Earth Solutions NW LLC

Geotechnical Engineering, Construction
Observation/Testing and Environmental Services

February 8, 2024
ES-8574.05

NW Laborers United
22323 Pacific Highway South
Des Moines, Washington 98198

Attention: Dale Cannon

Subject: Limited Phase II Environmental Site Assessment
Tacoma Smelter Plume
Laborers Local 242 Training Building Property
22205 Pacific Highway South
Des Moines, Washington

Dear Dale:

This letter presents the results of the Limited Phase II Environmental Site Assessment (ESA) performed by Earth Solutions NW, LLC (ESNW) at the above-referenced Laborers Local 242 Training Building property (subject property) located at 22205 Pacific Highway South in Des Moines, Washington (see attached Plates 1 and 2). The Limited Phase II ESA soil sampling activities were performed at the subject property to assess potential shallow soil contamination associated with airborne arsenic and lead fallout from the historical Asarco Smelter, formerly located in Tacoma, Washington (area referred to as the Tacoma Smelter Plume). It should be noted that Tacoma Smelter Plume (TSP) characterization soil sampling completed during this investigation was completed in accordance with the referenced Washington State Department of Ecology (Ecology) TSP Model Remedies Guidance document for sampling and cleanup of arsenic and lead contaminated soils (dated July 2019).

Based on the analytical laboratory results of this Limited Phase II ESA, elevated concentrations of arsenic and lead, exceeding the Model Toxics Control Act (MTCA) Method A soil cleanup levels for unrestricted land-use (CUL), was identified in one soil sample location (SS-16, see attached Plate 3 for sample locations). However, based on a verbal discussion with Diana Ison (Tacoma Smelter Plume Technical Assistance Coordinator with the Department of Ecology), the elevated arsenic concentration of 660 milligrams per kilogram (mg/kg) and the elevated lead concentration of 750 mg/kg (both collected from soil sample location SS-16) is likely not the result of the TSP fallout. Based on Diana Ison's suggestion, follow-up soil sampling including the collection of 3 additional soil samples underneath and adjacent to soil sample location SS-16 was completed to further characterize the area of elevated arsenic and lead. Based on the results of the follow-up soil sampling, the elevated arsenic concentrations identified within soil sample SS-16 are isolated at the SS-16 soil sample location and likely the result of a spill or possibly imported to the site as fill material. Therefore, based on the conversation with Diana Ison, the elevated arsenic and lead concentrations of soil sample SS-16 were not included in the average arsenic or lead concentration calculations.

No concentrations of lead in site soil exceed the MTCA Method A lead CUL of 250 milligrams per kilogram (mg/kg), with the exception of soil sample SS-16. Additionally, with the exception of soil sample SS-16, average concentrations of arsenic in site soil are below the MTCA Method A arsenic soil CUL of 20 mg/kg, with no single soil sample containing concentrations of arsenic at or greater than double the MTCA Method A arsenic soil CUL (40 mg/kg). Therefore, according to Ecology's TSP Model Remedies Guidance (July 2019), shallow soil at the subject site does not require remediation in connection with arsenic or lead impacts (with the exception of an isolated soil area of elevated arsenic and lead concentrations at sample location SS-16 that should be excavated and removed from the subject property).

Based on the findings of this Limited Phase II ESA, no further environmental investigation in connection with the TSP is considered warranted at this time. Recommendations regarding the isolated area impacted with elevated concentrations of arsenic and lead are provided in the *Recommendations* section below.

The body of this letter should be referenced for further details regarding the field activities and findings of this Limited Phase II ESA.

Site Description

The subject property is located along the west side of Pacific Highway South, directly southwest of the intersection with South 222nd Street, in Des Moines, Washington (see Plate 1 – Vicinity Map). The subject property consists of one tax parcel (King County Parcel No. 215640-0223), comprising a total of approximately 1.1 acres of land area. The subject property is currently vacant. Remnant foundations and asphalt areas currently occupy the northeast portion of the subject property. The western half of the subject property is undeveloped and lightly to moderately overgrown with brambles and scattered trees.

The subject property was determined to be located within an area designated by Ecology to have average concentrations of arsenic in soil ranging from 20 mg/kg to 40 mg/kg, exceeding the MTCA Method A arsenic CUL for soil (20 mg/kg).

Decision Units

A "Decision Unit" is an "Area of a property expected to have a different pattern of soil contamination than other areas. Some properties will only have one decision unit. Factors include current and past land uses and development history…[and]…Future use can also define decision units" (page 11 of Ecology's TSP Model Remedies Guidance document). Based on the understanding that the subject site will be redeveloped for commercial/office land-use, the entire subject site was treated as one Decision Unit for the purposes of this TSP characterization shallow soil sampling assessment.

See Plate 2 to reference site configuration and the existing site conditions.

Based on Table 1 (page 13) and Table 1a (page 16) of the referenced TSP Model Remedies Guidance, ESNW calculated the minimum number of soil samples that would need to be collected in accordance with the TSP Model Remedies Guidance. See attached "Form 1 – Characterization Sampling" for reference, with calculations on page three of the form. At a minimum, the following number of soil samples needed to be collected across the subject property: 16 soil samples at a depth of zero to six inches into native soil, 4 soil samples at a depth of 6 to 12 inches into native soil, and 4 forest duff composite samples.

See below for discussion of on-site soil sampling activities.

Field Activities

Field activities involved with completing this Limited Phase II ESA were performed on December 20, 2023. Follow-up field activities were completed on January 16, 2024.

ESNW used an aerial photograph to identify evenly spaced and accurately plotted sampling locations in an approximate grid pattern throughout the subject property. As discussed in the previous section of this letter, 16 discrete soil samples were collected at a depth of zero to six inches below the existing ground surface (bgs). Four soil samples were collected from depths of 6 to 12 inches bgs. Additionally, four forest duff composite samples (each consisting of six evenly spaced forest duff subsamples) were also collected across the subject property. Follow-up soil sampling consisted of collecting two soil samples at a depth of zero to six inches bgs and one soil sample at a depth of 6 to 12 inches bgs. A handheld post-hole digger was used to manually collect each soil and/or forest duff composite sample. See Plate 3 to review sampling locations.

Soil Sampling Methods

Each soil sample was carefully transferred from the post-hole digger into a stainless-steel bowl before being transferred to a pre-cleaned 8-oz glass sampling jar and sealed with a Teflon-lined plastic lid. All tools and equipment used during soil sampling activities were cleaned in separate wash and rinse buckets prior to and between the collection of each soil sample. Additionally, nitrile gloves were worn during sampling activities and replaced with a clean pair between collection of each soil sample.

