

# ***Lower Duwamish Waterway Group***

***City of Seattle / King County / The Boeing Company***

## **MEMORANDUM**

To: Sandra Matthews, Washington State Department of Ecology

Cc: Elly Hale, U.S. EPA; Nasrin, Erdelyi, U.S. EPA

From: Lower Duwamish Waterway Group Members

Subject: Comments on the Snopac Property In-water Feasibility Study Report and Draft Uplands Cleanup Action Plan

Date: April 24, 2025

The Lower Duwamish Waterway Group (LDWG) members appreciate the opportunity to comment on the in-water Feasibility Study Report (FS) and Draft Uplands Cleanup Action Plan (DCAP) associated with the Snopac Property cleanup site located at 5055 East Marginal Way South on the Lower Duwamish Waterway at the head of Slip 1 (Cleanup Site ID 12463). The cleanup is being conducted under Model Toxics Control Act (MTCA) Agreed Order DE 16300 with the Washington Department of Ecology (Ecology).

LDWG is responsible for developing the remedial design for the lower reach of the Lower Duwamish Waterway (LDW) Superfund site and both Slip 1 and the Snopac site are located within the lower reach of the LDW. It appears Ecology plans to select an in-water and shoreline remedy for this site that is compatible with the LDW Record of Decision (ROD).

With respect to both documents, LDWG has the following comments:

1. It is unclear in both the FS and DCAP who would design and implement Ecology's in-water plan. This site raises questions about the interplay and coordination between EPA's in-water sediment cleanup plan (LDW ROD), Ecology's upland source control work and cleanup of the MTCA site along the shoreline of LDW. LDWG requests the chance to discuss this matter with EPA and Ecology.

**Response: Ecology will coordinate a meeting between LDWG and the EPA to discuss this.**

2. The bank containing sandblast grit clearly extends beneath the overwater structure associated with GSA and Federal CTR S. There is no characterization of the under-pier area, no discussion of whether the historic grit dumping might have extended past the property line and/or affected the bank/sediments under the structure. What is the plan for investigating this under-pier area for either grit disposal or transport?

### **Response:**

The bank containing smelter slag-derived sandblast grit has already been thoroughly investigated and does not extend under the overwater structure associated with GSA and Federal CTR S. As a result, there are no plans for working in the under-pier area on the north side of the property.

#### **Uplands area:**

- Arsenic and metals concentrations in northernmost soil boring B-8 soil were below the PCULs ([Figure 10 and Table 2 of the RI<sup>1</sup>](#)).
- Removal of SBG-containing fill was confirmed both by visual observations in the interim action excavation and by collecting excavation sidewall and base samples following excavation south of B-8. Sidewall and base samples, near the northern site boundary, had metals concentrations below the upland remediation levels, indicating that SBG-containing fill has been removed and SBG impacts do not extend north to the property boundary ([Table 2A and Figure 2 of Interim Action Report; Aspect 2021<sup>2</sup>](#)).

#### **In-water area:**

In-water sediment samples similarly show no impact from SBG and elevated arsenic and metals concentrations along the northern site boundary.

- Sediment sample SSA-10, located at the northern boundary of the shoreface, did not exceed metals remedial action levels ([Figure 4 of the Sediment FS<sup>3</sup>](#)).
- Sediment sample locations 41 and 45 also did not exceed arsenic and metals RALs ([Figure 4 of the Sediment FS<sup>3</sup>](#)).

The RI data demonstrates that arsenic and metals concentrations in sediment decrease with distance away from the SBG-containing fill areas, and there is no impact of SBG-containing fill beyond the site boundary.

