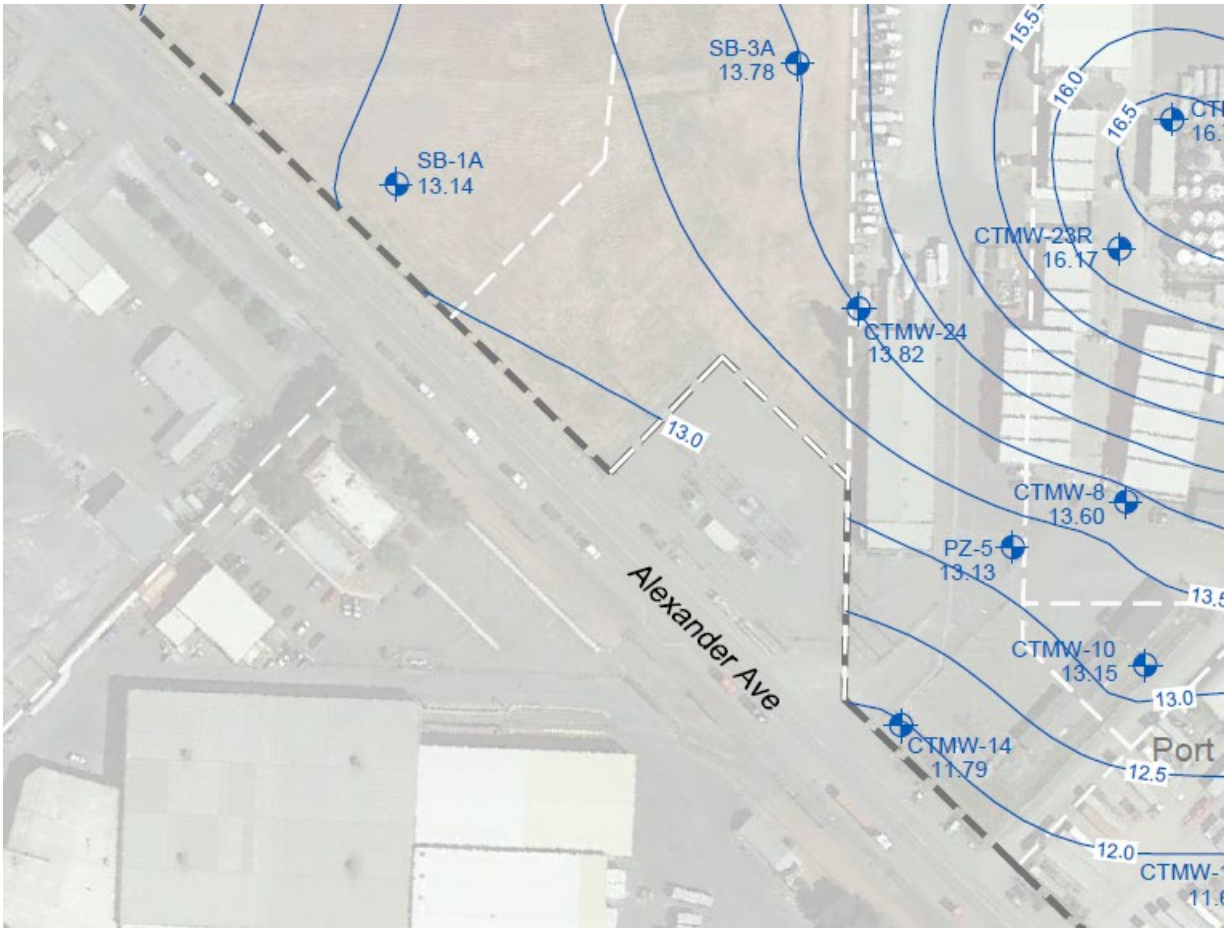
[1] Trihydro, 2021 *Annual Groundwater Monitoring Report, Emerald Services, Inc*., April 14, 2022.

