

June 2022
Port of Tacoma Parcel 14 Slag and Contaminated Soil Removal

ANCHOR QEA

Cleanup Action Report

Prepared for the Port of Tacoma

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TABLE OF CONTENTS

1 Introduction 1

2 Site Background 2

2.1 Previous Cleanup Action 2

2.2 Discovery of Additional Contamination 2

3 Completed Cleanup Action 4

3.1 Environmental Controls 4

3.2 Duff Layer Delineation and Removal 4

3.2.1 Duff Layer Characterization 4

3.2.2 Duff Layer Removal 5

3.3 Soil Delineation and Removal 5

3.3.1 Soil Characterization 5

3.3.2 Soil Cleanup 6

4 Summary and Conclusions 8

5 References 9

TABLE

Table 1 Summary of Duff Layer Analytical Results for Arsenic and Lead

Table 2 Summary of Soil Analytical Results for Arsenic in Soil Removal Areas

Table 3 Arsenic Leaching Test Results

Table 4 Summary of Soil Analytical Results for Arsenic in Areas Free of Slag

FIGURES

Figure 1 Vicinity Map

Figure 2 Duff Layer Characterization Data

Figure 3 Delineation of Contaminated Soil Removal Areas

Figure 4 Soil Arsenic Concentrations Remaining After Removal

Figure 5 Site Following Cleanup (Pre-Planting)

APPENDICES

Appendix A	GeoEngineers 2010 Site Investigation Report
Appendix B	Anchor QEA 2014 Completion Report – Removal of Arsenic Impacted Soil, Habitat Enhancement Project
Appendix C	Port of Tacoma 2021 Lower Wapato Creek Habitat Site Shallow Soil Sampling and Results Memorandum
Appendix D	Anchor QEA 2021 Data Report and Cleanup Plan
Appendix E	Ecology 2021 NFA Recission Letter
Appendix F	Waste Disposal Authorization and Landfill Soil Disposal Summary
Appendix G	Terrestrial Ecological Evaluation Exclusion Form

ABBREVIATIONS

ASARCO	American Smelting and Refining Company, LLC
CAP	Cleanup Action Plan
CUL	cleanup level
Ecology	Washington State Department of Ecology
KLB	KLB Construction Inc.
LWCHP	Lower Wapato Creek Habitat Project
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NFA	No Further Action
Port	Port of Tacoma
Site	Port of Tacoma Parcel 14
SPLP	synthetic precipitation leaching procedure
TCLP	toxicity characteristic leaching procedure
UCL	upper confidence limit
WAC	Washington Administrative Code

1 Introduction

Anchor QEA, LLC, has prepared this Cleanup Action Report on behalf of the Port of Tacoma (Port). It describes the successful cleanup of American Smelting and Refining Company, LLC (ASARCO), slag and associated arsenic-impacted soils from the Port's Parcel 14 property (Site).

Parcel 14 is located at 1131 Alexander Avenue, just south of Highway 509, Tacoma, Washington (Figure 1), which is within the boundaries of the Puyallup Tribe of Indians Reservation. The property has been recently redeveloped by the Port as a habitat enhancement area known as the Lower Wapato Creek Habitat Project (LWCHP).

During preparatory work for the LWCHP, the presence of ASARCO slag and associated arsenic-contaminated soils were identified in the upper 3 to 4 feet of soil on the eastern portion of the Site. The extent and depth of contaminated soil was fully delineated and removed prior to implementation of the habitat project.

This Cleanup Action Report was prepared to document the cleanup work performed. Soil arsenic concentrations following completion of the cleanup were equal to natural background soil concentrations.

2 Site Background

A detailed history and description of the physical characteristics of the Site are described in a 2010 site investigation report (GeoEngineers 2010; Appendix A).

2.1 Previous Cleanup Action

The 2010 site investigation included 27 soil test pits, nine soil borings, four piezometers, soil analytical testing from test pits and borings, and the installation of water level monitoring equipment. GeoEngineers evaluated soil types and conducted analytical testing of selected soil samples throughout Parcel 14. Soil samples were tested for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, copper, and zinc), semivolatile organic compounds, polychlorinated biphenyls, pesticides, herbicides, and petroleum.

All soil testing data complied with applicable Model Toxics Control Act (MTCA) Method A or B cleanup levels (CULs) with the exception of arsenic. Two of the 24 soil samples tested for arsenic exceeded the MTCA Method A CUL for soil (20 milligrams per kilogram [mg/kg]) for unrestricted land use.

In 2014, Anchor QEA conducted additional soil sampling (Anchor QEA 2014; Appendix B) to delineate the area of soils containing arsenic that had been identified by GeoEngineers in 2010. Anchor QEA found that arsenic contamination was limited to the upper 3 to 4 feet of soil.

Arsenic testing was performed on 30 individual soil samples and two duplicate samples. Measured arsenic concentrations in the soil ranged from 6 to 95 mg/kg. Additionally, leaching tests using the synthetic precipitation leaching procedure (SPLP; EPA Method SW-846/1311) were performed on eight of the samples. None of the eight samples tested contained detectable arsenic in the SPLP leachate, demonstrating that the arsenic in soil was not leachable and was not a potential source to stormwater or groundwater (Anchor QEA 2014).

Following the additional arsenic characterization conducted in 2014, the Port removed the arsenic-impacted soils that had been identified in the northeastern portion of the Site. A total of 943 tons of arsenic-impacted soil exceeding the MTCA Method A CUL was removed and disposed of at an off-site commercial landfill. Following the 2014 soil removal, data analysis to evaluate compliance with MTCA requirements demonstrated that soil quality at the Site complied with MTCA Method A CULs for arsenic applicable to unrestricted use (20 mg/kg). The Washington State Department of Ecology (Ecology) subsequently issued a No Further Action (NFA) Letter for Parcel 14 in April of 2015.

2.2 Discovery of Additional Contamination

In 2021, prior to the construction of the LWCHP, the Port conducted extensive shallow soil sampling throughout Parcel 14 to characterize surficial materials that were planned for off-site reuse

(Port 2021; Appendix C). The Port's testing was focused on the upper 4 inches of the surface soil layer containing plant litter and organic material mixed with soil (duff). Testing was performed at 25 uniformly distributed locations selected throughout the Site. Sampling locations were selected using the Point Dispersion tool in ArcMap 10.6.1.

All duff samples were analyzed for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), petroleum, and polynuclear aromatic hydrocarbons. Duff testing results for arsenic and lead are provided in Table 1 and Figure 2 depicts the sample locations. None of the testing parameters exceeded MTCA Method A CULs for unrestricted land use with the exception of arsenic at three locations (S-18, S-19, S-24).