The jars containing the soil samples were labeled and stored on ice in a 5°C cooler, and delivered to On-Site Environmental Laboratories, Inc. (a Washington State-certified laboratory), located in Redmond, Washington, to be analyzed for the following constituents:

- Total Arsenic by Environmental Protection Agency (EPA) Analytical Method 6010D.
- Total Lead by EPA Analytical Method 6010D.
- Total Chromium by EPA Analytical Method 6010D.

Per the request of NW Laborers United (Client), all soil samples collected during this investigation were also analyzed for the presence of total chromium which is not listed as a requirement under the current Tacoma Smelter Plume Guidance document. Additionally, three samples identified with the highest total chromium analytical results (samples SS-3, SS-8, and SS-16) were further analyzed for the presence of hexavalent chromium (chromium VI) using EPA Analytical Method 7196A.

Applicable Regulatory Standards – Soil

The rules that guide the cleanup process at sites within Washington State are incorporated into MTCA, as administered by Ecology and defined in WAC 173-340. For this Limited Phase II ESA, average values for total arsenic and lead concentrations (reported in the On-Site Environmental Laboratories, Inc. analytical reports) were compared to MTCA Method A CULs for soil. The Method A CULs are conservative and are for sites with relatively few hazardous substances, which may not be appropriate for all sites. The regulations state that Method A should not be automatically used to define cleanup levels that must be met for financial, real estate, insurance coverage, or similar purposes. Additionally, test results above Method A cleanup levels do not necessarily mandate a cleanup action for a site. The referenced TSP Model Remedies Guidance document uses MTCA Method A CULs.

Copies of the laboratory analytical reports are attached to this letter. Applicable MTCA Method A CULs used during this Limited Phase II ESA include the following:

- The MTCA Method A arsenic CUL for soil is 20 mg/kg.
- The MTCA Method A lead CUL for soil is 250 mg/kg.

It should be noted that, according to Ecology's 2019 TSP Model Remedies Guidance, "elevated concentrations" of arsenic and lead are defined as follows: average concentrations of total arsenic in soil exceeding Ecology's MTCA Method A arsenic CUL, 20 mg/kg; average concentrations of total lead in soil exceeding the lead MTCA Method A CUL, 250 mg/kg; or any concentrations of arsenic or lead exceeding double the above-identified MTCA Method A CULs.

Analytical Results

Arsenic

Analytical results indicate that the average concentrations of arsenic in site soil are as follows:

- Depth of zero to six inches bgs: 12.5 mg/kg (below the MTCA Method A arsenic CUL of 20 mg/kg), and;
- Depth of 6 to 12 inches bgs: 11.6 mg/kg (below the MTCA Method A arsenic CUL).

No single soil or composite duff sample contained concentrations at or exceeding double the MTCA Method A arsenic CUL. In conclusion, no elevated concentrations of arsenic were identified in site soil or forest duff. As mentioned above, the arsenic concentrations of soil sample SS-16 were not included within the average arsenic concentration calculation.

Lead

Analytical results indicate that the average concentrations of lead in site soil are as follows:

- Depth of zero to six inches bgs: 23.5 mg/kg (below the MTCA Method A lead CUL of 250 mg/kg), and;
- Depth of 6 to 12 inches bgs: 26.2 mg/kg (below the MTCA Method A lead CUL).

No single soil or composite duff sample contained concentrations at or exceeding double the MTCA Method A lead CUL. In conclusion, no elevated concentrations of lead were identified in site soil or forest duff. As mentioned above, the lead concentrations of soil sample SS-16 were not included within the average lead concentration calculation.

Laboratory analytical reports are attached to this letter for review. Also, see the attached "Form 2 – Characterization Sampling Results" document that separately summarizes the above-discussed results as required in Ecology's TSP Model Remedies Guidance document.

Chromium

Detectable concentrations of total chromium were identified in all 20 soil samples and 4 duff samples ranging between 13 to 42 mg/kg. Supplementary laboratory analysis of three soil samples containing the highest concentrations of total chromium reported non-detectable concentrations of chromium-VI in all three soil samples. Therefore, total chromium analytical results were compared to Ecology's MTCA Method A chromium III soil cleanup level of 2,000 mg/kg.

Detectable but low detections of chromium-III identified in 24 of the soil samples collected during this investigation were reportedly well below the corresponding Ecology MTCA Method A chromium III soil cleanup level.

Summary and Conclusions

Consistent with the Client's request, ESNW completed a Limited Phase II ESA at the subject property. This investigation included: (1) collecting 27 discrete soil samples across the subject property in accordance with the referenced TSP Model Remedies Guidance document (Ecology, July 2019); (2) submitting the soil samples to a Washington State-certified laboratory to be analyzed for the presence of total arsenic, lead, and chromium; and (3) completion of this letter.

In conclusion, laboratory analytical results identified no elevated concentrations (as defined in the "Applicable Regulatory Standards – Soil" section of this letter) of arsenic or lead in soil at the subject site. Soil samples collected at the site and the results discussed and recorded in this letter can be considered "compliance" samples. With the exception of a localized area of soil contamination at sample SS-16, this letter presents evidence that the site has not been impacted by elevated concentrations of arsenic or lead from the historical Asarco Smelter.

Recommendations

Based on the findings of this assessment, no soil remediation is considered warranted at the subject site in connection with potential arsenic and/or lead impacts from the historical Asarco Smelter. However, an isolated area of soil impacted with arsenic and lead was identified along the northeastern corner of the site (soil sample location SS-16). Soil in this area should be removed and disposed of properly during redevelopment activities. Follow-up confirmatory soil sampling should then be performed to assess soil remediation completeness at soil sample location SS-16.

Limitations

The work described herein was performed upon request by the Client after discussions relating to the potential for TSP-related arsenic and lead soil impacts at the subject property. The findings and recommendations in this letter are made based upon the analytical results, field observations, and our best professional judgement. It is possible that unforeseen events could occur that may limit the effectiveness of the assessment. Although risk can never be eliminated, more detailed and extensive sampling and testing would yield better management of site risks. Since such extensive services involve greater expense, we ask our clients to participate in identifying the level of service that will provide them with an acceptable level of risk. Please contact the signatories of this letter if you would like to discuss this issue of risk further.

The scope of work on this project was presented in our December 8, 2023 Phase II Environmental Site Assessment proposal (Proposal No. PES-8574.05) and subsequently approved by NW Laborers United as our Client. Please be aware our scope of work was limited to those items specifically identified in the proposal. Other activities not specifically included in the presented scope of work (in the proposal, correspondence, or this letter) are excluded and should not be considered part of our scope of services.

Land use, site conditions (both on-site and off-site), and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this letter, our observations, findings, and opinions can be considered valid only as of the date of the site visit (December 20, 2023).

This letter may be used by the Client and only for the purposes stated within a reasonable time from its issuance, but in no event later than one year from the date of this letter.