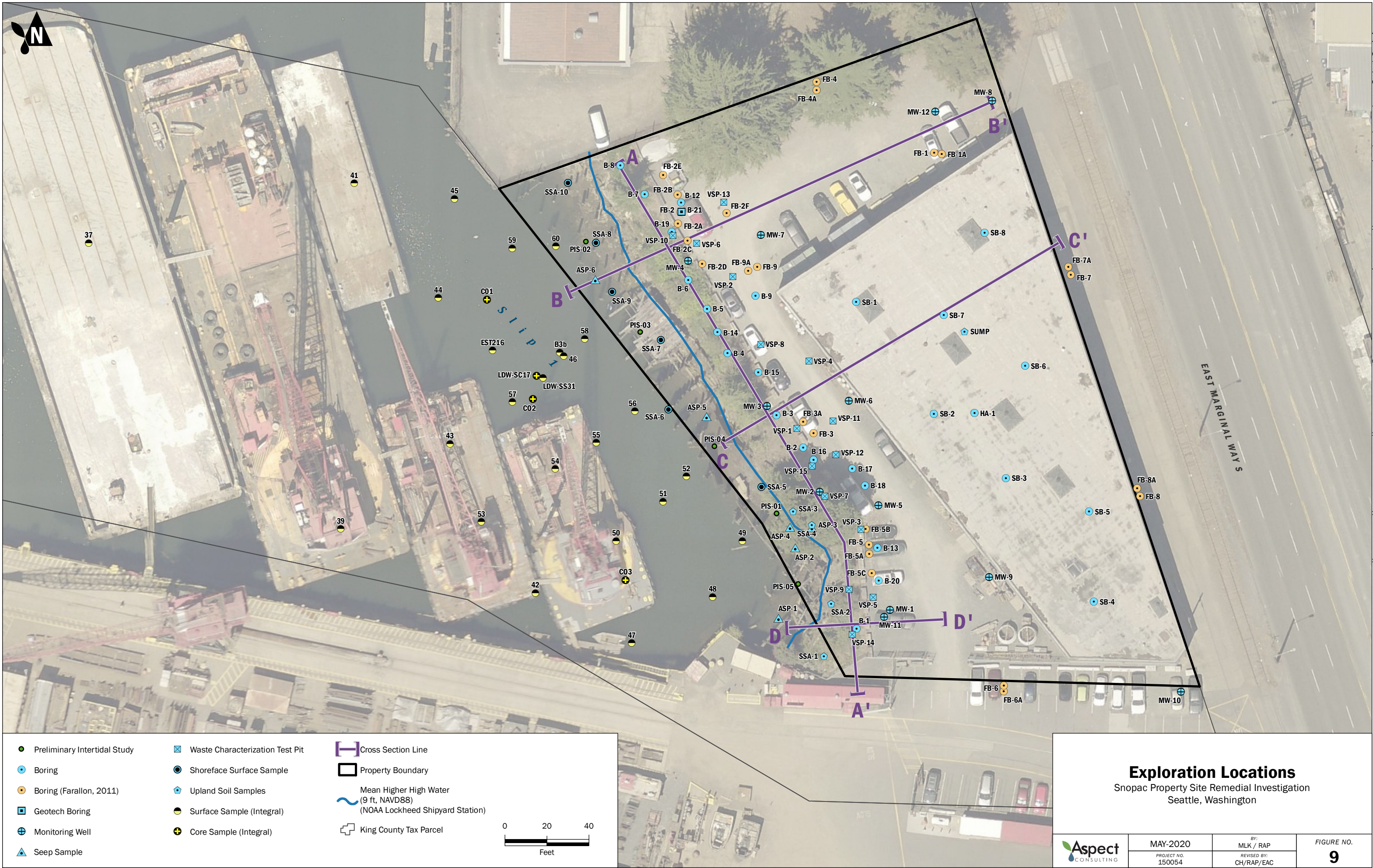
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<sup>1</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/99568>