The Port geologist also observed slag in soils directly beneath duff material at some of the locations with elevated arsenic concentrations. Follow-up testing conducted by Port staff documented the presence of arsenic in subsurface soils (>4 inches) underlying the duff material at two of these locations, S-19 and S-24 (Table 2).

Following discovery of the slag and arsenic contamination in soil, the Port retained Anchor QEA to conduct supplemental testing to delineate the extent and depths of slag and associated arsenic contamination. A Cleanup Action Plan (CAP) was developed for implementation in advance of LWCHP construction activities. Anchor QEA's additional data collection and resulting CAP are presented in the Data Report and Cleanup Plan, Parcel 14 Slag Removal (Anchor QEA 2021; Appendix D).

Given the location and planned future use of the Site, arsenic CULs were established at the MTCA Method A soil CUL for unrestricted land use (20 mg/kg). The CAP included full removal of the contaminated soils, which is the most protective and permanent potential remedy.

Notification to Ecology's Environmental Report Tracking System was made on July 6, 2021, and the CAP was provided to Ecology on July 7, 2021. Ecology subsequently rescinded the April 22, 2015, NFA determination in a letter dated August 17, 2021 (Appendix E), and relisted the Site on the Confirmed and Suspected Contaminated Sites List, noting that removal of slag and contaminated soil was planned.

The additional data collection activities are summarized in Section 3 along with the cleanup actions completed by the Port in accordance with the CAP.

3 Completed Cleanup Action

This section describes the methods used to delineate the extent and depth of slag and associated contaminated soil. All work was performed in accordance with the CAP. All impacted materials exceeding the MTCA Method A CUL for arsenic were successfully removed from the Site.

3.1 Environmental Controls

The CAP includes environmental controls to protect Site workers, commercial and residential neighbors, and the environment. The following controls were implemented throughout the work:

- A contractor with cleanup experience, KLB Construction Inc. (KLB), was retained by the Port.
- KLB developed a health and safety plan and provided an on-site health and safety supervisor to oversee the work.
- The Port, Anchor QEA, and KLB met with Ecology's Stormwater Group to discuss the work and the measures to be used to prevent any discharges of contaminated surface water. These measures were documented in a stormwater pollution prevention plan and included the following:
  - Work was conducted during the dry season (August).
  - Appropriate temporary erosion and sedimentation controls were established and maintained throughout the project.
  - Contaminated soil removal was completed prior to other grading and construction activities within the Site.
  - Contaminated soils were loaded directly into trucks.
  - Dust controls were implemented to prevent any spreading of the contamination to other areas of the Site.
  - Contingency plans were developed for rain events (no rain occurred during cleanup) to infiltrate or treat all stormwater coming into contact with contaminated soils.
- Health and safety meetings were held throughout performance of the work to ensure compliance with safe work practices.

3.2 Duff Layer Delineation and Removal

The layer of duff material (upper 4 inches of surface soil mixed with vegetation) was addressed first. Contaminated duff materials were excavated and disposed at an off-site commercial landfill. Clean duff materials were then removed for beneficial reuse at another Port property.

3.2.1 Duff Layer Characterization

The Port conducted extensive duff layer sampling throughout Parcel 14 to characterize this surficial layer. Testing was performed at 25 uniformly distributed locations throughout Parcel 14 (selected

using the Point Dispersion tool in ArcMap 10.6.1). Testing locations are shown in Figure 2, and the data are contained in Table 1.

All duff samples were analyzed for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), petroleum, and polynuclear aromatic hydrocarbons. None of the testing parameters exceeded MTCA Method A CULs for unrestricted land uses, except for arsenic. Arsenic was detected at elevated levels in samples from the eastern portion of Parcel 14.

Thiessen polygons were generated in ArcMap around each of the three sampling locations that exceeded the MTCA Method A arsenic CUL for unrestricted land use. These polygons are depicted in Figure 2 and conservatively delineate the area represented by each of the duff samples exceeding the MTCA Method A arsenic CUL.

3.2.2 Duff Layer Removal

The duff layer within the Thiessen polygons around samples S-18, 19, and 24 (Figure 2) was removed and disposed of at an off-site commercial landfill.

Suitability for reuse of the remaining duff materials was evaluated in accordance with MTCA requirements (Washington Administrative Code [WAC] 173-340-740(7)(d)). The 95% upper confidence limit (UCL) for the clean duff materials was 9.9 mg/kg arsenic, well below the MTCA Method A CUL for unrestricted land use (20 mg/kg). None of these remaining duff samples exceed the CUL by two times, and less than 10% of the individual samples exceed the CUL. The average concentration of the remaining duff materials (represented by the 22 samples outside of removal areas S-18, S-19, and S-24) is 6.1 mg/kg, which is less than Ecology's estimate (7.3 mg/kg) of the natural background concentration of arsenic in Puget Sound soils (Ecology 1994).

Following removal of the contaminated duff material, the remaining clean duff material was taken for reuse at another Port-owned site.

3.3 Soil Delineation and Removal

Soil cleanup work included an intensive pre-characterization effort, soil removal, and collection of confirmation samples as necessary to verify that all contaminated soils had been removed.

3.3.1 Soil Characterization

The extent of impacted soils beneath the duff layer was initially delineated during three rounds of investigation. The first two rounds were performed using backhoe-excavated test pits. The third round was performed using a hand auger at one follow-up testing location. The first round of test pit sampling was performed on May 14 and May 17, 2021, and included testing locations determined using a uniform sampling grid. Two rounds of follow-up sampling were then used to delineate the

extent and depth of visible slag and to collect bounding soil samples for analytical testing. The testing program was tiered using the following procedures:

- If visible slag was present, the soils containing slag were assumed to be contaminated. Analytical testing was then performed on underlying soils to define the clean soil horizon, and additional test pits were sampled in adjacent areas as necessary to define the lateral limits of the contaminated soil.
- If no visible slag was present, then samples were collected and analyzed for arsenic. Samples were collected at multiple intervals and archived. If arsenic contamination was detected, then the underlying archived samples were analyzed as necessary to define the clean soil horizon.
- On June 11, hand auger sampling was used to collect soil samples from one additional area to refine the lateral limits of contamination.

Results from these three rounds of testing provided the initial delineation of the lateral and vertical limits of slag and arsenic-impacted soil (a total of 57 samples). Additional details regarding these soil characterization activities are included in the Data Report and Cleanup Plan (Appendix D). No contaminated soil was identified deeper than 4 feet below ground surface. Depths to groundwater at the Site are much greater, ranging between 10 and 12 feet.

Toxicity characteristic leaching procedure (TCLP) testing was performed on two samples using Method 6010D to verify that the arsenic concentrations do not exceed criteria for landfill disposal (limit of 5 milligrams per liter in TCLP leachate). Concentrations of all TCLP metals were below method reporting limits in both samples (Table 3).