Any party other than the Client who would like to use this letter shall notify ESNW of such intended use. Based on the intended use of this letter, ESNW may require that additional work be performed and that a revised letter be issued. Non-compliance with any of these requirements by the client or anyone else will release ESNW from any liability resulting from the use of this letter by any unauthorized party. No warranty, either expressed or implied, is made.

Closing

We trust this letter meets your current needs and appreciate the opportunity to provide our consulting services. Please contact the undersigned at (425) 449-4704 if you have any questions or require additional information.

Sincerely,

EARTH SOLUTIONS NW, LLC

Kyler T. Kelly, L.G.
Project Geologist

Ted W. Sykes
Environmental Senior Project Manager

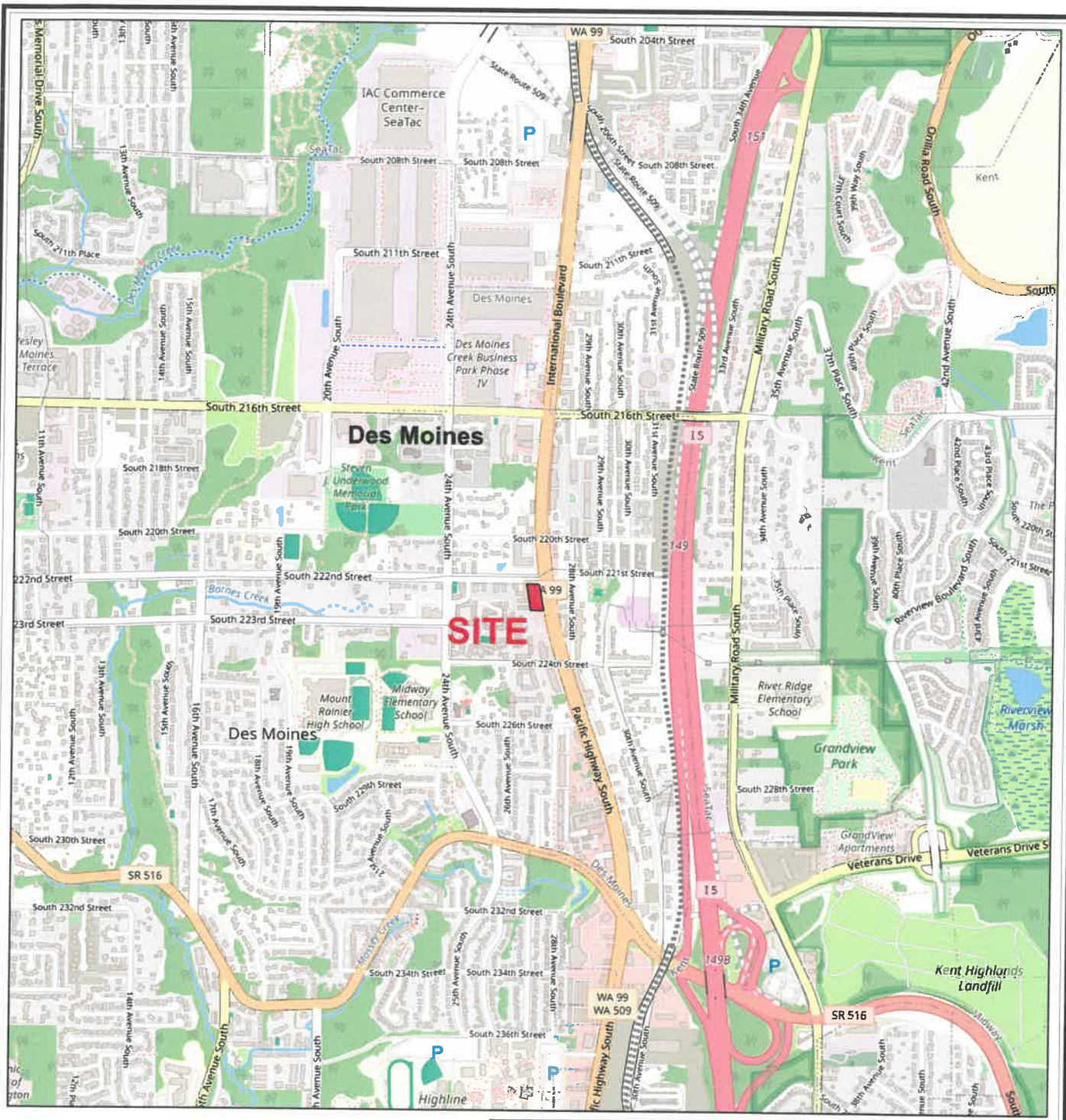
Kyle R. Campbell, P.E.
Senior Principal Engineer

Attachments: Plate 1 – Vicinity Map
Plate 2 – Decision Units
Plate 3 – Soil Sampling Location Plan
Form 1 – Characterization Sampling
Form 2 – Characterization Sampling Results
OnSite Environmental Analytical Laboratory Reports

cc: Foushee
Attention: John Dolence

Reference:

- Tacoma Smelter Plume Model Remedies Guidance, Washington State Department of Ecology, dated July 2019