<sup>2</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/110651>

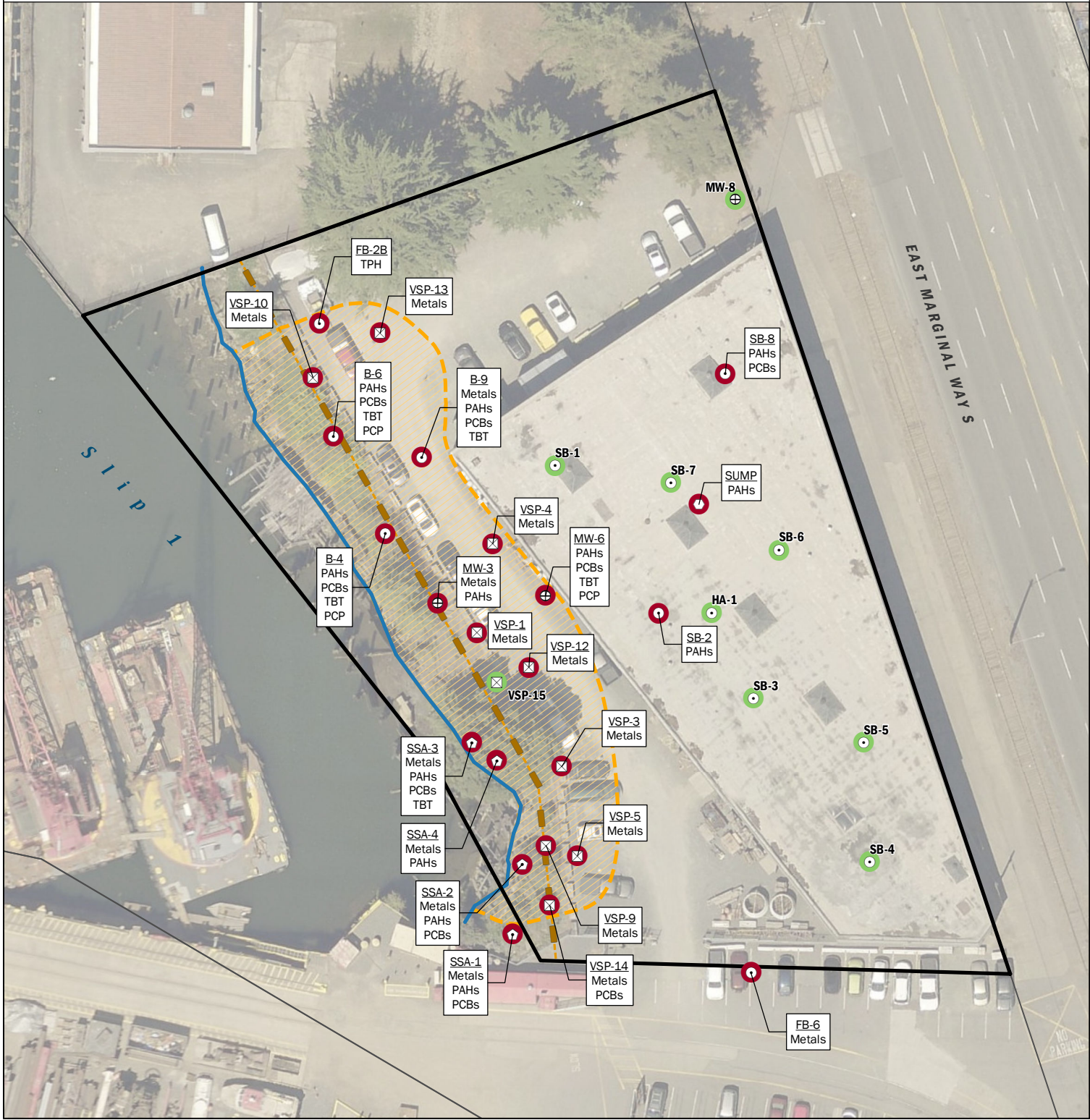
<sup>3</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/151068>