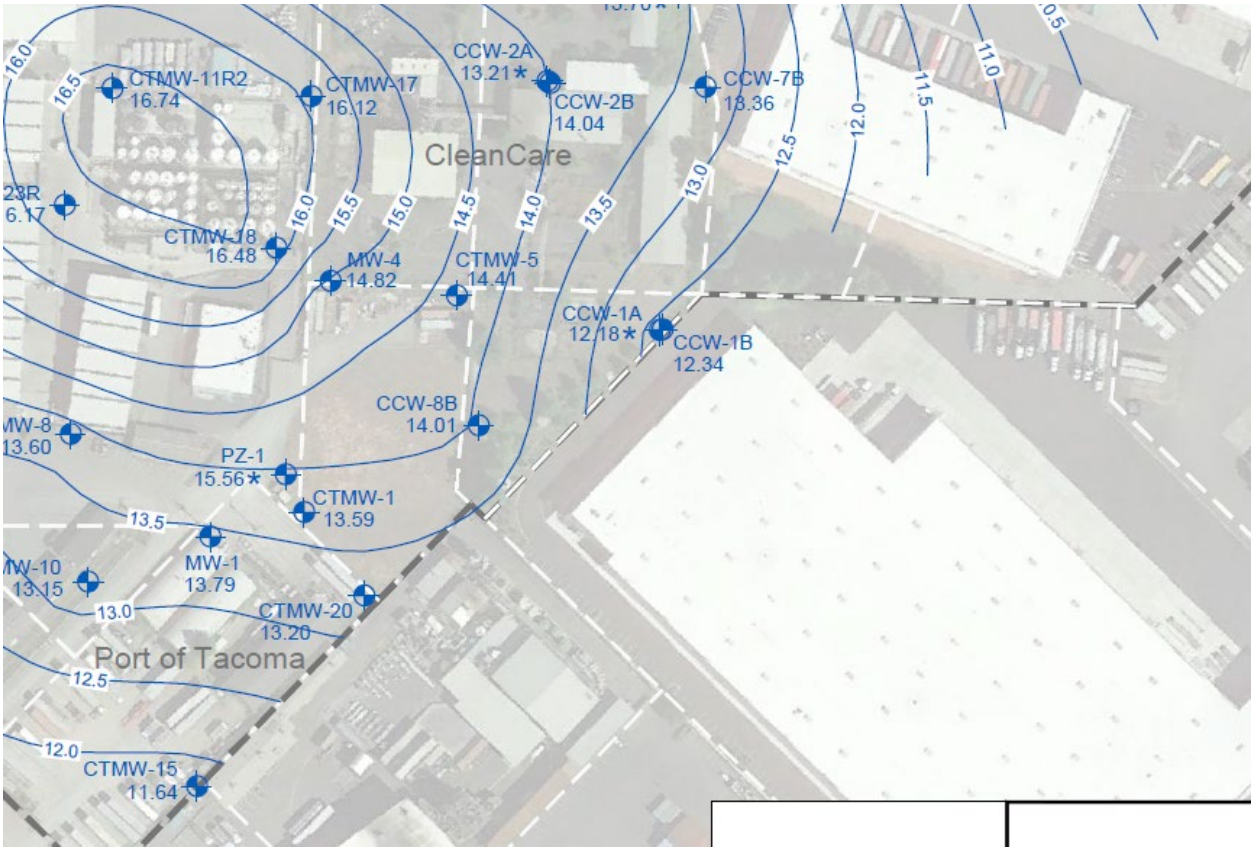
[2] Within the Tacoma tide flats, the terminology for this aquifer can be confusing because it has been variously referred to as the "intermediate" and "deep" aquifer. GeoEngineers (*Final Report, 721 East Alexander Avenue and Adjacent Properties Data Summary, Tacoma, Washington*, January 25, 2010) describes the intermediate aquifer as being encountered below the upper silt aquitard to depths of 200 feet below ground surface (bgs) and it is subject to tidal influence by the Blair and Hylebos Waterways and Commencement Bay. There is also a deeper regional aquifer system that consists of a sequence of confined aquifers and aquitards at depths below 200 feet bgs.