Reference:
King County, Washington
OpenStreetMap.org

NORTH

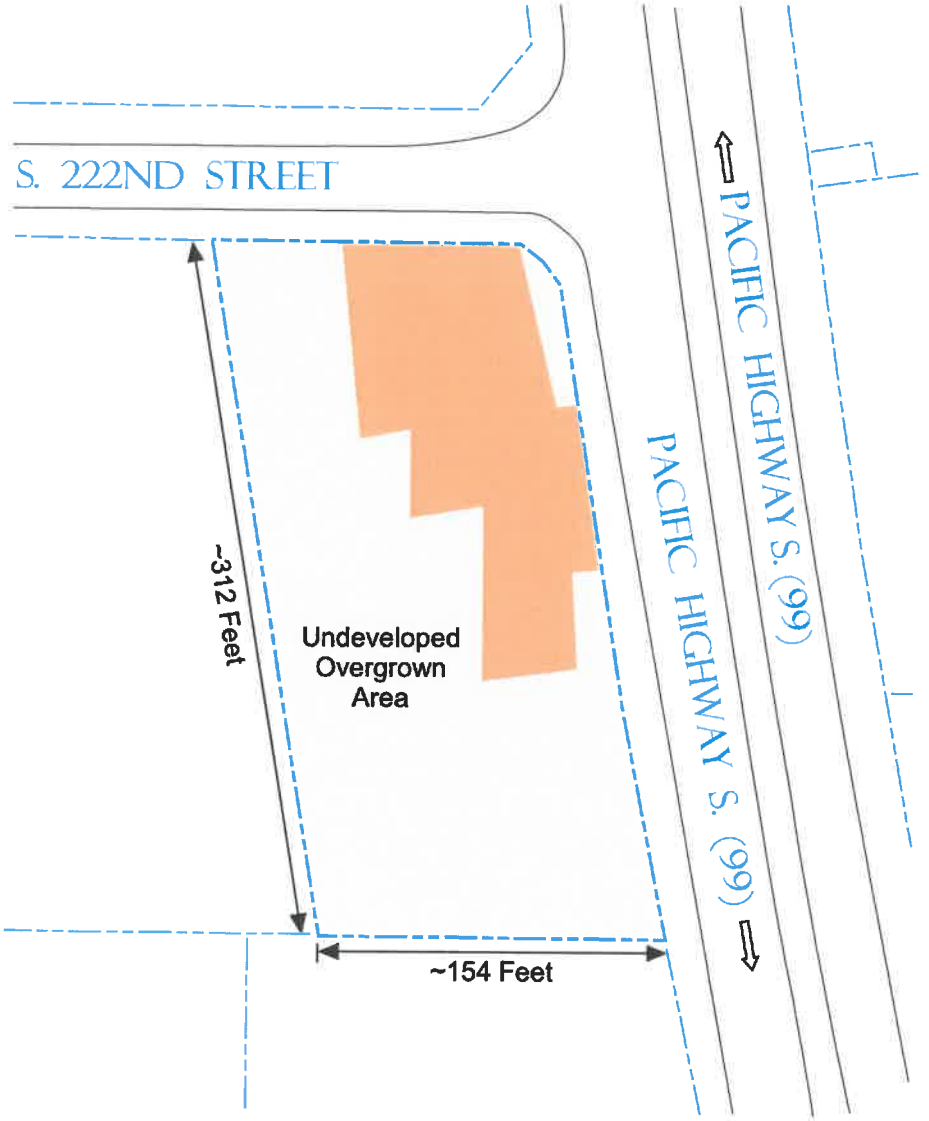
NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

Earth Solutions NW LLC

Geotechnical Engineering, Construction Observation/Testing and Environmental Services

Vicinity Map
Laborers Local 242 Training Bldg
Des Moines, Washington

Drawn MRS	Date 02/05/2024	Proj. No. 8574.05
Checked KTK	Date Feb. 2024	Plate 1



NORTH

NOT - TO - SCALE

LEGEND

Subject Site

Asphalt/Concrete

NOTE: The graphics shown on this plate are not intended for design purposes or precise scale measurements, but only to illustrate the approximate test locations relative to the approximate locations of existing and / or proposed site features. The information illustrated is largely based on data provided by the client at the time of our study. ESNW cannot be responsible for subsequent design changes or interpretation of the data by others.

NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

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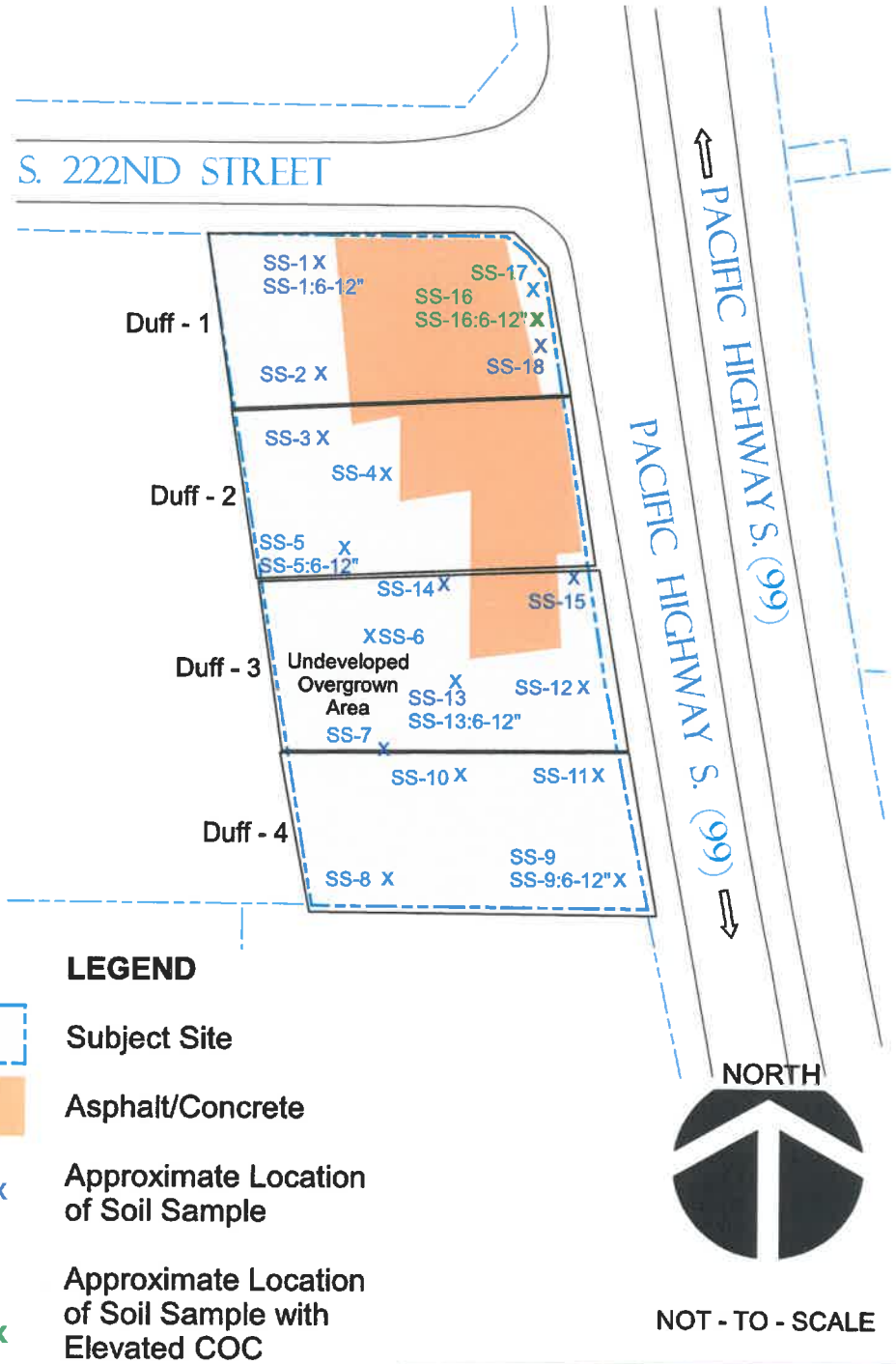
Geotechnical Engineering, Construction Observation/Testing and Environmental Services

Decision Units
Laborers Local 242 Training Bldg
Des Moines, Washington

Drawn MRS	Date 02/05/2024	Proj. No. 8574.05
Checked KTK	Date Feb. 2024	Plate 2



LEGEND

Subject Site

Asphalt/Concrete

SS-17 X — Approximate Location of Soil Sample

SS-16
SS-16:6-12" X — Approximate Location of Soil Sample with Elevated COC Concentrations

NOT - TO - SCALE

NOTE: The graphics shown on this plate are not intended for design purposes or precise scale measurements, but only to illustrate the approximate test locations relative to the approximate locations of existing and / or proposed site features. The information illustrated is largely based on data provided by the client at the time of our study. ESNW cannot be responsible for subsequent design changes or interpretation of the data by others.