Testing was also performed by the SPLP to evaluate whether the arsenic was potentially leachable. Arsenic was not detected in SPLP leachate from either sample (Table 3).

3.3.2 Soil Cleanup

Contaminated soil below the duff was fully removed and disposed of at an off-site commercial landfill prior to other development and grading activities within the Site. Soil excavation activities were conducted by KLB during August 2021.

Soil excavation areas (i.e., excavation sidewalls and bottoms) extended to the lateral and vertical limits, as determined by clean soil samples containing arsenic concentrations below the MTCA Method A CUL. An additional 15 samples were collected during the excavation activities to verify sidewall and bottom samples were below the MTCA Method A CUL in areas of additional excavation.

During the cleanup, a total of 14,149 tons of soil, slag, and contaminated duff material were removed. The soils were disposed of at the LRI Landfill in Puyallup, Washington, consistent with a waste disposal authorization provided by Pierce County Health Department. Waste Disposal

Authorization 2553/2553A along with the disposal tickets for the contaminated soil and duff materials are included in Appendix F.

Figure 3 summarizes the characterization data collected before and during the cleanup to verify the locations and depths of contaminated soil. Sample locations containing slag are depicted in orange and samples exceeding the MTCA Method A CUL are depicted in blue. Excavation depths during soil removal are also indicated. Sampling data for soils removed during the cleanup are summarized in Table 2.

Figure 4 shows soil arsenic concentrations remaining after removal of the overlying impacted material. These data included 71 samples delineating the soil removal areas and an additional 29 samples collected from remaining Site areas. All remaining soils contained arsenic concentrations less than the MTCA Method A CUL (20 mg/kg).

Table 2 summarizes the testing results for the clean confirmatory samples delineating the soil removal areas. The 95% UCL (calculated using MTCAStat-97) for the 71 sidewall and bottom samples was 5.6 mg/kg. The average arsenic concentration at the limits (vertical/bottoms and horizontal/sidewalls) of the completed excavations is 4.8 mg/kg. These values are well below the CULs (20 mg/kg) and are less than Ecology's estimate (7.3 mg/kg) of the natural background concentration of arsenic in Puget Sound soils (Ecology 1994).

Table 4 summarizes the testing results for all samples in uncontaminated areas (i.e., outside of the excavation limits shown in Figures 3 and 4). These soils did not contain any visible slag, and the results of testing confirmed soil arsenic levels were less that the MTCA Method A CUL (i.e., no cleanup required in these areas). The 95% UCL (calculated using MTCAStat-97) of the 29 samples collected from these uncontaminated areas was 6.9 mg/kg arsenic, which is well below the MTCA Method A CUL for unrestricted land use (20 mg/kg).

Final arsenic concentrations at the Site are less than natural background concentrations as described in WAC 173-340-200 and 173-340-709. Therefore, no further evaluations were conducted prior to implementation of the Habitat Project. The Site qualifies for a Terrestrial Ecological Evaluation exclusion under the criteria in WAC 173-340-7491. The basis for the exclusion is that concentrations of hazardous substances in soil do not exceed natural background levels. The Terrestrial Ecological Evaluation exclusion form is included as Appendix G.

4 Summary and Conclusions

Soil at the Site has been successfully cleaned up to levels at or below background arsenic concentrations.

Following the cleanup of slag and arsenic-impacted soils, the Parcel 14 Site was redeveloped by the Port and is now the LWCHP area. Grading work has been completed and planting will begin in the fall 2022. Photographs of the current use of the Site are included in Figure 5.

5 References

Anchor QEA, 2014. Re: Completion Report – Removal of Arsenic Impacted Soil Habitat Enhancement Project – 1131 East Alexander Avenue, Tacoma, 98424 Environmental Incident Reporting System ID (ERTS) #649884. October 20, 2014.

Anchor QEA, 2021. Data Report and Cleanup Plan, Parcel 14 Slag Removal, June 17, 2021

Ecology, 1994. Natural Background Soil Metals Concentrations in Washington State. Ecology Publication No. 94-115. Prepared October, 1994.

GeoEngineers (GeoEngineers, Inc.), 2010. *Site Investigation, Port of Tacoma Parcel 14, Tacoma, Washington.* File No. 0454-094-15. December 6, 2010.

Port (Port of Tacoma), 2021. *Lower Wapato Creek Habitat Site Shallow Soil Sampling and Results.* Port of Tacoma – Facilities Development. May 7, 2021.

Tables

Table 1
Summary of Duff Layer Analytical Results for Arsenic and Lead

Duff Removal Area Samples	Port Sample ID	Analytical Results for Total Arsenic (mg/kg)	Analytical Results for Total Lead (mg/kg)
(Removed and sent for Landfill Disposal August 2021)	S-18	34.2	12.2
	S-19	45.4	9.0
	S-24	52.4	18.2

Non-Impacted Area Samples	Port Sample ID	Analytical Results for Total Arsenic (mg/kg)	Analytical Results for Total Lead (mg/kg)
Duff Samples from Non-Impacted Areas [1]	S-1	3.0	6.3
	S-2	<2.5	2.6
	S-3	3.4	8.0
	S-4	4.6	9.6
	S-5	3.1	11.2
	S-6	<2.5	<2.5
	S-7	2.8	7.2
	S-8	2.8	3.4
	S-9	6.1	5.4
	S-10	3.2	<2.5
	S-11	<2.5	2.6
	S-12	<2.5	<2.5
	S-13	<2.5	<2.5
	S-14	7.6	2.9
	S-15	<2.5	<2.5
	S-16	18.6	7.4
	S-17	2.8	5.4
	S-20	18.4	5.4
	S-21	11.0	6.1
	S-22	6.5	<2.5
	S-23	3.5	<2.5
	S-25	28.4	8.9
	No. of Samples	**22**	**22**
	Mean	**6.1 mg/kg [2]**	**4.6 mg/kg [2]**
	95% UCL [1,3]	**9.9 mg/kg**	**5.8 mg/kg**

Table 1
Summary of Duff Layer Analytical Results for Arsenic and Lead

Notes:

mg/kg: milligrams per kilogram

MTCA: Model Toxics Control Act

UCL: upper confidence limit

Refer to Figures 2A and 2B for sample locations.

All samples were collected April 2, 2021, from depths of 0 to 4 inches below ground surface (within the duff layer).

