Contaminated Media Management Plan

WSDOT SR 509 STAGE 2
24TH AVENUE SOUTH TO SOUTH 188TH STREET – NEW EXPRESSWAY PROJECT
CONTRACT NO. 9905
KING COUNTY, WASHINGTON

PREPARED FOR: ATKINSON CONSTRUCTION
PREPARED BY: PBS-NASRIN BASTAMI/TOM MERGY

PBS Project Number 40757.028
Revision Date: February 28, 2025

1. Purpose

This Contaminated Media Management Plan (CMMP) is a follow-up to the project sampling and analysis plan (SAP) dated October 31, 2024, and is an addendum to the project Soil and Groundwater Management Plan (SGMP). Sampling at the project site has encountered elevated concentrations of arsenic and/or lead in soils at four (4) locations (see attached figures) that will require remediation. Those locations are each being considered separate Decision Units (DU2 through DU5) for the purposes of contaminated soil characterization and management. Additional soil samples will be collected at each of these DUs to guide remediation. Soils will be remediated by a method selected by joint agreement between the Contractor and WSDOT at the locations and depths in DU2 through DU5 with elevated concentrations of lead and/or arsenic. Confirmation soil samples will be collected following remediation as a performance monitoring measure. PBS notes that the overall Project Area is considered a single decision unit (DU1).

2. Background

The project builds the remaining two miles of new SR 509 Expressway from Burien to Kent, reconfiguring SR 509 interchanges at South 188th and South 160th Streets, adding a southbound auxiliary lane on I-5 between SR 516 and South 272nd Street, and improving service between industrial districts by allowing general purpose traffic and trucks to bypass I-5, SR 99 and local streets. When finished, SR 509 will be a key component of the Seattle and south King County transportation network.

According to the Washington State Department of Ecology (Ecology), the Asarco Company operated a copper smelter in the Point Defiance area of Tacoma for almost 100 years. Air pollution from the smelter settled on the surface soils over more than 1,000 square miles of the Puget Sound basin. Arsenic, lead, and other heavy metals are still in the soil because of this pollution. Concentrations of arsenic are known to exist within the aerial plume, which includes the project site, above the Model Toxics Control Act (MTCA) Method A cleanup level of 20 milligrams per kilogram (mg/kg) in soil at depths of 0 to 12 inches below ground surface[1]

This document amends the WSDOT SR509 Stage 2 Project Soil and Groundwater Management Plan (February 2024) for soil management procedures to be consistent with the applicable Washington State

[1] https://apps.ecology.wa.gov/dirtalert/

Department of Ecology Tacoma Smelter Plume Model Remedies Guidance, Publication Number 19-09-101, July 2019.

3. Soil Sampling and Testing

3.1 Sample Locations

Supplemental samples will be obtained from each planned sampling location laid out in the attached figures (see Figures 1 through 5). Supplemental sampling will be carried out using hand tools. At locations with vegetation/turf, hardscape (asphalt, concrete, etc.), or fill soils (gravel road base and built-up structural fill soils associated with roads), samples should be obtained at a depth of 3 to 6 inches below the depth at which native soils are first encountered. For example, supplemental samples should be collected at DU2-1, DU2-2, and DU2-3. In addition, at 25% of all other sample locations, an additional soil sample should be obtained at a depth of 6 to 12 inches below ground surface (i.e., 6 inches below the first soil sample).

At the initial proposed location of Bridge 1 (B1H8, DU4), additional soil samples could not be collected beyond a depth of 12 to 18 inches due to excessive groundwater encountered in the borehole. PBS notes that as part of future development modifications, the location of Bridge 1 was relocated further north of the initial remedial action area (DU4) to a region where confirmation soil samples did not detect arsenic or lead concentrations exceeding MTCA Method A cleanup standards. Furthermore, the proposed remediation activities at DU4 is limited to vegetation clearing followed by replanting at the site.

Additionally, the initial remedial investigation and confirmation soil sampling at MISC-4 (DU2) could not be extended further to the east and west due to proximity of the freeway and challenging terrain, respectively. At C1H2 (DU3), sampling was constrained by the steep slope to the south, and at Bridge 4 (DU5), it was limited by dense vegetation and wetlands to the east and southeast.

3.2 Sampling Personnel

Trained environmental personnel or Atkinson's Environmental Consultant (PBS) will perform soil sampling.

3.3 Sample Collection

The following sections describe the procedures for soil sampling. Soil samples will be collected by filling laboratory-provided containers for specific analysis. For the purposes of total arsenic and lead analysis, soil will be collected in a single 4-oz jar.

Sample personnel will wear new disposable nitrile gloves for collection of each sample to protect against cross-contamination between samples. All non-disposable components of the sampling equipment (e.g., split spoon, hand augers, shovels, spoons, or other equipment) used to collect samples that contact the soil will be decontaminated prior to, and in between, collection of individual samples as follows:

- Scrub with potable water containing Alconox/Liquinox detergent
- Potable water rinse/deionized (DI) water rinse

Each soil sample will be labeled using a Unique Sample ID:

- *Location (Sample boring #)_Depth_Time_Date*

Soil samples intended for metals analysis will be packed with care to avoid breakage in containers (typically coolers) under chain-of-custody documentation for transport to the analytical laboratory. Chain-of-custody documents will be provided by the Environmental Consultant, and relevant field information such as sample collection times will be filled in by the sampling personnel. Additionally, the sampling personnel will sign and date the chain-of-custody document when it is transferred to a parcel carrier or the project laboratory and send a copy to the Environmental Consultant.