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Earth Solutions NW LLC

Geotechnical Engineering, Construction Observation/Testing and Environmental Services

Soil Sampling Location Plan
Laborers Local 242 Training Bldg
Des Moines, Washington

Drawn MRS	Date 02/05/2024	Proj. No. 8574.05
Checked KTK	Date Feb. 2024	Plate 3

Form 1 Characterization Sampling

Reminder: Keep a copy of the filled out forms to pass on to future property owners.

Part 1: Determine your decision units

1. Total property size: 1.1 acres

2. In an area of arsenic >100 ppm (see map on inside cover): yes ~~no~~

3. Check all that apply and identify decision units in any of these cases:

- ☑ Property is larger than 0.25 acres
- ☑ Property currently or historically had a mix of forested and developed land.
- ☐ More than one type of land use is planned for the development
- ☐ Parts of the property will be play areas, gardens, or other high use areas
- ☐ Property has geographic features, such as steep slopes or wetlands
- ☑ Areas have forest duff that needs separate sampling

4. On the next page, list the decision units on your property and their size in Table 1. Use Table 2 to determine the number of samples needed for each decision unit.

Part 2: Soil sample depth in upland areas

5. Fill in Table 1 on the following page with the sample depths.

- **At every location:** Take samples from the top 0-6 inches of soil, after clearing away grass, leaves, gravel, or debris on the surface (Figure 3)
- **At every fourth location (25% of the samples):** Also take a sample from the 6-12 inch depth
- **If you are sampling in natural areas:** Take soil samples from 0-6 inches below ground surface (bgs), 6-12 inches bgs, 12-24 inches bgs, 24-36 inches bgs from every location
- **Areas where fill dirt or topsoil was added in the past:** At every fourth location, take a sample from the top 0-6 inches of the original land surface, if it is deeper than 12 inches
- **If using mixing as a remedy:** At every fourth sample location, take a sample from the depth you to which you will mix
- **For forest duff:** Take six subsamples throughout the decision unit and combine into one sample. If your decision unit is larger than 0.25 acres,

calculate how many composite duff samples to take using Table 1a in Chapter 1 of this guidance

Part 2A: Soil sample depth in wetlands

- **At every location:** Take samples from the top 0-4 inches of sediment
- **At every location:** Take samples from the top 4-8 inches of sediment

Part 3: Overlay a sampling grid for each decision unit

6. Attach a diagram showing property dimensions and locations of decision units.

7. Attach a separate diagram for each decision unit, including dimensions, existing structures, and which structures will remain after development.

Table 1. Characterization sampling plan

Decision unit description (past use, planned use)	**Acres/ft²**	**# of samples**	**Sample depth/duff layer**
1. Undeveloped and partially developed, Office-space	1.1 acres	18	0-6"
		5	6-12"
		4	Duff
2.			
3.			
4.			

Table 2. Number of sample locations per decision unit by planned use and estimated arsenic level.

Sampling area	Residential, parks, commercial (# samples needed)		Forest and open land (# samples needed)	
Acres	Arsenic >100 ppm	Arsenic <100 ppm	Arsenic >100 ppm	Arsenic 20-100 ppm
0.25*	**10**	**8**	**8**	**8**
1	**20**	**16**	**16**	**12**
5	**40**	**32**	**30**	**24**
10	**60**	**48**	**40**	**32**
20	**80**	**64**	**50**	**40**
100	**120**	**90**	**70**	**60**
>100	**120 +1 per 5 acres**	**90 + 1 per 5 acres**	**70 + 1 per 5 acres**	**60 + 1 per 5 acres**

*0.25 acres ~11,000 square feet

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Form 2 Characterization Sampling Results

Reminder: Keep a copy of the filled out forms to pass on to future property owners.

Filling in the sample inventory

List the samples by decision unit in the inventory on the back of this page. Enter the depth of each sample. When sampling multiple depths at a single location, mark each depth as a separate sample number.

Optional: If you have duff, remember to sample and analyze that separately from the soil.

Next, fill in the date and time. Note any unusual observations (high soil disturbance, heavy rain, etc.) in the "Comments" column.

Complete the rest of the columns when you get the sampling results.

Determining if arsenic or lead is elevated

1. Calculate average arsenic and lead levels **for each sampling depth** and **each decision unit** and enter them on the inventory sheet. For each decision unit circle the arsenic average that exceeds 20 ppm, or average lead that exceeds 250 ppm. For decision units in natural areas, calculate average arsenic and lead for **each sampling location** in addition to calculating the averages for **each sampling depth**.
2. Circle every value where maximum **arsenic exceeds 40 ppm** and where maximum **lead exceeds 500 ppm**.
3. Attach a copy of your lab results and chain of custody.
4. For decision units with a circled value (maximum or average), note in the "Comment" column that cleanup is needed for that entire decision unit. Turn to Chapter 2 to review options for cleaning up those decision units.

   If no decision units have elevated arsenic or lead, no cleanup is necessary. Because no cleanup is being done, you do not need to take any compliance samples. The characterization samples demonstrate that your soils meet state standards. Treat these results as "compliance" sampling results and read Chapter 7 for next steps.

See Attached Table for Results

Soil Characterization Sampling Inventory Sheet

Property address:

Phone:

Sampled by:

Testing Parameters (ppm)

DU	Sample no.	Soil Depth /Duff	Date	Time	Notes	Arsenic	Avg. arsenic	Lead	Avg lead

Property Address: 22205 Pacific Hwy S, Des Moines, WA 98189
Phone: 425.449.4704
Sampled By: Kyler Kelly