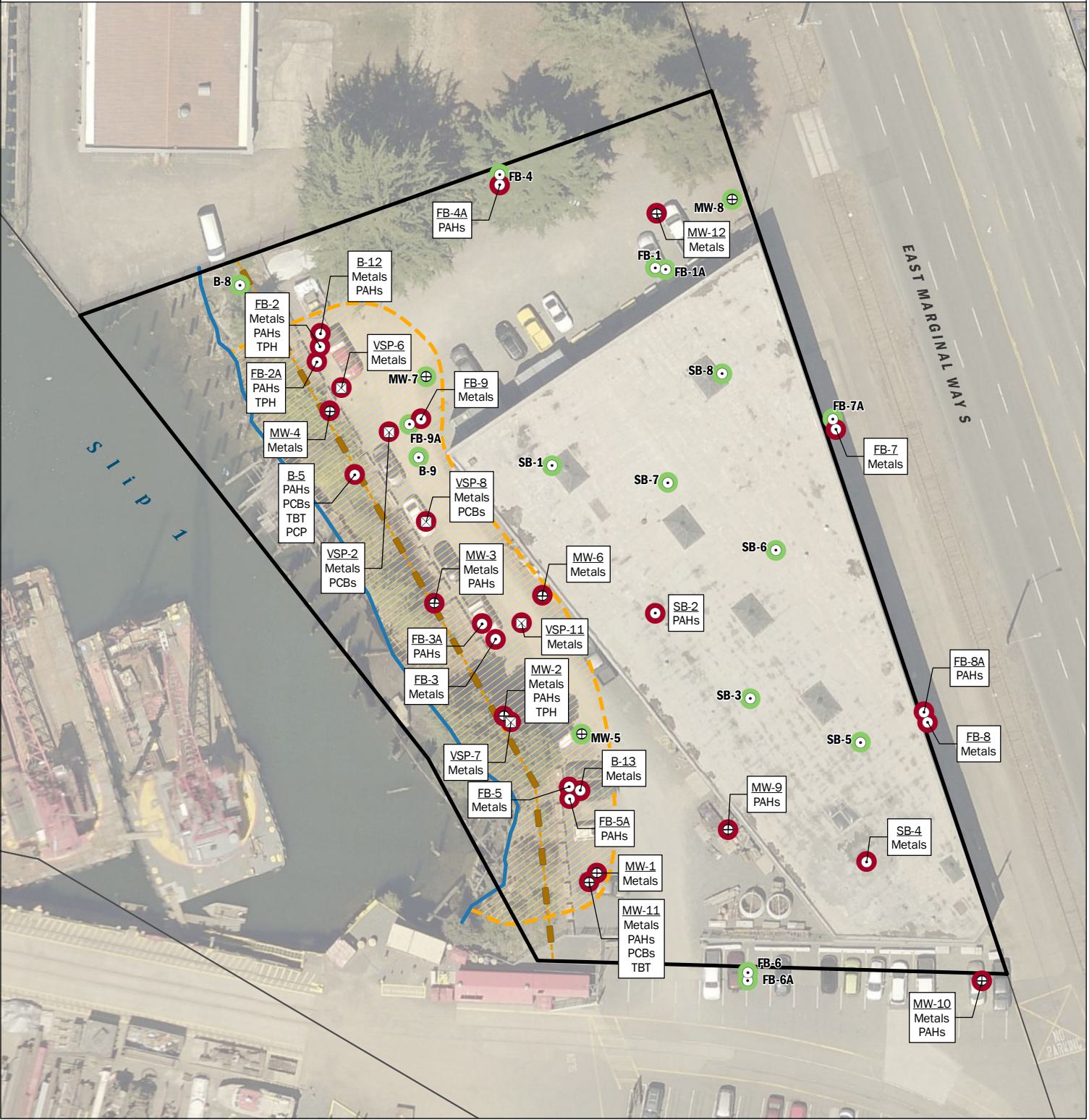




VADOSE SOIL EXCEEDANCE SUMMARY



SATURATED SOIL EXCEEDANCE SUMMARY



Analyte Groups with Exceedances include:

CPAHs  
PCBs  
TBT  
Metals (including Arsenic, Copper, Lead, Mercury, Zinc)  
PCP  
TPH

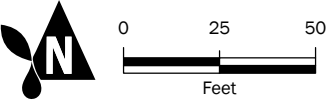
Notes: Exceedances represent detected concentration greater than the most stringent media-specific PCUL (Tables 5 and 6). Only analytes or analyte groups which have exceedances are labeled. Visible sandblast grit was found at locations B-4, B-5, B-6, MW-6, and VSP-12 to VSP-14.

Exploration Type

- Upland Soil Samples
- Waste Characterization Test Pit
- Boring
- Monitoring Well
- Sump
- Property Boundary
- King County Tax Parcel

Analyte Group Exceedances

- One or More Analyte Groups Exceed
- No Exceedances
- Mean Higher High Water (9 ft, NAVD88) (NOAA Lockhead Shipyard Station)
- Proposed Shoring Alignment
- Inferred Extent of Uplands Sandblast Grit-Containing Fill



Vadose and Saturated Soil Exceedance Summary

Snopac Property Site Remedial Investigation  
Seattle, Washington

Aspect CONSULTING

MAY-2020  
PROJECT NO.  
150054

BY:  
EAC / CH  
REVISED BY:  
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FIGURE NO.  
10