3.4 Sampling Analysis Procedures

Samples will be analyzed for the following:

- Total Metals (arsenic and lead) by EPA Method 6020A

4. Soil Remediation

The Guidance presents several model remedies that could be employed. Selection of the appropriate model remedy will be dependent upon the results of soil sampling as described in Section 3. It is possible that different model remedies will be selected for different DUs based on sample results, field conditions, and other project considerations. It is expected that one or more of the following model remedies will be applied at the Site:

- **Excavate & Remove:** Excavate areas with elevated concentrations of contaminants to an appropriate depth (6" minimum, varies depending on sample results). Contaminated soil handling and disposal should be managed in accordance with the project SGMP. Requires confirmation samples after remediation effort as performance monitoring. This option may be more expensive than other remediation alternatives, but is most likely to achieve permanent compliance efficiently. This model remedy can be applied to soils of any concentration and is considered permanent and does not require ongoing monitoring.

- **Mix in Place:** Mix contaminated soils in place with deeper, clean soils or imported clean soils (from offsite or elsewhere on the project site) to achieve average concentrations below relevant cleanup levels. Requires confirmation samples after remediation effort as performance monitoring. May entail multiple rounds of mixing and sampling to achieve compliance. This model remedy may be applied to soils with average arsenic concentrations less than 40 parts per million (ppm) and average lead concentrations less than 500 ppm. It is also considered permanent and does not require ongoing monitoring.

- **Cap in Place:** May also consolidate and cap. This model remedy can be applied to soils with any concentrations of lead and arsenic but is considered non-permanent, and requires ongoing institutional control (recorded environmental covenant) and provision for long term monitoring and maintenance.

- At areas where proposed removal action is limited to clearing and grubbing vegetation for replanting purposes, the overgrown vegetation and trees should be considered as organic material for disposal purposes. However, the forest duff and soil associated with in-ground roots should be further assessed to determine appropriate disposal requirements.

5. Confirmation Sampling

The proposed remediation alternatives will require confirmation sampling. Following completion of the selected model remedy, samples will be acquired by the method described in Section 3 of this document in DU2 through DU5 as depicted in Figures 1 through 9 and Figures 2A, 2B, 7A, and 8A. If sample results indicate that those decision units remain "elevated" per the Guidance, additional remediation efforts may need to be applied in some locations, which would then need to be re-sampled.

6. Schedule and Reporting

The analytical results from samples collected will be reviewed by the Environmental Consultant and compared to action levels provided in the Guidance and MTCA regulations (Washington Administrative Code 173-340). The laboratory analyses results will be available within about 7 days after sample collection. PBS will await those results, compiling all data in a memo summarizing results and including the laboratory report chain of custody documentation, sample location plan(s), and conclusions. The results will be used to support regulatory reporting, decision unit characterization, and waste profiling for disposal.

Please feel free to contact me at 206.233.9639 or Nasrin.Bastami@PBSUSA.com with any questions.

Prepared by: Nasrin Bastami – Environmental Practice Lead (PBS)

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Reviewed by: Melanie Young, PE – Senior Environmental Engineer (PBS)
Kevin Hood - Senior Project Manager (PBS)

Attachments

Figure 1: SR 509 Stage II - Map Index (Area 1 through 4)
Figure 2 through 4: SR 509 State II – Lead Area 1 through Lead Area 4
Figure 5 through 9: SR 509 State II – Arsenic Area 1 through Arsenic Area 4
Figure 2A: Decision Unit 2 Remediation Plan (MISCH4)
Figure 2B: Decision Unit 3 Remediation Plan (C1-H2)
Figure 7A: Decision Unit 4 Remediation Plan (B1H8)
Figure 8A: Decision Unit 5 Remediation Plan (B4H6)