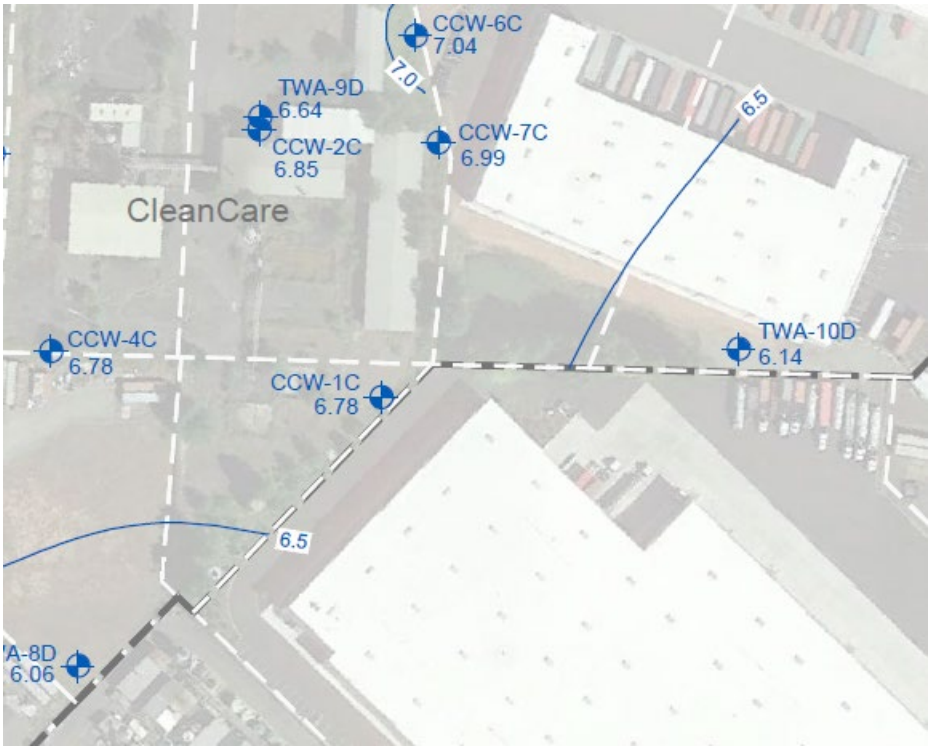
(From Figure 3, 1st quarter 2022 groundwater monitoring report)



(From Figure 3, 1st quarter 2022 groundwater monitoring report)



(From Figure 3, 1st quarter 2022 groundwater monitoring report)



(From Figure 4, 1st quarter 2022 groundwater monitoring report)

4. "NJ" Data Validation Qualifier: Based on both internal discussions and consultation with Manchester Environmental Laboratory's quality assurance (QA) office and data validation chemist, Ecology concludes that the "NJ" qualifier in the results is not appropriate from the results where the "x" flag was the only reason noted. The data validation summary reports for both quarters assigned "NJ" qualifiers (tentatively identified and estimated) for results that the laboratory had flagged with an "x" ("the sample chromatographic pattern does not resemble the fuel standard used for quantitation"). This type of flag is a comment practice for a TPH-D result when the sample pattern does not match the standard and the result is reported as diesel range organics. The data could be qualified as estimated if there were other QA parameters out of limits, but that does not appear to be the case. **Therefore, please adjust the data reports to remove the "NJ" qualifier from the results where the "x" flag was the only reason noted.**

5. Additional Characterization – Former Potter Property: In addition to the new well and associated soil samples mentioned above, additional soil and soil vapor sampling are needed to further investigate the elevated sub-slab concentrations that were observed beneath Quonset Hut 2 and the Shop Building on the Former Potter Property (Figure 1):

    a. Quonset Hut 2, location TWA-SV-35: Soil samples for total petroleum hydrocarbons, gasoline, diesel, and oil range organics (TPH-G, -D, and –O); volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs, including carcinogenic PAHs, cPAHs); polychlorinated biphenyls (PCBs), and metals are needed to investigate the source of the elevated TPH sub-slab concentrations and any residual contamination.

    b. Shop Building, location TWA-SV-41: Soil samples for TPH, VOCs, SVOCs, PCBs, and metals are needed to investigate the source of the elevated TPH, PCE, and TCE sub-slab concentrations and any residual contamination. Additional sub-slab sample locations for TPH-APH and VOCs are also needed near the property line with Emerald Services to determine if there is a potential for elevated TPH and chlorinated VOCs soil vapor concentrations to be present beneath the adjacent Emerald Services building. If concentrations above applicable screening levels are found then sub-slab sampling beneath the Emerald Services Building will also be necessary.

    c. Ecology concurs with the Port of Tacoma's intent to collect additional soil vapor samples and indoor air samples from the Potter Property buildings (Port of Tacoma, 2022).

Please provide Ecology with a work plan for additional soil and soil vapor sampling and well installation within 60 days of the date of this letter. Ecology also requests that you provide your proposed indoor air sample locations for the Potter Property buildings. Please also let us know if you would like to schedule a meeting to discuss potential monitoring well locations.