DU	Sample No.	Soil Depth/[	Date	Time	Notes	Testing Parameters (ppm) Arsenic	Avg. Arsenic	Lead	Avg. Lead
1	SS-1	0-6"	12/20/2023	8:15	Grab	ND	12.5	44	23.5
1	SS-1:6-12"	6-12"	12/20/2023	8:30	Grab	ND	11.6	37	26.2
1	SS-2	0-6"	12/20/2023	8:45	Grab	ND	12.5	38	23.5
1	SS-3	0-6"	12/20/2023	9:00	Grab	ND	12.5	17	23.5
1	SS-4	0-6"	12/20/2023	9:15	Grab	ND	12.5	46	23.5
1	SS-5	0-6"	12/20/2023	9:30	Grab	ND	12.5	31	23.5
1	SS-5:6-12"	6-12"	12/20/2023	9:45	Grab	ND	11.6	12	26.2
1	SS-6	0-6"	12/20/2023	10:00	Grab	ND	12.5	17	23.5
1	SS-7	0-6"	12/20/2023	10:15	Grab	ND	12.5	23	23.5
1	SS-8	0-6"	12/20/2023	10:30	Grab	ND	12.5	25	23.5
1	SS-9	0-6"	12/20/2023	10:45	Grab	ND	12.5	18	23.5
1	SS-9:6-12"	6-12"	12/20/2023	11:00	Grab	ND	11.6	26	26.2
1	SS-10	0-6"	12/20/2023	11:15	Grab	ND	12.5	26	23.5
1	SS-11	0-6"	12/20/2023	11:30	Grab	ND	12.5	ND	23.5
1	SS-12	0-6"	12/20/2023	11:45	Grab	ND	12.5	ND	23.5
1	SS-13	0-6"	12/20/2023	12:00	Grab	ND	12.5	10	23.5
1	SS-13:6-12"	6-12"	12/20/2023	12:15	Grab	ND	11.6	27	26.2
1	SS-14	0-6"	12/20/2023	12:30	Grab	ND	12.5	29	23.5
1	SS-15	0-6"	12/20/2023	12:45	Grab	ND	12.5	8.9	23.5
1	*SS-16	0-6"	12/20/2023	13:00	Grab	660 *		750 *	
1	SS-16:6-12"	6-12"	1/16/2024	11:15	Grab	ND	11.6	29	26.2
1	SS-17	0-6"	1/16/2024	11:30	Grab	ND	12.5	31	23.5
1	SS-18	0-6"	1/16/2024	11:45	Grab	ND	12.5	24	23.5
1	DUFF-1	Duff	12/20/2023	13:15	Grab	ND		12	
1	DUFF-2	Duff	12/20/2023	13:30	Grab	ND		29	
1	DUFF-3	Duff	12/20/2023	13:45	Grab	ND		37	
1	DUFF-4	Duff	12/20/2023	14:00	Grab	ND		15	

* Sample results not incorporated into average arsenic and lead values

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 3, 2024

Kyler Kelly
Earth Solutions NW, LLC
15365 NE 90th Street, Suite 100
Redmond, WA 98052

Re: Analytical Data for Project ES-8574.05
Laboratory Reference No. 2312-253

Dear Kyler:

Enclosed are the analytical results and associated quality control data for samples submitted on December 20, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

Case Narrative

Samples were collected on December 20, 2023 and received by the laboratory on December 20, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total Metals EPA 6010D Analysis

Due to the high concentration of Arsenic in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 101%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-1**					
Laboratory ID:	12-253-01					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**19**	0.61	EPA 6010D	12-28-23	12-28-23	
Lead	**44**	6.1	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-1:6-12"**					
Laboratory ID:	12-253-02					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**18**	0.59	EPA 6010D	12-28-23	12-28-23	
Lead	**37**	5.9	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-2**					
Laboratory ID:	12-253-03					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**18**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**38**	5.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-3**					
Laboratory ID:	12-253-04					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**25**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**17**	5.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-4**					
Laboratory ID:	12-253-05					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**19**	0.58	EPA 6010D	12-28-23	12-28-23	
Lead	**46**	5.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-5**					
Laboratory ID:	12-253-06					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**19**	0.62	EPA 6010D	12-28-23	12-28-23	
Lead	**31**	6.2	EPA 6010D	12-28-23	12-28-23	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-5:6-12"**					
Laboratory ID:	12-253-07					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**15**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**12**	5.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-6**					
Laboratory ID:	12-253-08					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**20**	0.56	EPA 6010D	12-28-23	12-28-23	
Lead	**17**	5.6	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-7**					
Laboratory ID:	12-253-09					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**20**	0.61	EPA 6010D	12-28-23	12-28-23	
Lead	**23**	6.1	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-8**					
Laboratory ID:	12-253-10					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**27**	0.58	EPA 6010D	12-28-23	12-28-23	
Lead	**25**	5.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-9**					
Laboratory ID:	12-253-11					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**23**	0.56	EPA 6010D	12-28-23	12-28-23	
Lead	**18**	5.6	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-9:6-12"**					
Laboratory ID:	12-253-12					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**20**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**26**	5.7	EPA 6010D	12-28-23	12-28-23	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-10**					
Laboratory ID:	12-253-13					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**25**	0.56	EPA 6010D	12-28-23	12-28-23	
Lead	**26**	5.6	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-11**					
Laboratory ID:	12-253-14					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**20**	0.58	EPA 6010D	12-28-23	12-28-23	
Lead	**ND**	5.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-12**					
Laboratory ID:	12-253-15					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**22**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**ND**	5.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-13**					
Laboratory ID:	12-253-16					
Arsenic	**ND**	11	EPA 6010D	12-28-23	12-28-23	
Chromium	**21**	0.57	EPA 6010D	12-28-23	12-28-23	
Lead	**10**	5.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-13:6-12"**					
Laboratory ID:	12-253-17					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**19**	0.61	EPA 6010D	12-28-23	12-28-23	
Lead	**27**	6.1	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-14**					
Laboratory ID:	12-253-18					
Arsenic	**ND**	16	EPA 6010D	12-28-23	12-28-23	
Chromium	**18**	0.78	EPA 6010D	12-28-23	12-28-23	
Lead	**29**	7.8	EPA 6010D	12-28-23	12-28-23	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-15**					
Laboratory ID:	12-253-19					
Arsenic	**ND**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**14**	0.58	EPA 6010D	12-28-23	12-28-23	
Lead	**8.9**	5.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**SS-16**					
Laboratory ID:	12-253-20					
Arsenic	**660**	12	EPA 6010D	12-28-23	12-28-23	
Chromium	**42**	0.58	EPA 6010D	12-29-24	12-29-23	
Lead	**750**	5.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**Duff-1**					
Laboratory ID:	12-253-21					
Arsenic	**ND**	17	EPA 6010D	12-28-23	12-28-23	
Chromium	**16**	0.85	EPA 6010D	12-28-23	12-28-24	
Lead	**12**	8.5	EPA 6010D	12-28-23	12-28-23	
Client ID:	**Duff-2**					
Laboratory ID:	12-253-22					
Arsenic	**ND**	16	EPA 6010D	12-28-23	12-28-23	
Chromium	**13**	0.78	EPA 6010D	12-29-24	12-29-23	
Lead	**29**	7.8	EPA 6010D	12-28-23	12-28-23	
Client ID:	**Duff-3**					
Laboratory ID:	12-253-23					
Arsenic	**ND**	13	EPA 6010D	12-28-23	12-28-23	
Chromium	**20**	0.67	EPA 6010D	12-29-24	12-29-23	
Lead	**37**	6.7	EPA 6010D	12-28-23	12-28-23	
Client ID:	**Duff-4**					
Laboratory ID:	12-253-24					
Arsenic	**ND**	13	EPA 6010D	12-28-23	12-28-23	
Chromium	**14**	0.64	EPA 6010D	12-29-24	12-29-23	
Lead	**15**	6.4	EPA 6010D	12-28-23	12-28-23	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1228SM1					
Arsenic	**ND**	10	EPA 6010D	12-28-23	12-28-23	
Chromium	**ND**	0.50	EPA 6010D	12-28-23	12-28-23	
Lead	**ND**	5.0	EPA 6010D	12-28-23	12-28-23	
Laboratory ID:	MB1228SM2					
Arsenic	**ND**	10	EPA 6010D	12-28-23	12-28-23	
Lead	**ND**	5.0	EPA 6010D	12-28-23	12-28-23	
Laboratory ID:	MB1229SM1					
Chromium	**ND**	0.50	EPA 6010D	12-29-23	12-29-23	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	12-253-04										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**21.8**	**20.6**	NA	NA		NA		NA	6	20	
Lead	**15.4**	**17.3**	NA	NA		NA		NA	12	20	
Laboratory ID:	12-253-20										
	ORIG	DUP									
Arsenic	**565**	**545**	NA	NA		NA		NA	4	20	
Lead	**645**	**710**	NA	NA		NA		NA	10	20	
Laboratory ID:	12-253-20										
	ORIG	DUP									
Chromium	**36.1**	**36.2**	NA	NA		NA		NA	0	20	
MATRIX SPIKES											
Laboratory ID:	12-253-04										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**107**	**106**	100	100	ND	**107**	**106**	75-125	1	20	
Chromium	**141**	**118**	100	100	21.8	**119**	**96**	75-125	17	20	
Lead	**268**	**272**	250	250	15.4	**101**	**103**	75-125	1	20	
Laboratory ID:	12-253-20										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**620**	**600**	100	100	565	**55**	**35**	75-125	3	20	A
Lead	**850**	**835**	250	250	645	**82**	**76**	75-125	2	20	
Laboratory ID:	12-253-20										
	MS	MSD	MS	MSD		MS	MSD				
Chromium	**133**	**134**	100	100	36.1	**97**	**98**	75-125	1	20	