Table 1 - Soil Analytical Results - Arsenic & Lead

Map Index

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 1

Project Area

1 INCH = 3,500 FEET

0 3,500 7,000 Feet

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Lead - Area 1

SR 509

Date: January 2025 | Project: 40757.028

Figure: 2

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500

Project Area

Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Lead - Area 2

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 3

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

DU = Decision Unit

---

1 INCH = 500 FEET

0 500 1,000 Feet

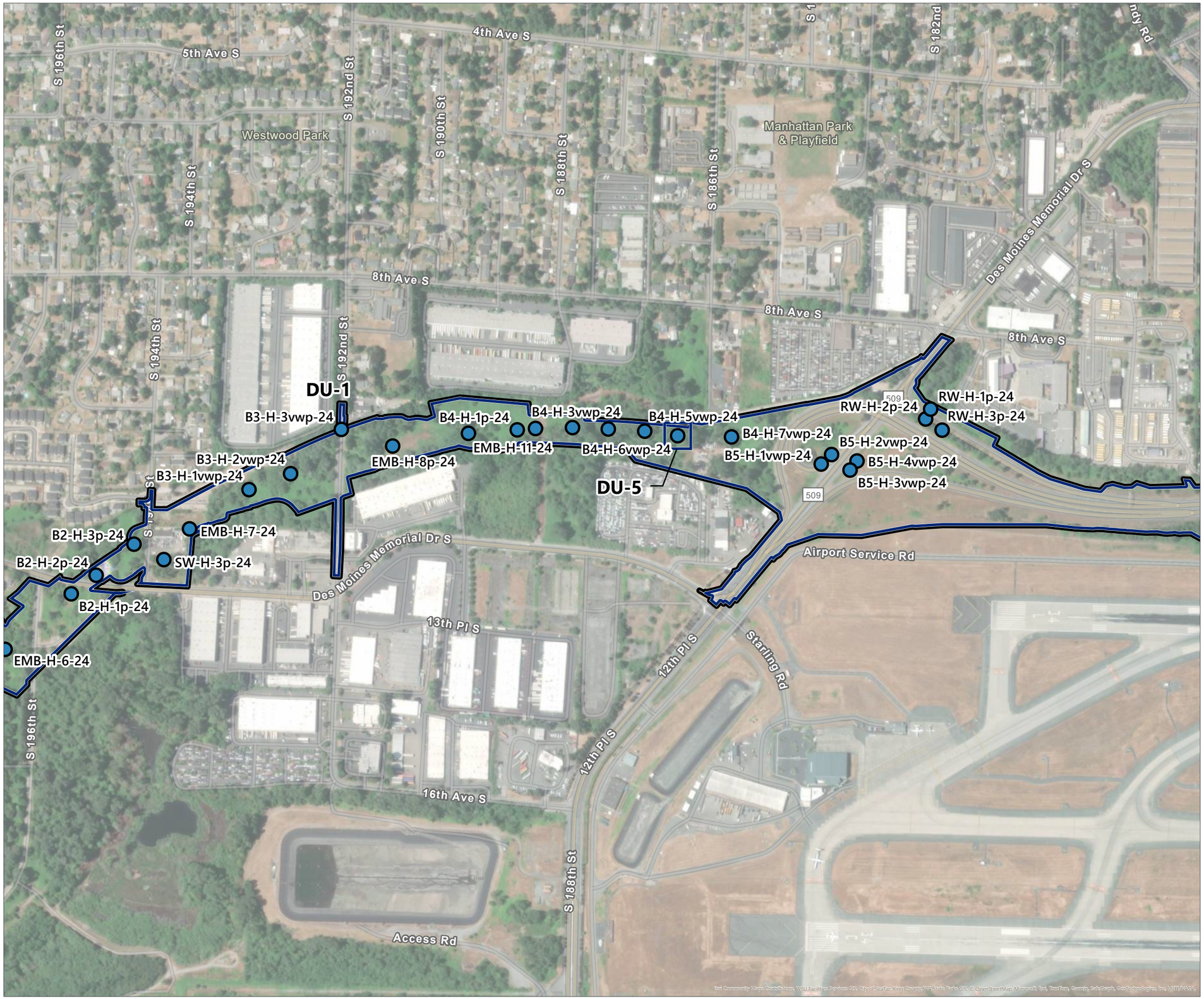
PBS

Lead - Area 3

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 4



DU = Decision Unit

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

PBS

NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet | \\apexcos.local\PBS_L\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\SAP Pb & AS - Stage 2 - 2024\GIS\40757.028_SR509_Stg2\40757.028_SR509_Stg2.aprx | 1/15/2025 4:35 PM

Lead - Area 4

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 5

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Arsenic - Area 1

SR 509

Date: January 2025 | Project: 40757.028

Figure: 6

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

PBS

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NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet | \\apexcos.local\PBS_L\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\SAP Pb & AS - Stage 2 - 2024\GIS\40757.028_SR509_Stg2\40757.028_SR509_Stg2.aprx | 1/15/2025 4:35 PM

Arsenic - Area 2

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 7

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40

Project Area

Decision Unit

DU = Decision Unit

---

1 INCH = 500 FEET

N

0 500 1,000 Feet

PBS

Arsenic - Area 3

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 8

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Arsenic - Area 4

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 9

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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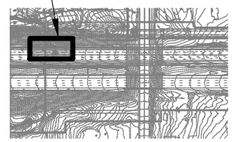
GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

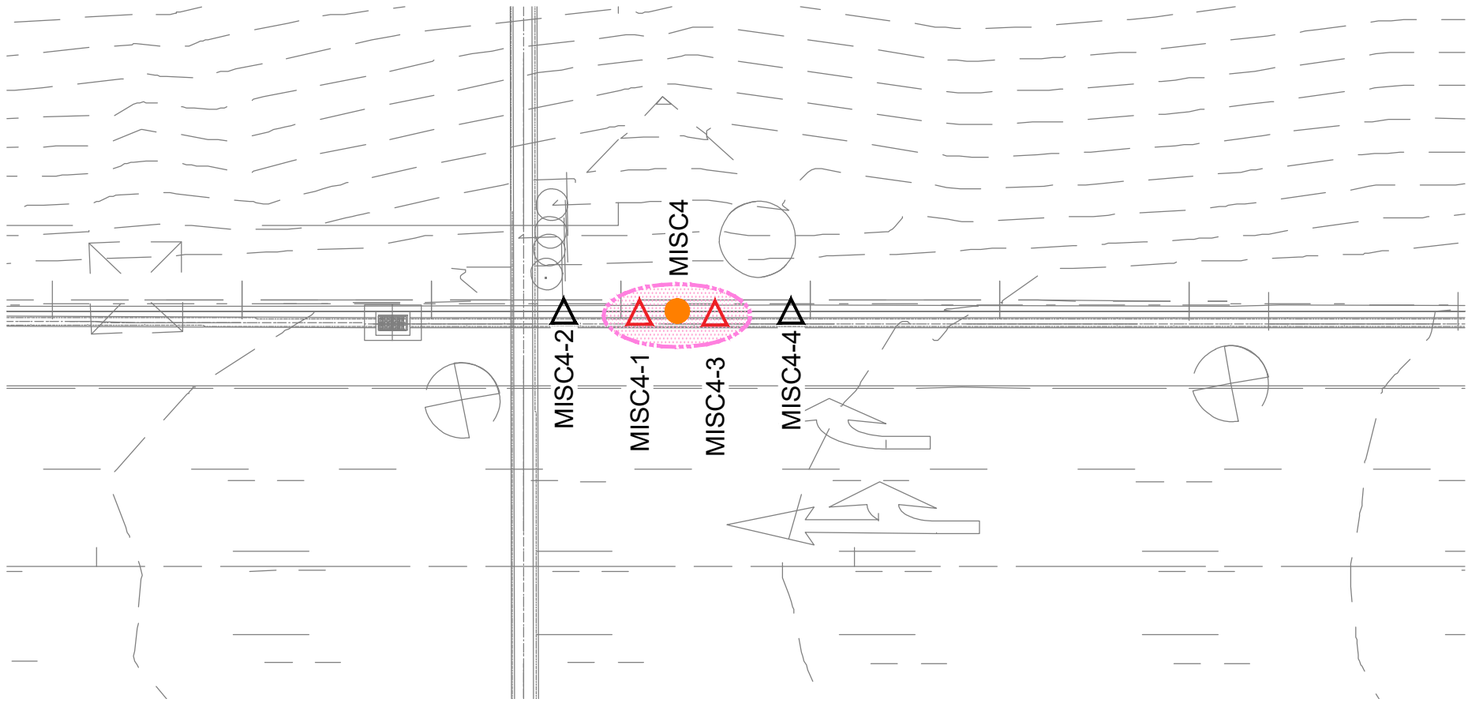
LEGEND

● MISC4	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION
△ MISC4-#	As/Pb IMPACTED SOIL/DELINEATION SOIL SAMPLE
△ MISC4-#	NOT IMPACTED SOIL/DELINEATION SOIL SAMPLE LOCATION
▭	APPROXIMATE LOCATION OF THE As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