**Table 2A. Analytical Results for In-Place Vadose Soil (Final Verification Samples)**

Project No. 150054, Snopac, Seattle, Washington

Location		SW-I-3	SW-J-3	SW-K-2	SW-K-3	SW-L-2	SW-L-4	SW-M-1	SW-M-3	SW-N-5
Date		12/31/2020	01/15/2021	12/31/2020	01/15/2021	12/31/2020	01/22/2021	12/31/2020	01/22/2021	01/22/2021
Sample		SW-I-3-12	SW-J-3-13	SW-K-2-12	SW-K-3-13	SW-L-2-12	SW-L-4-13	SW-M-1-12	SW-M-3-14	SW-N-5-13
Elevation (NAVD88)		12	13	12	13	12	13	12	14	13
Analyte	Vadose Soil Remediation Level									
<b>Metals</b>										
Arsenic	7.3	2.02	2.45	3.14	3.02	2.48	1.6	4.12	1.29	1.69
Copper	36	6.07	8.16	23.3	7.06	20.7	6.36	14.5	7.13	6.51
Lead	50	1.26	1.64	13.4	2.46	12.5	1.16	21.8	1.98	1.63
Mercury	0.07	< 0.01 U	0.088	0.061	0.017	0.033	< 0.01 U	0.025	< 0.01 U	< 0.01 U
Zinc	86	14.7	17	57.2	27.9	37.9	65	31.9	14	15.7
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>										
1-Methylnaphthalene	34	< 0.002 U	< 0.002 U	0.056	0.0021	0.073	< 0.002 U	0.011	< 0.002 U	< 0.002 U
2-Methylnaphthalene	0.67	< 0.002 U	< 0.002 U	0.071 J	0.0024	0.095 J	< 0.002 U	0.015 J	< 0.002 U	< 0.002 U
Acenaphthene	0.5	< 0.002 U	< 0.002 U	< 0.01 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U
Acenaphthylene	1.3	< 0.002 U	< 0.002 U	< 0.01 U	< 0.002 U	0.0053	< 0.002 U	0.0027	< 0.002 U	< 0.002 U
Anthracene	0.96	< 0.002 U	< 0.002 U	0.015	< 0.002 U	0.0096	< 0.002 U	0.0066	< 0.002 U	< 0.002 U
Fluoranthene	1.7	< 0.002 U	0.0043	0.085	0.0029	0.041	< 0.002 U	0.036	< 0.002 U	< 0.002 U
Fluorene	0.54	< 0.002 U	< 0.002 U	< 0.01 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U
Naphthalene	0.056	< 0.002 U	< 0.002 U	0.093	< 0.002 U	0.076	< 0.002 U	0.013	< 0.002 U	< 0.002 U
Phenanthrene	1.5	< 0.002 U	0.0029	0.06	0.0037	0.045	< 0.002 U	0.02	< 0.002 U	< 0.002 U
Pyrene	2.6	< 0.002 U	0.0042	0.074	0.003	0.059	< 0.002 U	0.05	< 0.002 U	< 0.002 U
Total HPAHs	12	< 0.002 UJ	0.0194	0.607 J	0.0194	0.328 J	< 0.002 U	0.3877 J	< 0.002 U	< 0.002 U
Total LPAHs	5.2	< 0.002 U	0.0029	0.168	0.0037	0.1359	< 0.002 U	0.0423	< 0.002 U	< 0.002 U
Total cPAHs TEQ <sup>1</sup>	0.074	< 0.00302 U	0.0037	0.070 J	0.0041	0.046 J	< 0.00302 U	0.059 J	< 0.00302 U	< 0.00302 U
<b>Semivolatile Organic Compounds (SVOCs)</b>										
Pentachlorophenol <sup>2</sup>	0.05	--	--	--	--	< 0.05 U	--	< 0.05 U	--	--
<b>Polychlorinated Biphenyls (PCBs)</b>										
Total PCBs Aroclors <sup>3</sup>	0.002	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.0024	< 0.002 U	0.0025	< 0.002 U	< 0.002 U

**Notes:**

**Bold** - detected

**Blue Shaded** - Detected result exceeded remediation level

IAWP - Interim Action Work Plan (Aspect, 2020)

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UU - Analyte not detected and the Reporting Limit (RL) is an estimate

HPAH = high-molecular weight PAH; LPAH = low-molecular weight PAH

All concentrations are in

Remediation levels are the most-stringent Preliminary Cleanup Levels (PCLs) from the Preliminary Cleanup Levels Workbook for the Lower Duwamish Waterway (Ecology, 2020) or established empirically and approved by Ecology. A combined TPH remediation level is based on the generic direct contact cleanup level of 1,500 mg/kg. (Ecology, 2017).

1. Carcinogenic PAHs total toxic equivalent concentration of benzo(a)pyrene (total cPAH s TEQ) calculated in accordance with WAC 173-340-708(8)(e).

2. Soil samples collected in the one location that Pentachlorophenol was detected in groundwater in accordance with IAWP. An analytical reporting limit of 0.05 mg/kg is achievable for PCP in soil. In accordance with WAC 173-340-700(6)(d), the soil remediation level is established at this practical quantitation limit.

3. An analytical reporting limit of 0.002 mg/kg is achievable by the laboratory for PCB Aroclors in soil. In accordance with WAC 173-340-700(6)(d), the soil remediation level is established at this practical quantitation limit.

4. Location SW-AA-2 was collected after overexcavation of Sample SW-A-2 to achieve compliance with arsenic remediation level (Figure 1). SW-A-2 results are in Table 2B.