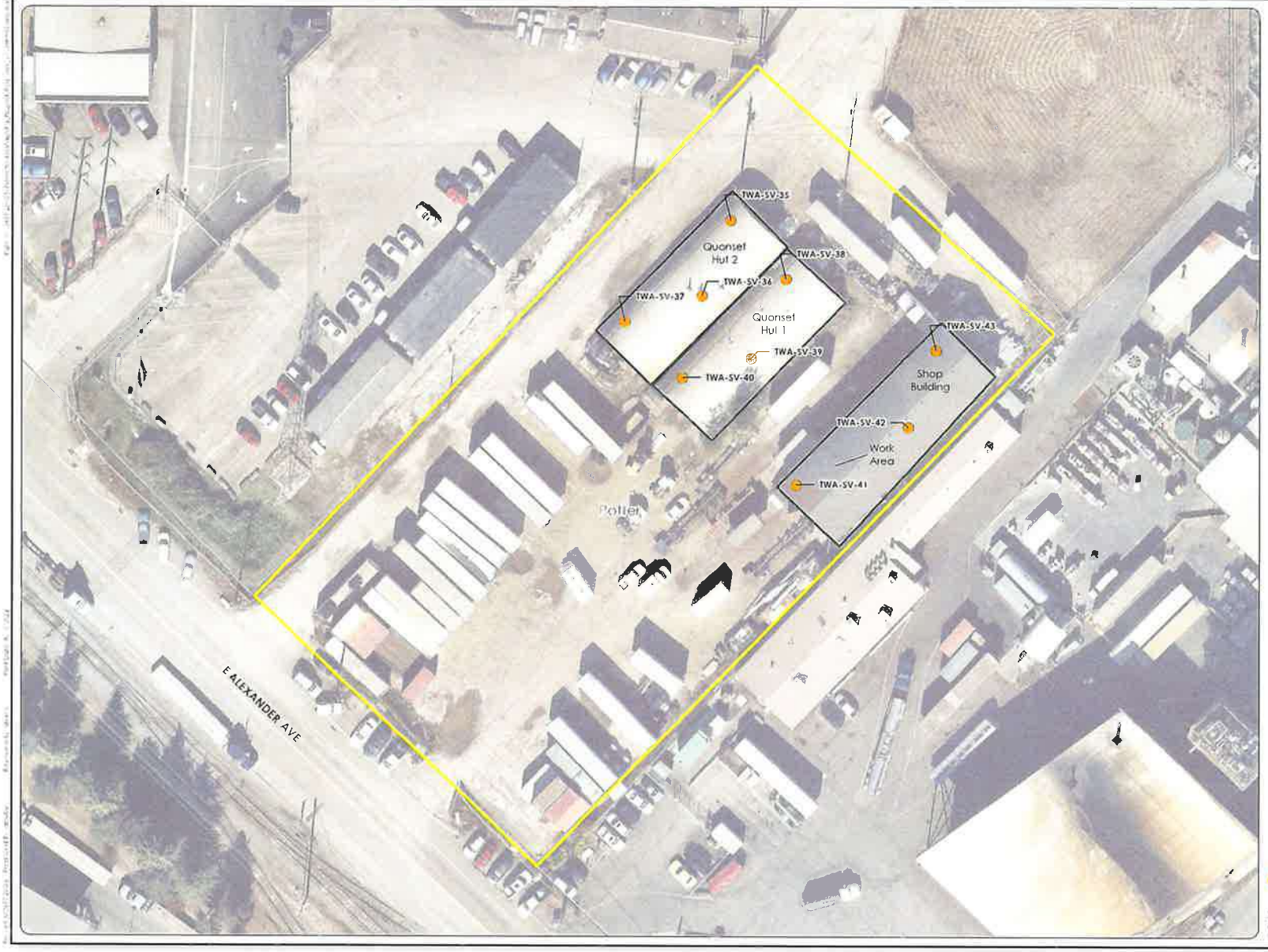


Figure
Property Features and Vapor Sample Locations

Port of Tacoma
Former Potter Property
1801 E Alexander Avenue
Tacoma, Washington

Legend

- Sub-Slab Vapor Pin
- Building Footprint
- Property Parcel (Floyd Snider, 2006)
- Tax Parcel (Floyd Snider, 2006)

NOTE:
All features are approximate.
DOF = Dalton Olmsted & Fuglevand.
PSC = Philip Services Corporation.

0 40 80
Feet

Source:
Aerial photograph obtained from ArcGIS Online.
Tax parcels obtained from Port of Tacoma.

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