Date of Report: January 3, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253
Project: ES-8574.05

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
SS-1	12-253-01	18	12-28-23
SS-1:6-12"	12-253-02	15	12-28-23
SS-2	12-253-03	12	12-28-23
SS-3	12-253-04	12	12-28-23
SS-4	12-253-05	14	12-28-23
SS-5	12-253-06	19	12-28-23
SS-5:6-12"	12-253-07	13	12-28-23
SS-6	12-253-08	11	12-28-23
SS-7	12-253-09	18	12-28-23
SS-8	12-253-10	14	12-28-23
SS-9	12-253-11	11	12-28-23
SS-9:6-12"	12-253-12	13	12-28-23
SS-10	12-253-13	11	12-28-23
SS-11	12-253-14	14	12-28-23
SS-12	12-253-15	12	12-28-23
SS-13	12-253-16	13	12-28-23
SS-13:6-12"	12-253-17	17	12-28-23
SS-14	12-253-18	36	12-28-23
SS-15	12-253-19	13	12-28-23
SS-16	12-253-20	14	12-28-23
Duff-1	12-253-21	41	12-28-23
Duff-2	12-253-22	36	12-28-23
Duff-3	12-253-23	25	12-28-23
Duff-4	12-253-24	22	12-28-23

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

X2 - Sample extract treated with a silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Earth Solutions NW, LLC
Project Number: ES-8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyle Kelly
Sampled by: "

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-253

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Lead, Chromium				% Moisture
1	SS-1:	12/20/23	8:15	Soil	1																		X				X
2	SS-1: 6-12"		8:30		1																		X				X
3	SS-2:		8:45		1																		X				X
4	SS-3		9:00		1																		X				X
5	SS-4		9:15		1																		X				X
6	SS-5		9:30		1																		X				X
7	SS-5: 6-12"		9:45		1																		X				X
8	SS-6		10:00		1																		X				X
9	SS-7		10:15		1																		X				X
10	SS-8		10:30		1																		X				X

	Signature	Company	Date	Time
Relinquished		ESNW	12/20/23	14:50
Received	Nicholle Bolland	OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 12-253

Company: ESNW
Project Number: ES-8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyle Kelly
Sampled by: "

Turnaround Request (in working days) (Check One)
- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☑ Standard (7 Days)
- ☐ ______ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, lead, chromium				% Moisture
11	SS-9	12/20/23	10:45	Soil	1	[illegible]																	X				X
12	SS-9:6-12"	↓	11:00	↓	1	[illegible]																	X				X
13	SS-10	↓	11:15	↓	1	[illegible]																	X				X
14	SS-11	↓	11:30	↓	1																		X				X
15	SS-12	↓	11:45	↓	1																		X				X
16	SS-13	↓	12:00	↓	1																		X				X
17	SS-13:6-12"	↓	12:15	↓	1																		X				X
18	SS-14	↓	12:30	↓	1																		X				X
19	SS-15	↓	12:45	↓	1																		X				X
20	SS-16	↓	13:00	↓	1																		X				X

	Signature	Company	Date	Time
Relinquished	[signature]	ESNW	12/20/23	14:50
Received	[signature] Nichelle [illegible]	OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: ESNW
Project Number: ES 8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyle Kelly
Sampled by: "

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-253

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Lead, Chromium				% Moisture
21	Duff-1	12/20/23	13:15	Soil	1																		X				X
22	Duff-2	"	13:30	"	1																		X				X
23	Duff-3	"	13:45	"	1																		X				X
24	Duff-4	"	14:00	"	1																		X				X

	Signature	Company	Date	Time
Relinquished		ESNW	12/20/23	14:50
Received		OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 9, 2024

Kyler Kelly
Earth Solutions NW, LLC
15365 NE 90th Street, Suite 100
Redmond, WA 98052

Re: Analytical Data for Project ES-8574.05
Laboratory Reference No. 2312-253B

Dear Kyler:

Enclosed are the analytical results and associated quality control data for samples submitted on December 20, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 9, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253B
Project: ES-8574.05

Case Narrative

Samples were collected on December 20, 2023 and received by the laboratory on December 20, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Soluble Hexavalent Chromium EPA 7196A Analysis