SCOPE OF WORK



KEY PLAN



DECISION UNIT 2 - MISC4

SCALE: 1" = 20'

0 10' 20' 40'

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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SR 509 STAGE II - MISC4

DECISION UNIT 2

SR509/24TH AVEUNE SOUTH TO SOUTH 188TH STREET

PROJECT
40757.028
DATE
JANUARY 2025
FIGURE:
2A

GENERAL NOTES

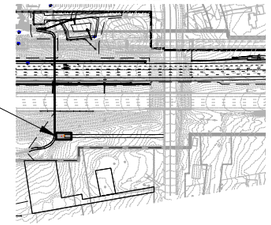
1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

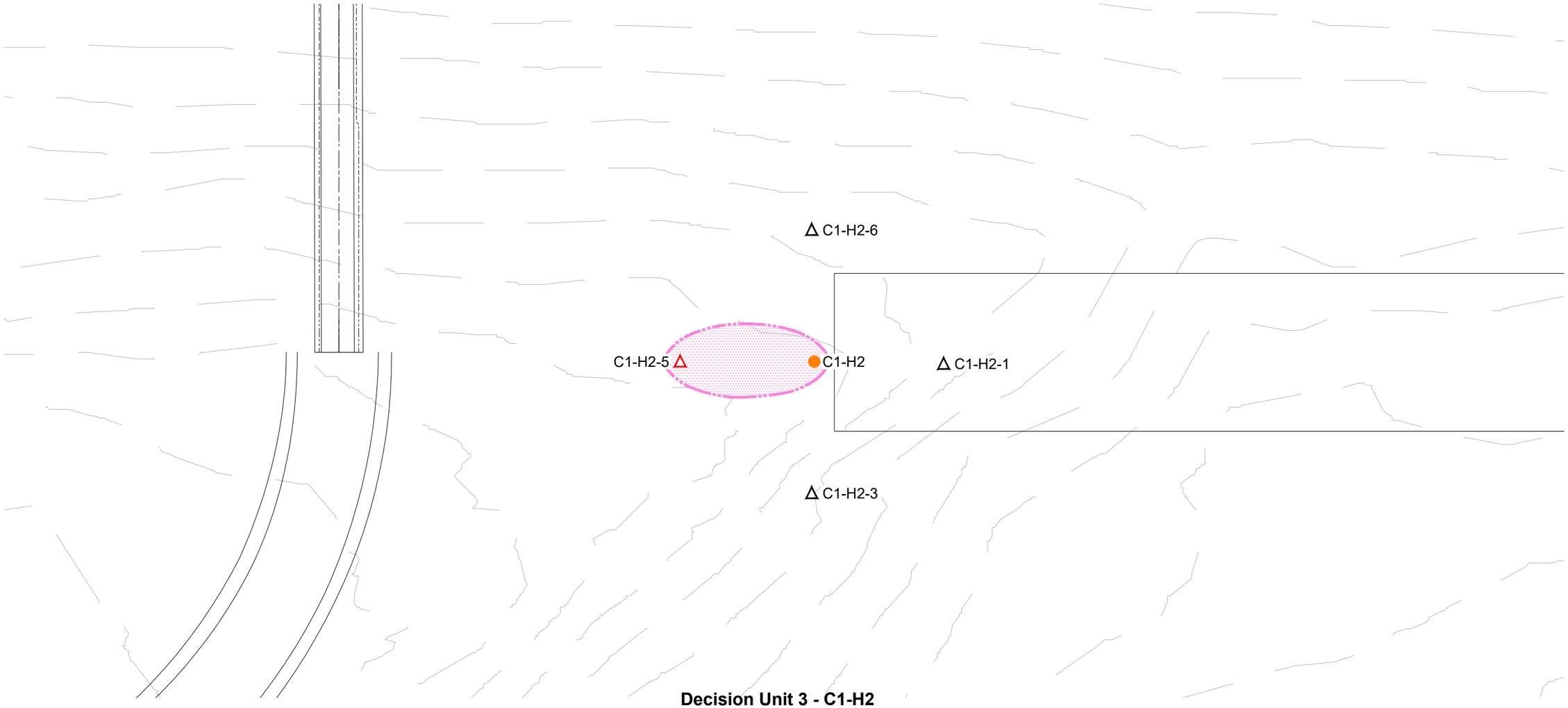
● C1-H2	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION
△ C1-H2-#	As/Pb IMPACTED SOIL SAMPLE
△ C1-H2-#	NOT IMPACTED CONFIRMATION SOIL SAMPLE
	APPROXIMATE LOCATION OF As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

T.22N. R.4E. W.M.

SCOPE OF WORK



KEY PLAN



Decision Unit 3 - C1-H2

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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SR 509 STAGE II - C1-H2

DECISION UNIT 3

SR509/24TH AVEUNE SOUTH TO 188TH STREET

PROJECT
40757.028
DATE
JANUARY 2025
FIGURE:
2B

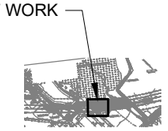
GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

- B1H8 — GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION (Arsenic [As]/Lead
- B1H8# — [Pb]) As/Pb IMPACTED SOIL SAMPLE
- B1H8# — NOT IMPACTED CONFIRMATION SOIL SAMPLE
- APPROXIMATE LOCATION OF As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