5. Location SW-E-2.5 was collected after overexcavation of Sample SW-E-2 to achieve compliance with arsenic remediation level (Figure 1). SW-E-2 results are in Table 2B.

Aspect Consulting

9/16/2021

\\SEAFPS\Deliverables\150054 Snopac-Manson\Deliverables\2021 08\_Interim Action Report\Draft Final\_2\Tables\T-2 Vadose Zone Analytical

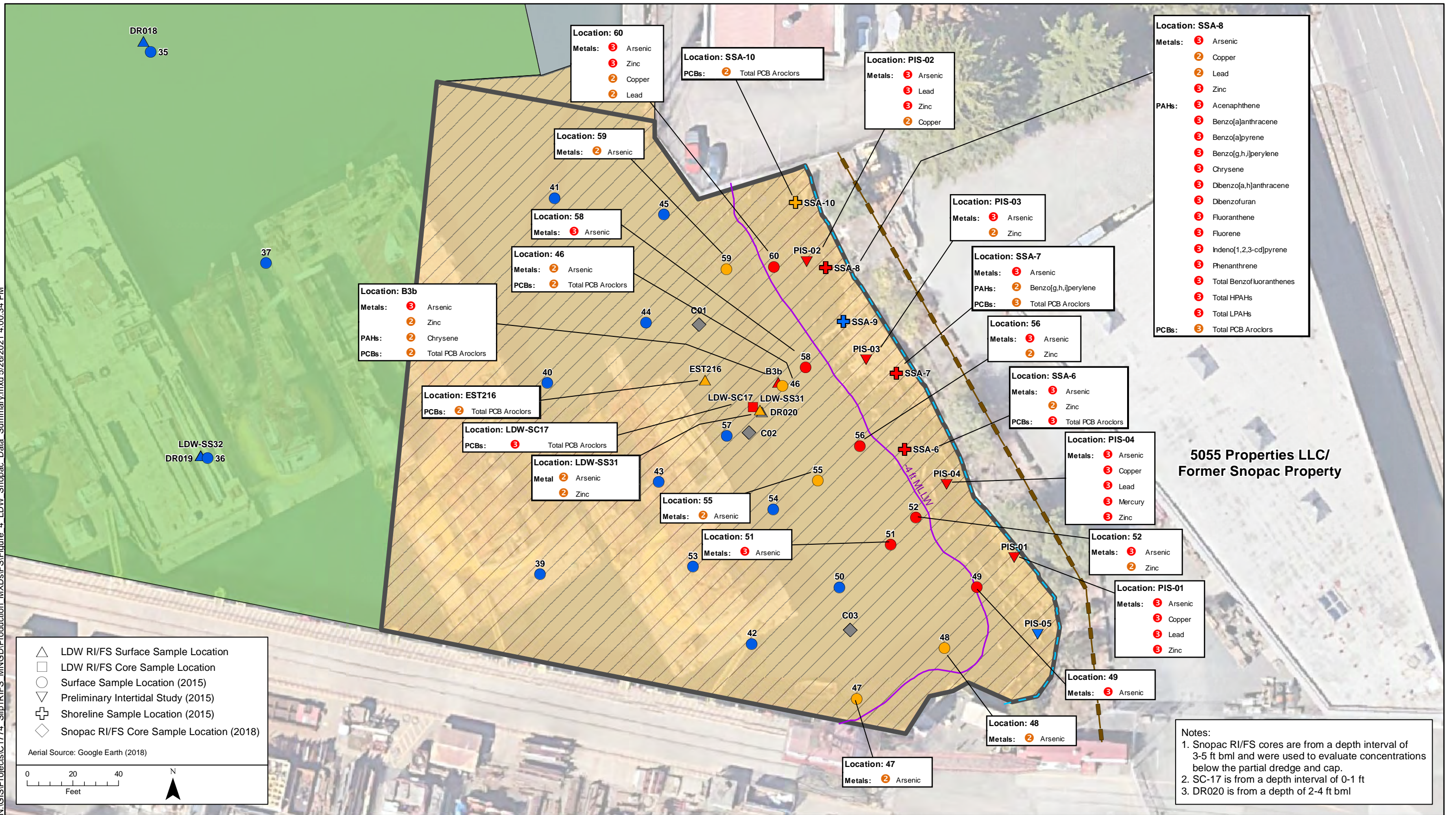
**Table 2A**

Interim Action Report

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**Figure 4.**  
LDW RI/FS and Snopac RI/FS Data Summary  
Sediment Feasibility Study  
Snopac Property