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level for arsenic is 20 mg/kg.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic (7.3 mg/kg) or lead (24.0 mg/kg) in the Puget Sound Basin (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Table 2
Summary of Soil Analytical Results for Arsenic in Soil Removal Areas

Soil Removal Area Samples	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
(Removed and sent for Landfill Disposal August 2021)*	S-18	04/02/21	5-10	10.8
		04/02/21	11-22	15.4
	S-19	04/02/21	5-10	21.5
		04/02/21	11-22	40.0
	S-24	04/02/21	5-10	23.8
		04/02/21	11-22	16.8
	S-41	05/14/21	5-10	29.0
	S-66	05/17/21	5-10	57
	S-67	05/17/21	5-10	38
	S-83	06/01/21	21	85

Soil Removal Area Boundary Samples	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Samples at Lateral Limits (Excavation Sidewalls) of Contaminated Area Excavations	S-68	06/01/21	27	3.1
	S-69	06/01/21	27	7.2
	S-70	06/01/21	21	6.8
	S-71	06/01/21	21	3.0
	S-72	06/01/21	21	1.6
	S-73	06/01/21	21	3.2
	S-74	06/01/21	21	1.8
	S-75	06/01/21	21	7.5
	S-80	06/01/21	5-10	15
		06/01/21	18-24	15
	S-82	06/01/21	21	11
	S-84	06/01/21	12	7.1
	S-86	06/01/21	12	12
	S-87	06/01/21	12	3.9
	S-88	06/01/21	15	4.6
	S-89	06/01/21	15	8.0
	S-91	06/01/21	15	1.4
	S-93	06/01/21	15	1.8
	S-94	06/01/21	15	1.8
	S-95	06/01/21	15	1.5
	S-96	06/01/21	18	2.3

Table 2
Summary of Soil Analytical Results for Arsenic in Soil Removal Areas

Soil Removal Area Samples	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Samples at Lateral Limits (Excavation Sidewalls) of Contaminated Area Excavations (cont.)	S-97	06/01/21	5-10	3.6
		06/01/21	18-24	10
	S-98	06/01/21	5-10	8.3
		06/01/21	18-24	4.6
	S-99	06/01/21	5-10	7.4
		06/01/21	18-24	14
	S-100	06/01/21	5-10	4.0
		06/01/21	18-24	2.5
	S-101	06/01/21	15	7.8
	S-102	06/01/21	15	3.2
	S-103	06/01/21	21	1.7
	S-104	06/01/21	12	2.6
	S-105	06/11/21	21	2.7
	S-108	8/17/2021	24	1.8
	S-109	8/17/2021	24	1.7
	S-110	8/17/2021	24	2.7
	S-111	8/17/2021	24	5.3
	S-112	8/18/2021	18	2.5
	S-113	8/18/2021	18	2.5
	S-114	8/18/2021	18	1.7
	SW-N	8/17/2021	24	2.2
	SW-W	8/17/2021	24	1.7
	SW-S	8/17/2021	24	3.9
	SW-E	8/17/2021	24	4.5
Samples at Vertical Limits (Excavation Bottom) of Contaminated Area Excavations	S-31	05/14/21	48-54	6.6
	S-36	05/14/21	36-42	3.4
	S-37	05/14/21	36-42	16
	S-38	05/14/21	28-34	5.2
	S-41	05/14/21	30-36	3.0
	S-42	05/14/21	18-24	2.0
	S-46	05/14/21	24-30	1.4
	S-47	05/14/21	26-32	3.6
	S-48	05/14/21	28-34	8.2
	S-49	05/14/21	24-30	1.8
	S-53	05/14/21	19-25	4.32

Table 2
Summary of Soil Analytical Results for Arsenic in Soil Removal Areas

Soil Removal Area Samples	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Samples at Vertical Limits (Excavation Bottom) of Contaminated Area Excavations (cont.)	S-54	05/17/21	41-47	17
	S-58	05/17/21	24-30	2.3
	S-59	05/17/21	41-47	6.3
	S-60	05/17/21	40-46	7.2
	S-66	05/17/21	30-36	2.0
		06/01/21	18-24	2.1
	S-67	05/17/21	30-36	4.9
		06/01/21	18-24	1.9
	S-76	06/01/21	21	2.8
	S-77	06/01/21	18	2.4
	S-79	06/01/21	36-40	3.1
	S-106	08/13/21	36	3.2
	S-107	08/13/21	36	1.8
	S-116	08/18/21	24	2.8
	Floor	08/17/21	24	2.3
Summary Statistics for Excavation Sidewall and Bottom Samples	**Summary Statistics**		**No. of Samples**	**71**
			Average	**4.8 mg/kg [2]**
			95% UCL [1,3]	**5.6 mg/kg**

Notes:

bgs: below ground surface

mg/kg: milligram per kilogram

MTCA: Model Toxics Control Act

UCL: Upper confidence limit

Refer to Figures 4A and 4B for sample locations.

Analytical Method: 6020B

* Samples represent soil that was removed and is not included in summary statistics. Other locations were removed based on visual observation of slag (see orange locations depicted on Figure 4A).

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level for arsenic is 20 mg/kg.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic in the Puget Sound Basin, which is 7.3 mg/kg (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Table 3
Arsenic Leaching Test Results

Sample Station	Sample Date	Arsenic (mg/kg)	Sample Depth (inches bgs)	TCLP Arsenic Concentration (mg/L)	SPLP Arsenic Concentration (mg/L)
S-41 [1]	05/14/21	29	5-10	< 0.060	< 0.060
S-66 [1]	05/17/21	57	5-10	< 0.060	< 0.060

Notes:
1. The soils associated with these samples have been removed and disposed of at an off-site landfill.

bgs: below ground surface

mg/kg: milligrams per kilogam

mg/L: milligrams per liter

NA: not analyzed

SPLP: synthetic precipitation leaching procedure (simulates exposure to rain water)

TCLP: toxicity characteristic leaching procedure (simulates exposure to municipal landfill leachate)

Table 4
Summary of Soil Analytical Results for Arsenic in Areas Free of Slag

Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
S-25	04/02/21	5-10	5.8
	04/02/21	11-22	2.8
S-26	05/14/21	5-10	2.2
S-27	05/14/21	5-10	18
S-28	05/14/21	5-10	2.1
S-29	05/14/21	5-10	6.0
S-30	05/14/21	5-10	1.7
S-32	05/14/21	5-10	3.9
S-33	05/14/21	5-10	6.7
S-34	05/14/21	5-10	8.4
S-35	05/14/21	5-10	4.2
S-39	05/14/21	5-10	4.2
S-40	05/14/21	5-10	7.7
S-43	05/14/21	5-10	8.5
S-44	05/14/21	5-10	16
S-45	05/14/21	5-10	1.7
S-50	05/14/21	5-10	5.3
S-51	05/14/21	5-10	4.7
S-52	05/14/21	5-10	1.5
S-55	05/17/21	5-10	2.8
S-56	05/17/21	5-10	4.4
S-57	05/17/21	5-10	3.8
S-61	05/17/21	5-10	2.9
S-62	05/17/21	5-10	2.2
S-63	05/17/21	5-10	5.6
S-64	05/17/21	5-10	6.1
S-65	05/17/21	5-10	2.9
S-78	06/01/21	5-10	5.8
	06/01/21	18-24	8.6