SCOPE OF WORK



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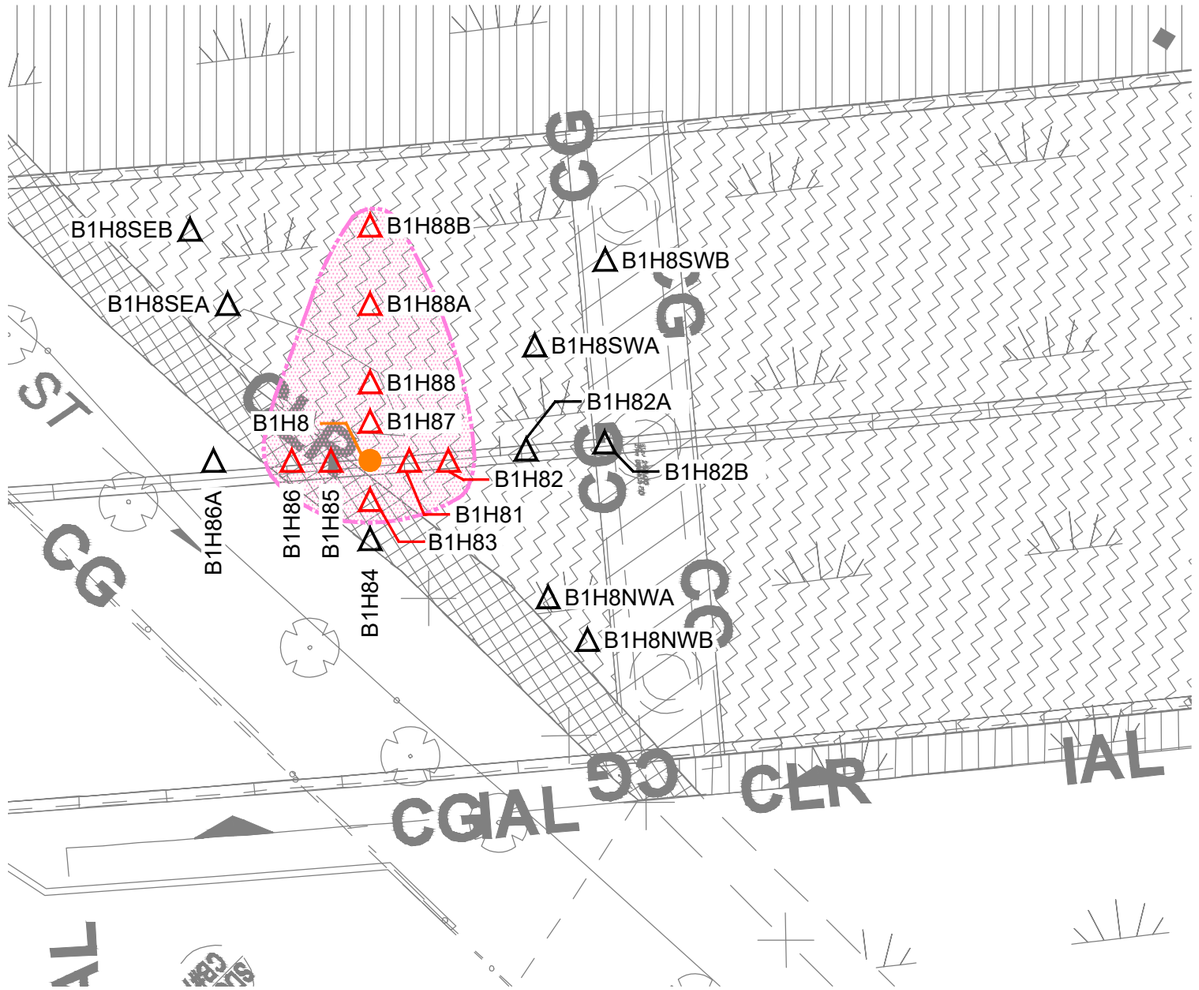

DECISION UNIT 4 - BRIDGE ONE

SCALE: 1" = 30'

0 15' 30' 60'

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SR509 STAGE II - BRIDGE 1

DECISION UNIT 4

SR509/24TH AVEUNE SOUTH TO SOUTH 18TH STREET

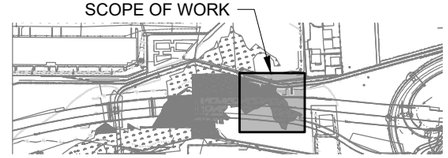
PROJECT
40757.028
DATE
DECEMBER 2024
FIGURE:
7A

GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

B4H6	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION (AS/pb)
B4H6#	As/Pb IMPACTED SOIL SAMPLE
B4H6#	NOT IMPACTED CONFIRMATION SOIL SAMPLE
	APPROXIMATE LOCATION OF AS/PB IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)