The Matrix Spike/Matrix Spike Duplicate recoveries for hexavalent chromium are outside control limits due to matrix interferences. The soil exhibits reducing conditions. The Spike Blank recovery was 98%. The Standard Reference Material meets the published acceptance limits.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: January 9, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253B
Project: ES-8574.05

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-3**					
Laboratory ID:	12-253-04					
Hexavalent Chromium	**ND**	1.1	EPA 7196A mod.	1-8-24	1-8-24	
Client ID:	**SS-8**					
Laboratory ID:	12-253-10					
Hexavalent Chromium	**ND**	1.2	EPA 7196A mod.	1-8-24	1-8-24	
Client ID:	**SS-16**					
Laboratory ID:	12-253-20					
Hexavalent Chromium	**ND**	1.2	EPA 7196A mod.	1-8-24	1-8-24	

Date of Report: January 9, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253B
Project: ES-8574.05

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0108S2					
Hexavalent Chromium	**ND**	1.0	EPA 7196A mod.	1-8-24	1-8-24	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	12-207-16										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	12-207-16										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**2.69**	**2.79**	5.00	5.00	ND	54	56	75-125	4	20	V
SPIKE BLANK											
Laboratory ID:	SB0108S2										
	SB		SB			SB					
Hexavalent Chromium	**4.88**		5.00		NA	98		80-120	NA	NA	

Date of Report: January 9, 2024
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-253B
Project: ES-8574.05

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
SS-3	12-253-04	**12**	12-28-23
SS-8	12-253-10	**14**	12-28-23
SS-16	12-253-20	**14**	12-28-23

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

X2 - Sample extract treated with a silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Earth Solutions NW, LLC
Project Number: ES-8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyle Kelly
Sampled by: "

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-253

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Lead, Chromium	Hex. Chrom.			% Moisture
1	SS-1:	12/20/23	8:15	Soil	1																		X				X
2	SS-1: 6-12"		8:30		1																		X				X
3	SS-2:		8:45		1																		X				X
4	SS-3		9:00		1																		X	⊗			X
5	SS-4		9:15		1																		X				X
6	SS-5		9:30		1																		X				X
7	SS-5: 6-12"		9:45		1																		X				X
8	SS-6		10:00		1																		X				X
9	SS-7		10:15		1																		X				X
10	SS-8		10:30		1																		X	⊗			X

	Signature	Company	Date	Time
Relinquished		ESNW	12/20/23	14:50
Received		OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 1/8/24 NB (1 Day)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: ESNW
Project Number: ES-8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyle Kelly
Sampled by: "

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-253

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Lead, Chromium	Hex. Chrom.			% Moisture
11	SS-9	12/20/23	10:45	Soil	1	X																	X				X
12	SS-9:6-12"		11:00		1																		X				X
13	SS-10		11:15		1																		X				X
14	SS-11		11:30		1																		X				X
15	SS-12		11:45		1																		X				X
16	SS-13		12:00		1																		X				X
17	SS-13:6-12"		12:15		1																		X				X
18	SS-14		12:30		1																		X				X
19	SS-15		12:45		1																		X				X
20	SS-16		13:00		1																		X	⊗			X

	Signature	Company	Date	Time
Relinquished		ESNW	12/20/23	14:50
Received		OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: ESNW
Project Number: ES 8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyler Kelly
Sampled by: "

Turnaround Request (In working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-253

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Lead, Chromium				% Moisture
21	Duff-1	12/20/23	13:15	Soil	1																		X				X
22	Duff-2	"	13:30	"	1																		X				X
23	Duff-3	"	13:45	"	1																		X				X
24	Duff-4	"	14:00	"	1																		X				X

	Signature	Company	Date	Time
Relinquished	[signature]	ESNW	12/20/23	14:50
Received	[signature]	OSE	12/20/23	1450
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 23, 2024

Kyler Kelly
Earth Solutions NW, LLC
15365 NE 90th Street, Suite 100
Redmond, WA 98052

Re: Analytical Data for Project ES-8574.05
Laboratory Reference No. 2401-162

Dear Kyler:

Enclosed are the analytical results and associated quality control data for samples submitted on January 16, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 23, 2024
Samples Submitted: January 16, 2024
Laboratory Reference: 2401-162
Project: ES-8574.05

Case Narrative

Samples were collected on January 16, 2024 and received by the laboratory on January 16, 2024. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: January 23, 2024
Samples Submitted: January 16, 2024
Laboratory Reference: 2401-162
Project: ES-8574.05

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-16:6-12"**					
Laboratory ID:	01-162-01					
Arsenic	**ND**	12	EPA 6010D	1-16-24	1-16-24	
Lead	**29**	5.9	EPA 6010D	1-16-24	1-16-24	
Client ID:	**SS-17**					
Laboratory ID:	01-162-02					
Arsenic	**ND**	12	EPA 6010D	1-16-24	1-16-24	
Lead	**31**	5.9	EPA 6010D	1-16-24	1-16-24	
Client ID:	**SS-18**					
Laboratory ID:	01-162-03					
Arsenic	**ND**	11	EPA 6010D	1-16-24	1-16-24	
Lead	**24**	5.7	EPA 6010D	1-16-24	1-16-24	

Date of Report: January 23, 2024
Samples Submitted: January 16, 2024
Laboratory Reference: 2401-162
Project: ES-8574.05

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0116SM2					
Arsenic	**ND**	10	EPA 6010D	1-16-24	1-16-24	
Lead	**ND**	5.0	EPA 6010D	1-16-24	1-16-24	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	01-125-01									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**13.2**	**14.1**	NA	NA		NA	NA	7	20	
MATRIX SPIKES										
Laboratory ID:	01-125-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	**103**	**103**	100	100	ND	**103**	**103**	75-125	0	20
Lead	**266**	**265**	250	250	13.2	**101**	**101**	75-125	0	20

Date of Report: January 23, 2024
Samples Submitted: January 16, 2024
Laboratory Reference: 2401-162
Project: ES-8574.05

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
SS-16:6-12"	01-162-01	**15**	1-16-24
SS-17	01-162-02	**15**	1-16-24
SS-18	01-162-03	**12**	1-16-24

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

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Q - Surrogate recovery is outside of the control limits.

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X - Sample extract treated with a mercury cleanup procedure.

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PQL - Practical Quantitation Limit
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Company: Earth Solutions NW
Project Number: ES-8574.05
Project Name: Laborers Local 242 Training Bldg
Project Manager: Kyler Kelly
Sampled by: "

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 01-162

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Total Arsenic, Pb Lead				% Moisture
1	SS-16: 6-12"	1/16/24	11:15	Soil	1																		X				X
2	SS-17	"	11:30	"	1																		X				X
3	SS-18:	"	11:45	"	1																		X				X

	Signature	Company	Date	Time
Relinquished		ESNW	1/16/24	13:15
Received		CE	1/16/24	1315
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