Table 4
Summary of Soil Analytical Results for Arsenic in Areas Free of Slag

Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Summary Statistics		No. of Samples	29
		Average	5.4 mg/kg [2]
		95% UCL [1,3]	6.9 mg/kg

Notes:
bgs: below ground surface

mg/kg: milligrams per kilogram

MTCA: Model Toxics Control Act

UCL: upper confidence limit

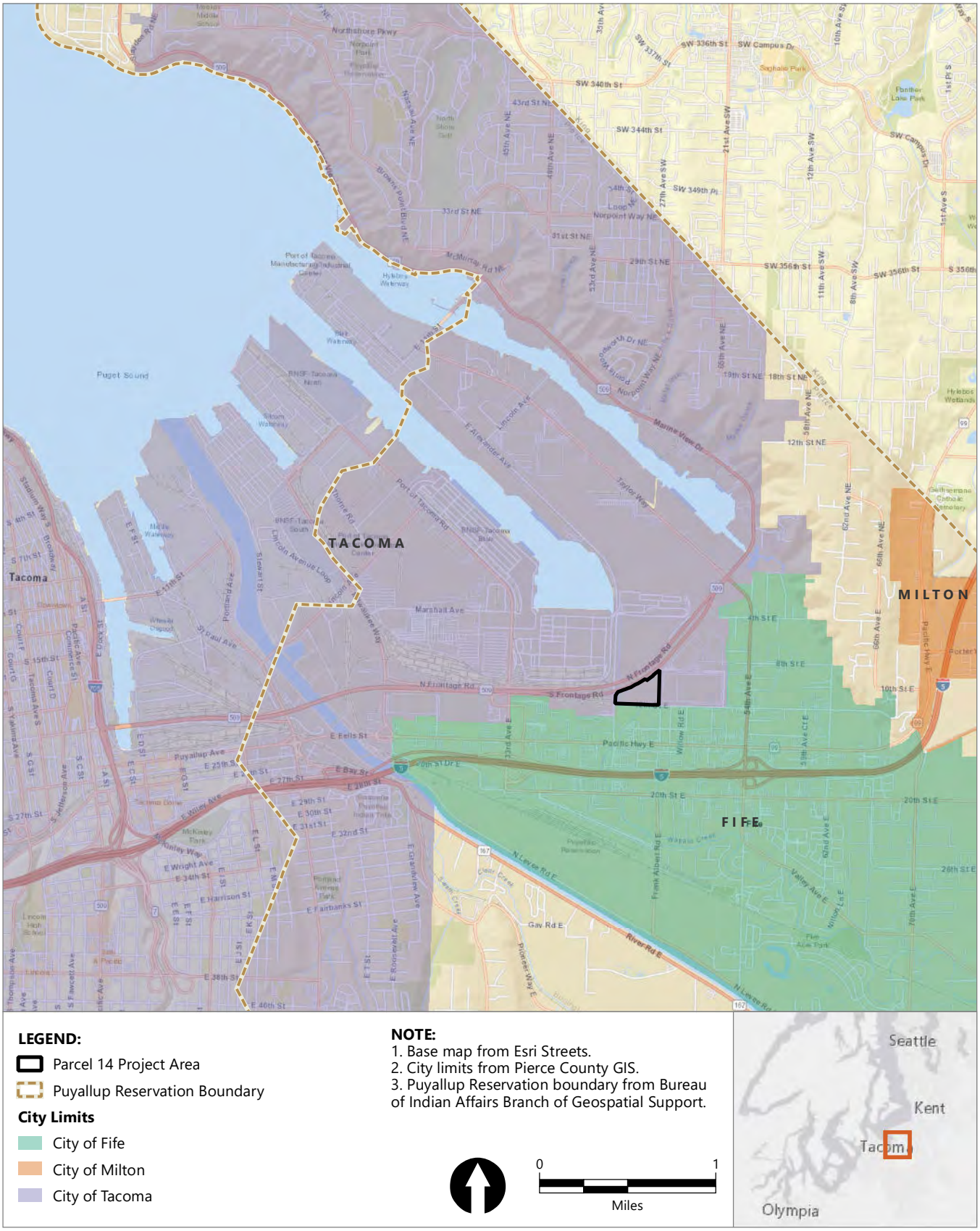
Refer to Figures 4A and 4B for sample locations.

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level is 20 mg/kg for arsenic.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic in the Puget Sound Basin, which is 7.3 mg/kg (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Figures



LEGEND:

- Parcel 14 Project Area
- Puyallup Reservation Boundary

City Limits

- City of Fife
- City of Milton
- City of Tacoma

NOTE:

1. Base map from Esri Streets.
2. City limits from Pierce County GIS.
3. Puyallup Reservation boundary from Bureau of Indian Affairs Branch of Geospatial Support.