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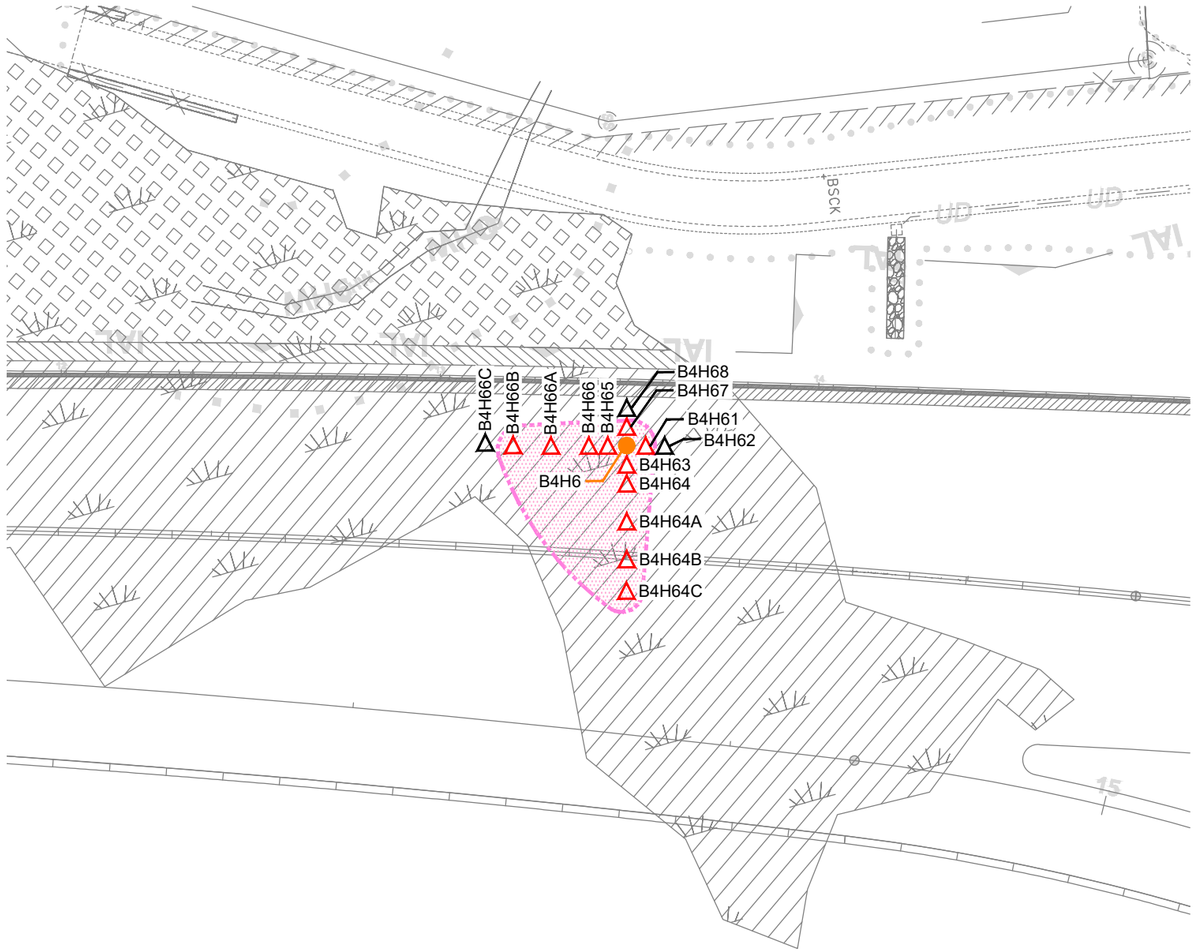

DECISION UNIT 5 - BRIDGE 4

SCALE: 1" = 40'

0 20' 40' 80'

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SR509 STAGE II - BRIDGE 4

DECISION UNIT 5

SR509/24TH AVEUNE SOUTH TO SOUTH 188TH STREET

PROJECT
40757.028
DATE
FEBRUARY 2025
FIGURE:
8A

Table 1 - Soil Analytical Results - Arsenic & Lead

State Route 509 - Stage II
Kent, Washington
PBS Project No. 40757.028

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B1H1	B1H1-06	5/24/2024	6	4.2	6.6
	B1H1-12	5/24/2024	12	--	--
B1H2	B1H2-06	5/24/2024	6	3.4	5.5
	B1H2-12	5/24/2024	12	3.4	5.6
B1H3	B1H3-6	8/8/2024	6	1.4	2.1
	B1H3-12	8/8/2024	12	--	--
B1H4	B1H4-06	5/24/2024	6	11	23
	B1H4-12	5/24/2024	12	--	--
B1H5	B1H5-06	5/24/2024	6	4.4	4.1
	B1H5-12	5/24/2024	12	5.8	5.6
B1H6	B1H6-06	5/24/2024	6	2.9	5.7
	B1H6-12	5/24/2024	12	--	--
B1H7	B1H7-06	5/24/2024	6	5.1	19
	B1H7-12	5/24/2024	12	--	--
B1H8	B1H8-06	5/24/2024	6	**26**	**290**
	B1H8-12	5/24/2024	12	**22**	210
	B1H8-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H8-24				
	B1H81-6	8/8/2024	6	**45**	**360**
	B1H81-12	8/8/2024	12	**31**	**360**
	B1H81-18	8/8/2024	18	**69**	220
	B1H81-24	9/19/2024	24	5.6	52
	B1H82-6	8/8/2024	6	**26**	**310**
	B1H82-12	8/8/2024	12	**49**	**430**
	B1H82-18	8/8/2024	18	**54**	**250**
	B1H82-24	9/19/2024	24	10	6.4
	B1H82A-6	9/19/2024	6	18	140
	B1H82A-12	9/19/2024	12	18	41
	B1H82A-18	9/19/2024	18	**--**	**--**
	B1H82A-24	9/19/2024	24	**--**	**--**
	B1H82B-6	9/19/2024	6	19	150
	B1H82B-12	9/19/2024	12	**--**	**--**
	B1H82B-18	9/19/2024	18	**--**	**--**
	B1H82B-24	9/19/2024	24	**--**	**--**

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B1H8	B1H83-6	8/8/2024	6	**35**	**270**
	B1H83-12	8/8/2024	12	**31**	240
	B1H83-18	8/8/2024	18	**50**	**300**
	B1H83-24	Deeper samples could not be collected due to excess water in the borehole			
	B1H83-30				
	B1H84-6	8/8/2024	6	17	100
	B1H84-12	8/8/2024	12	4.7	39
	B1H84-18	8/8/2024	18	9.1	65
	B1H85-6	8/8/2024	6	**35**	**300**
	B1H85-12	8/8/2024	12	**35**	**390**
	B1H85-18	8/8/2024	18	**25**	220
	B1H85-24	9/19/2024	24	8.4	45
	B1H86-6	8/8/2024	6	**31**	**330**
	B1H86-12	8/8/2024	12	1.0	60
	B1H86-18	8/8/2024	18	10	35
	B1H86A-6	10/7/2024	6	5.1	9.3
	B1H87-6	8/8/2024	6	**39**	**550**
	B1H87-12	8/8/2024	12	**48**	**510**
	B1H87-18	8/8/2024	18	**95**	**320**
	B1H87-24	Deeper samples could not be collected due to excess water in the borehole			
	B1H87-30				
	B1H88-6	8/8/2024	6	**31**	**280**
	B1H88-12	8/8/2024	12	**58**	**320**
	B1H88-18	8/8/2024	18	**50**	**580**
	B1H88-24	9/19/2024	24	9.6	8.4
	B1H88A-6	10/7/2024	6	**39**	**320**
	B1H88A-12	10/7/2024	12	**42**	**280**
	B1H88A-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H88A-24				
	B1H88B-6	10/7/2024	6	20	**260**
	B1H88B-12	10/7/2024	12	**31**	250
	B1H88B-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H88B-24				
	B1H8SEA-6	10/7/2024	6	5.6	110
	B1H8SEA-12	10/7/2024	12	--	--
	B1H8SEB-6	10/7/2024	6	3.7	110
	B1H8SEB-12	10/7/2024	12	--	--
	B1H8NWA-6	10/7/2024	6	20	210
	B1H8NWB-6	10/7/2024	6	19	160

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
B1H8	B1H8SWA-6	10/14/2024	6	18	210
	B1H8SWB-6	10/14/2024	6	18	210
	B1H8SWB-12	10/14/2024	12	12	150
B1H9	B1H9-06	5/24/2024	6	11	110
	B1H9-12	5/24/2024	12	--	--
B1H10	B1H10-06	8/2/2024	6	6.8	7.6
	B1H10-12	8/2/2024	12	--	--
B1H11	B1H11-06	8/2/2024	6	13	22
	B1H11-12	8/2/2024	12	--	--
B1H12	B1H12-06	8/2/2024	6	16	38
	B1H12-12	8/2/2024	12	--	--
B1H13	B1H13-06	8/2/2024	6	3.7	94
	B1H13-12	8/2/2024	12	--	--
B1H14	B1H14-06	5/24/2024	6	3.8	8
	B1H14-12	5/24/2024	12	--	--
B1H15	B1H15-06	8/2/2024	6	3	4.6
	B1H15-12	8/2/2024	12	--	--
B2H1	B2H1-06	5/24/2024	6	17	55
	B2H1-12	5/24/2024	12	--	--
B2H2	B2H2-06	5/24/2024	6	3.8	7.1
	B2H2-12	5/24/2024	12	--	--
B2H3	B2H3-06	8/2/2024	6	6.6	17
	B2H3-12	8/2/2024	12	--	--
B3H1	B3H1-06	8/2/2024	6	4.4	5.3
	B3H1-12	8/2/2024	12	--	--
B3H2	B3H2-06	8/2/2024	6	2.6	3.6
	B3H2-12	8/2/2024	12	--	--
B3H3	B3H3-6	8/7/2024	6	2.2	4
	B3H3-12	8/7/2024	12	--	--
B4H1	B4H1-06	5/24/2024	6	9.8	19
	B4H1-12	5/24/2024	12	--	**--**
B4H2	B4H2-06	5/24/2024	6	8.2	16
	B4H2-12	5/24/2024	12	1.2	1.5
B4H3	B4H3-06	5/24/2024	6	8.1	18
	B4H3-12	5/24/2024	12	--	--
B4H4	B4H4-06	5/24/2024	6	11	30
	B4H4-12	5/24/2024	12	--	--
B4H5	B4H5-06	5/24/2024	6	12	33
	B4H5-12	5/24/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B4H6	B4H6-06	5/24/2024	6	**31**	110
	B4H6-12	5/24/2024	12	9.7	21
	B4H61-6	8/9/2024	6	**31**	52
	B4H61-12	8/9/2024	12	**33**	27
	B4H61-18	10/14/2024	18	**47**	3.5
	B4H61-24	10/14/2024	24	9.3	2.3
	B4H61-24*	10/31/2024	24	11	1.7
	B4H62-6	8/9/2024	6	13	42
	B4H62-12	8/9/2024	12	15	26
	B4H63-6	8/9/2024	6	**23**	36
	B4H63-12	8/9/2024	12	**30**	70
	B4H63-18	10/14/2024	18	4.6	2.9
	B4H64-6	8/9/2024	6	**28**	65
	B4H64-12	8/9/2024	12	20	25
	B4H64A-6	10/14/2024	6	**23**	44
	B4H64A-12	10/14/2024	12	6.9	13
	B4H64A-18	10/31/2024	18	3.5	3.7
	B4H64B-6	10/31/2024	6	**28**	26
	B4H64B-12	10/31/2024	12	**31**	4.5
	B4H64B-18	10/31/2024	18	**56**	3.6
	B4H64C-6	11/17/2024	6	**23**	26
	B4H64C-12	11/18/2024	12	17	52
	B4H65-6	8/9/2024	6	**30**	48
	B4H65-12	8/9/2024	12	14	19
	B4H66-6	8/9/2024	6	**30**	67
	B4H66-12	8/9/2024	12	18	31
	B4H66A-6	10/14/2024	6	**21**	28
	B4H66A-12	10/14/2024	12	9.1	13
	B4H64A-18	10/31/2024	18	3.5	3.7
	B4H66B-6	10/31/2024	6	**31**	56
	B4H66B-12	10/31/2024	12	12	13
	B4H66B-18	10/31/2024	18	--	--
	B4H66C-6	11/17/2024	6	18	33
	B4H67-6	8/9/2024	6	**32**	67
	B4H67-12	8/9/2024	12	**66**	100
	B4H67-18	10/14/2024	18	12	5.3
	B4H68-6	8/9/2024	6	<1	<1
	B4H68-12	8/9/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B4H7	B4H7-06	5/24/2024	6	8.4	15
	B4H7-12	5/24/2024	12	--	--
B5H1	B5H1-06	5/24/2024	6	12	32
	B5H1-12	5/24/2024	12	--	--
B5H2	B5H2-06	5/24/2024	6	4.9	17
	B5H2-12	5/24/2024	12	9.9	32
B5H3	B5H3-06	5/24/2024	6	2.0	3.9
	B5H3-12	5/24/2024	12	--	--
B5H4	B5H4-06	5/24/2024	6	3.2	6.5
	B5H4-12	5/24/2024	12	--	--
EMB-H-1	EMB-H-1-06	8/2/2024	6	8.2	17
	EMB-H-1-12	8/2/2024	12	--	--
C1-H1	C1-H1-6	11/7/2024	6	2.8	9.7
C1-H2	C1-H2-6	11/7/2024	6	**26**	73
	C1-H2-12	11/7/2024	12	3.8	8.7
	C1-H2-1-6	12/12/2024	6	3.8	8.2
	C1-H2-3-6	12/12/2024	6	13	44
	C1-H2-5-6	12/12/2024	6	**33**	140
	C1-H2-6-6	12/12/2024	6	11	40
EMB-H-2	EMB-H-2-06	8/6/2024	6	20	16
	EMB-H-2-12	8/6/2024	12	6.1	--
EMB-H-3	EMB-H-3-06	8/6/2024	6	11	18
	EMB-H-3-12	8/6/2024	12	--	--
EMB-H-4	EMB-H-4-6	8/8/2024	6	4.6	9
	EMB-H-4-12	8/8/2024	12	--	--
EMB-H-5	EMB-H-5-06	8/6/2024	6	7.7	12
	EMB-H-5-12	8/6/2024	12	--	--
EMB-H-6	EMB-H-6-06	8/6/2024	6	12	36
	EMB-H-6-12	8/6/2024	12	--	--
EMB-H-7	EMB-H-7-06	8/2/2024	6	3.6	5.1
	EMB-H-7-12	8/2/2024	12	--	--
EMB-H-8	EMB-H-8-06	5/24/2024	6	6.9	19
	EMB-H-8-12	5/24/2024	12	4.8	15
EMB-11	EMB-11-11-24-06	5/24/2024	6	8.4	19
	EMB-11-11-24-12	5/24/2024	12	16	31
MISCH2	MISCH-2-6	9/20/2024	6	2.4	24
MISCH3	MISCH-3-6	9/20/2024	6	4.8	50
	MISCH-4-6	9/20/2024	6	**24**	170
	MISCH-4-12	9/20/2024	12	6.5	**460**
	MISCH-4-18	10/14/2024	18	8.4	**490**
	MISCH-4-24	10/14/2024	24	2.8	58