0 1
Miles

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ANCHOR QEA

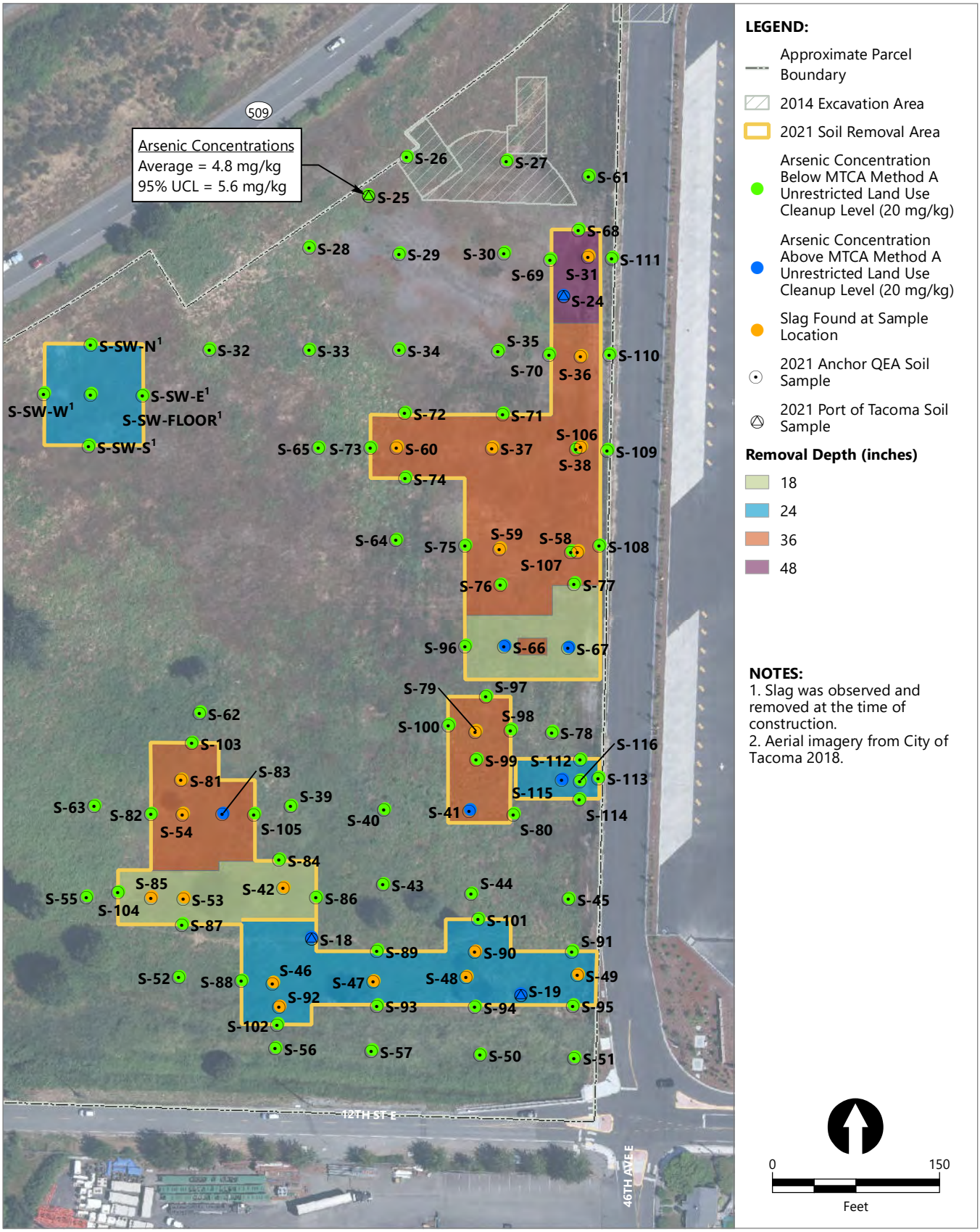
Figure 1
Vicinity Map
Parcel 14 Cleanup Action Report
Port of Tacoma



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ANCHOR QEA

Figure 2
Duff Layer Characterization Data
Parcel 14 Cleanup Action Report
Port of Tacoma



LEGEND:

- Approximate Parcel Boundary
- 2014 Excavation Area
- 2021 Soil Removal Area
- Arsenic Concentration Below MTCA Method A Unrestricted Land Use Cleanup Level (20 mg/kg)
- Arsenic Concentration Above MTCA Method A Unrestricted Land Use Cleanup Level (20 mg/kg)
- Slag Found at Sample Location
- 2021 Anchor QEA Soil Sample
- 2021 Port of Tacoma Soil Sample

Removal Depth (inches)

- 18
- 24
- 36
- 48

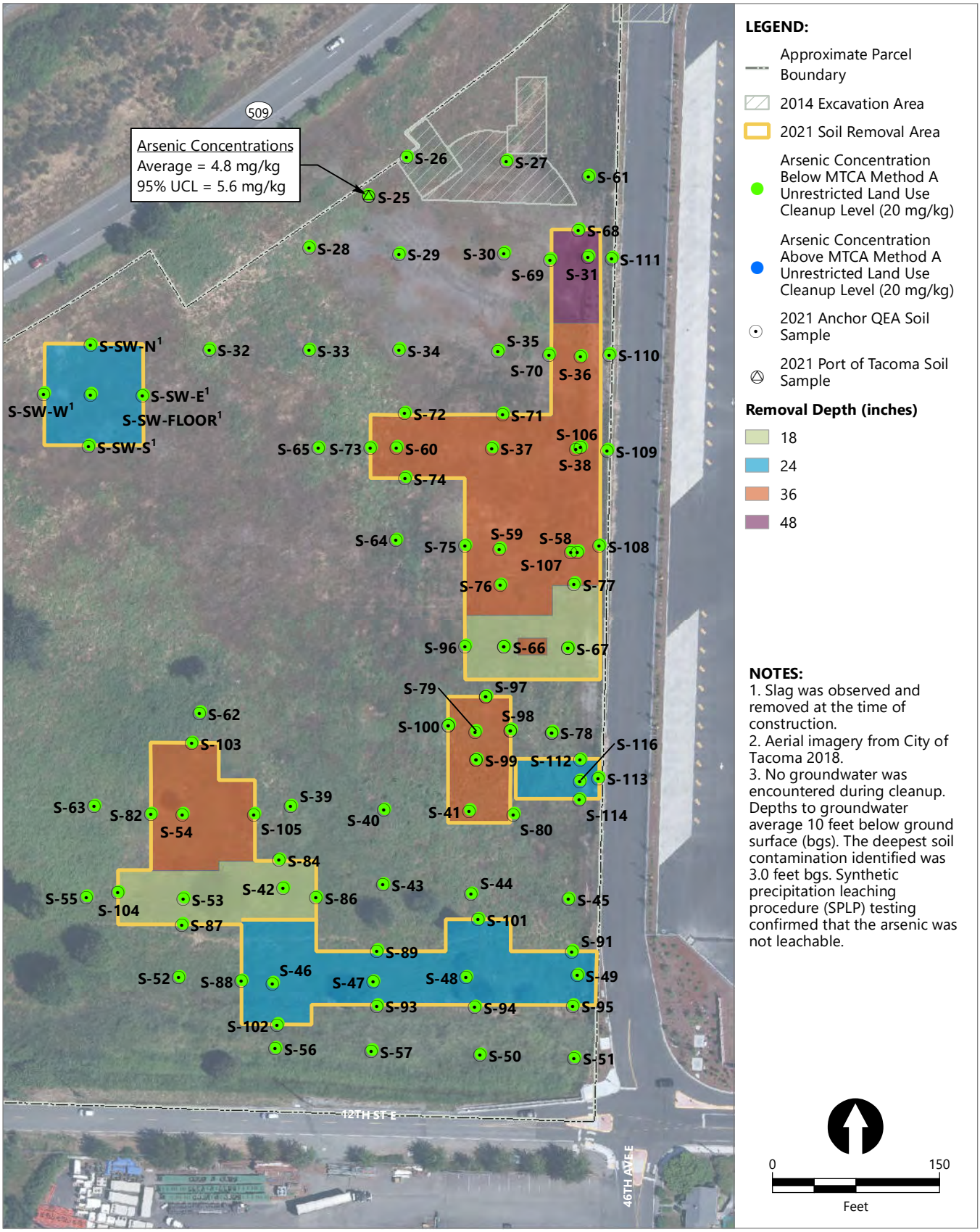
NOTES:
1. Slag was observed and removed at the time of construction.
2. Aerial imagery from City of Tacoma 2018.

0 150
Feet

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ANCHOR QEA

Figure 3
Delineation of Contaminated Soil Removal Areas
Parcel 14 Cleanup Action Report
Port of Tacoma

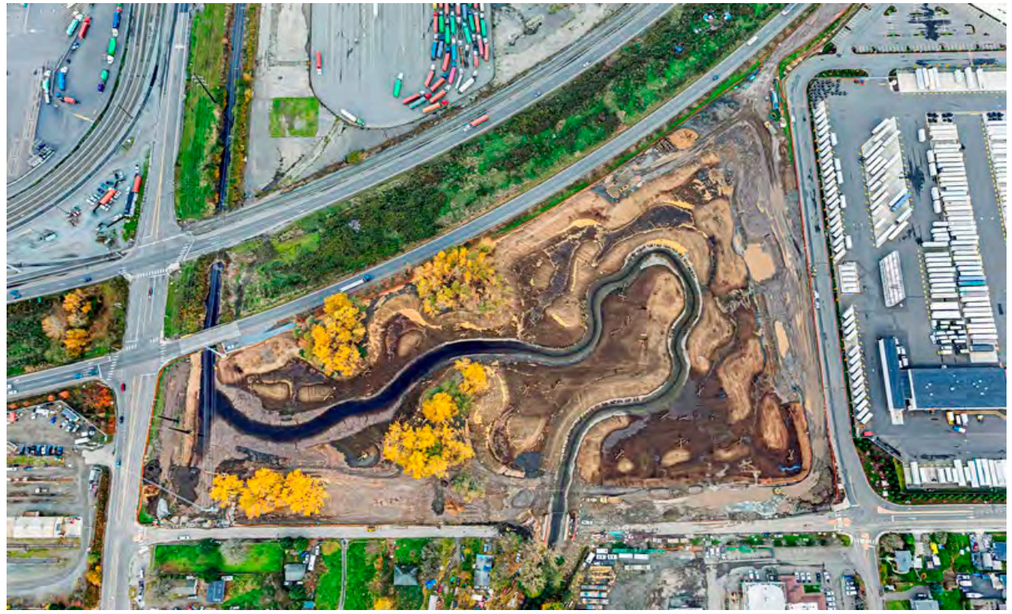


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Figure 4
Soil Arsenic Concentrations Remaining After Removal
Parcel 14 Cleanup Action Report
Port of Tacoma









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Figure 5
Site Following Cleanup (Pre-Planting)
Parcel 14 Cleanup Action Report
Port of Tacoma

Appendix A
GeoEngineers 2010 Site Investigation Report

Site Investigation

Port of Tacoma Parcel 14
Tacoma, Washington

for
Grette Associates LLC
and Port of Tacoma

December 6, 2010

GeoEngineers
Earth Science + Technology

Site Investigation

Port of Tacoma Parcel 14
Tacoma, Washington

File No. 0454-094-15

December 6, 2010

Prepared for:

Grette Associates LLC
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JWP:DSP:tt

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GeoEngineers

Table of Contents

INTRODUCTION **1**

SCOPE OF SERVICES **1**

Hydrogeology and Environmental Task 1

PROJECT DESCRIPTION **3**

SITE HISTORY **4**

SITE CONDITIONS **4**

General 4
Topography 5
Vegetation 5
Geologic History of the Port of Tacoma 5
- Geomorphic Setting 5
- Geologic History 5
- Human Modification 6
- Post-Vashon Geologic Units 6

INVESTIGATION **7**

Subsurface Explorations 7
- Soil Units and Target Zones 7

Chemical Analyses 8
- Soil Sampling 8
- Groundwater Quality Sampling 8

Water Level Monitoring 8

RESULTS **9**

Soil Conditions 9
- General 9
- Fill 9
- Native Alluvium 9

Wetland Soils Conditions 10
Groundwater Levels During Subsurface Explorations 10
Chemical Analyses Results 11
- Soil 11
- In-Field Groundwater Quality 11

Water Level Monitoring Results 12
- Groundwater Levels 12
- Wapato Creek Levels 13

SUMMARY **13**

Site History 13
Chemical Analytical Results 13
Groundwater Water Quality 14
Water Levels 14
Suitability of Constructed Wetland 14

RECOMMENDATIONS **15**

LIMITATIONS **15**

LIST OF TABLES

Table 1. Summary of Chemical Analytical Results for Petroleum and Metals - Soil
Table 2. Summary of Chemical Analytical Results for VOCs, SVOCs, Pesticides, Herbicides and PCBs – Soil
Table 3. Summary of In-Field Water Quality Sampling Results
Table 4. Summary of Groundwater Monitoring Data

LIST OF FIGURES

Figure 1. Vicinity Map
Figure 2. Site Plan – Proposed Actions
Figure 3. Existing Features and Explorations
Figure 4. Approximate Fill Locations, Thicknesses and Sources
Figure 5. Cross Section A-A'
Figure 6. Cross Section B-B'
Figure 7. Groundwater Levels and Creek Stage Heights at Parcel 14

APPENDICES

Appendix A. Historical Aerial Photographs
Appendix B. Exploration Methods and Exploration Logs
- Figure B-1. Key to Exploration Logs
- Figures B-2 through B-5. Logs of Monitoring Wells
- Figures B-6 through B-10. Logs of Borings
- Figures B-11 though B-37. Logs of Test Pits

Appendix C. Wetland Soils Methods and Characteristics Description
Appendix D. Chemical Analytical Data
Appendix E. Report Limitations and Guidelines for Use

INTRODUCTION

This report summarizes the results of a hydrogeologic and environmental investigation of Parcel 14 completed as a basis for evaluating its suitability for the construction of wetland and stream mitigation associated with the Port of Tacoma's (Port) Blair Waterway development efforts. Parcel 14 (Parcel No. 0320013145) is owned by the Port and is located southeast of the intersection of State Route 509 (SR 509) and Alexander Avenue and north of 12th Street East as shown on the Vicinity Map, Figure 1. The investigation was completed for Grette Associates, LLC (Grette) on behalf of the Port.