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
MISCH4	MISCH4-1-6	10/31/2024	6	9.2	**390**
	MISCH4-1-12	10/31/2024	12	8.1	**490**
	MISC4-1-18	12/20/2024	18	4.0	61
	MISCH4-2-6	10/31/2024	6	5.8	22
	MISCH4-2-12	10/31/2024	12	--	--
	MISCH4-3-6	10/31/2024	6	9.5	**880**
	MISCH4-3-12	10/31/2024	12	7.6	**440**
	MISC4-3-18	12/20/2024	18	3.9	12
	MISCH4-4-6	10/31/2024	6	7.5	67
	MISCH4-4-12	10/31/2024	12	--	--
MISCH5	MISCH-5-6	9/20/2024	6	3.6	27
MISCH6	MISCH-6-6	9/20/2024	6	4.8	26
MISC7	MISC7-6	11/7/2024	6	2.4	11
MISCH11	MISCH11-6	8/9/2024	6	3.2	14
	MISCH11-12	8/9/2024	12	--	--
MISCH13	MISCH13-6	8/9/2024	6	2.5	11
	MISCH13-12	8/9/2024	12	--	--
MISCH17	MISCH17-6	8/9/2024	6	2.6	4.1
	MISCH17-12	8/9/2024	12	--	--
MISC18	MISC18-6	11/7/2024	6	6	90
MISC19	MISC19-6	11/7/2024	6	2.7	19
NW3-H1	NW3-H1-6	11/7/2024	6	9.1	51
NW9H1P	NW9H19-6	8/7/2024	6	6.2	110
	NW9H19-12	8/7/2024	12	--	--
NW9H2P	NW9H2P-6	8/7/2024	6	1.9	5.7
	NW9H2P-7	8/7/2024	12	--	--
NW9H3P	NW9H3P-6	8/7/2024	6	2.6	47
	NW9H3P-12	8/7/2024	12	--	--
NW10H1	NW10H1-6	8/7/2024	6	2.5	24
	NW10H1-12	8/7/2024	12	--	--
NW10H2	NW10H2-6	8/7/2024	6	3.0	17
	NW10H2-12	8/7/2024	12	--	--
NW10H3	NW10H3-6	8/7/2024	6	7.3	44
	NW10H3-712	8/7/2024	12	--	--
NW10H4P	NW10H4P-6	8/7/2024	6	13	79
	NW10H4P-12	8/7/2024	12	--	--
RWH1	RWH1-6	8/7/2024	6	4.8	14
	RWH1-12	8/7/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
RWH2	RWH2-6	8/7/2024	6	1.9	5.7
	RWH2-12	8/7/2024	12	--	--
RWH3	RWH3-6	8/7/2024	6	1.6	3.5
	RWH3-12	8/7/2024	12	--	--
RWHSP	RWHSP-6	8/8/2024	6	3.7	6.2
	RWHSP-12	8/8/2024	12	--	--
SW-H-1P	SW-H-1P-06	8/8/2024	6	3.6	42
	SW-H-1P-12	8/8/2024	12	--	--
SW-H-3P	SW-H-3P-06	8/2/2024	6	5.4	11
	SW-H-3P-12	8/2/2024	12	--	--

Notes:

bold indicates detected concentration exceeds adopted criteria

Abbreviations & Acronyms:

mg/kg - milligrams per kilogram

in bgs - inches below native ground surface

-- - Sample not analyzed

* Sample collected twice

A - Sample collected 20 feet step back from the initial sample location

B - Sample collected 30 feet step back from the initial sample location

C - Sample collected 40 feet step back from the initial sample location

Footnotes:

[a] Analyzed by Environmental Protection Agency Method 6020B

[b] Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900