The purpose of the investigation, stemming from requests from U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA), was to evaluate the subsurface conditions beneath Parcel 14, the site of a proposed constructed forested wetland and stream reconfiguration (the Project). There were three major goals of the investigation: 1) evaluate the suitability of the soils to support a wetland environment, 2) analyze the soils for potential contamination, and 3) install monitoring wells to collect groundwater levels before and during the upcoming growing season.

Currently, Parcel 14 is an undeveloped parcel that was historically filled by materials presumed to originate from dredging activities in the Tacoma Tideflats. It is relatively flat and vegetated with upland grass, shrubs and sparse trees. Wapato Creek flows within a steep-sided, deep channel straight west from the midpoint of the southern parcel boundary and then straight north along the western parcel boundary. The proposed wetland mitigation actions preliminarily designed by Grette are to excavate a 7.64-acre area in Parcel 14 to construct a depressional forested wetland and to reconfigure the Wapato Creek channel by developing a meander and vegetated bench. The site plan of the proposed actions is shown on Figure 2.

SCOPE OF SERVICES

The subsurface investigation at Parcel 14 was completed in cooperation with Grette and the Port. A preliminary investigation included the drilling of nine borings, the installation of four monitoring wells, soil and groundwater sampling, and the installation of water level monitoring equipment. The investigation was expanded to include an extended water level monitoring period, test pit excavations and further soil sampling near B-5 where arsenic was detected during the preliminary investigation. For the entire investigation, we completed the following scope of services:

Hydrogeology and Environmental Task

- Reviewed readily available hydrogeologic information, including well logs, hydrographs and published hydrogeologic reports for information on hydrogeologic characteristics in the site vicinity.
- Prepared a Health and Safety Plan for use by our personnel during site exploration and field activities.
- Notified the one-call utility locate service to check for underground utilities in accordance with Washington State requirements.

- Retained a drilling subcontractor for the project to drill nine boreholes to approximately 15 to 20 feet below ground surface (bgs) using hollow-stem auger drilling techniques. A track-mounted rig was used.
- Collected representative soil samples from the four target zones (fill, buried pre-fill soil horizon, designed excavation surface and underlying native soils) in each borehole for potential chemical analyses. We submitted up to five soil samples from each of the four target zones for chemical analysis. Remaining samples were placed on 'hold' pending the analytical results of the initial samples.
- Analyzed soil samples for Resource Conservation and Recovery Act (RCRA) 8 metals plus copper and zinc, Washington State Department of Ecology (Ecology)-approved NWTPH-HCID with follow-up analysis for diesel- and heavy oil-range petroleum hydrocarbons by Ecology-approved NWTPH-Dx and/or gasoline-range petroleum hydrocarbons by Ecology-approved NWTPH-Gx, as applicable. Samples, selected based on field screening, were analyzed for semivolatile organic compounds (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, and volatile organic compounds (VOCs) by EPA Method 8260. In addition to the analyses listed above, representative soil samples from the buried pre-fill soil horizon were analyzed for chlorinated pesticides by EPA Method 8151A and organochlorine herbicides by EPA Method 8081A.
- Collected additional soil samples from each boring for potential future geotechnical analysis (the geotechnical task is not authorized at this time). These additional soil samples are stored at GeoEngineers' Tacoma office.
- Completed four 2-inch-diameter polyvinyl chloride (PVC) monitoring wells with aboveground monuments.
- Documented potential hydric soil conditions in accordance with the 2006 "Field Indicators of Hydric Soils in the United States, Version 6.0" G.W. Hurt and L.M. Vasilas (eds.) USDA-NRCS.
- Conducted in-field analyses of groundwater samples collected at the four monitoring wells and Wapato Creek. Parameters include pH, conductivity, temperature, dissolved oxygen and salinity.
- Equipped the four monitoring wells with pressure transducers/dataloggers to record groundwater levels and water temperature every 10 minutes. Installed a staff gage in the nearby Wapato Creek to monitor stage heights and water temperature.
- Downloaded water level data from dataloggers approximately one week after installation. Additional downloads were conducted approximately one to two months thereafter until the end of the monitoring period that was extended to the end of September 2010.
- Downloaded tidal data for selected periods to compare to surface water and groundwater levels. Spreadsheets and plots of water level data were developed.
- Retained an excavation contractor to excavate test pits. A total of 27 test pits were excavated to further evaluate the soils in and around the vicinity of the original Wapato Creek channel and near borehole B-5 to collect additional environmental samples. Pits generally were excavated to the depth of the groundwater table. The excavation took place on October 13, 2010 when the groundwater table was relatively low.

- Recorded on-site observations of subsurface soils during excavation of test pits.
- Collected seven samples of fill soils from test pits excavated in the vicinity of B-5, where arsenic was detected during the preliminary investigation. Samples were submitted for analysis for RCRA 8 metals.
- Reviewed historical aerial photos taken between 1931 and 2009 to evaluate the timing and extent of fill placed in the original Wapato Creek channel that crosses the proposed constructed wetland excavation area on Parcel 14. The City of Tacoma's govME website has aerial photos of Parcel 14 from 1950 and 1973 that indicate the filling occurred sometime between those two dates. We reviewed available digital photos taken of the site during this data gap. The digital photos were requested from Parcel Insight (PI), a local provider of historical aerial photos. Other digital photos were requested from the United States Geological Survey (USGS).
- Reviewed a site-specific study of shallow groundwater at the nearby Portac log yard site, located directly to the north of Parcel 14.
- Prepared a written draft report presenting our conclusions and recommendations relative to the authorized tasks together with supporting field and laboratory data, including a description of field methods, borehole soil logs, monitoring well construction details, chemical analysis results and our evaluation of the data.
- Prepared this revised site investigation report that includes updated conclusions and recommendations, expanded site history and geologic history sections, test pit logs, chemical analysis results and our evaluation of the entire water level elevation dataset.

The original scope included the evaluated pertinent physical and engineering characteristics of site soils based on the results of the explorations. We did not conduct analyses for moisture content, grain size and organic content because the geotechnical engineering task was not approved. However, we obtained and stored selected samples for potential future laboratory testing.

PROJECT DESCRIPTION

The Project is the proposed construction of a forested wetland and stream channel reconfiguration at Parcel 14 to provide wetland and stream mitigation for proposed development by the Port on the Blair-Hylebos peninsula. We understand that the wetland portion of the Project includes excavation to between approximately 13 and 16 feet bgs to provide an environment for a constructed forested wetland. The proposed bottom of the wetland excavation is to be at approximately Elevation 8 feet (Mean Lower Low Water [MLLW]), with upland islands at approximately Elevation 15 feet MLLW. Note that the elevations of the well sites and monitoring points were surveyed by Apex Engineering using the Port of Tacoma Tidal Datum, which is equivalent to MLLW. Realignment of Wapato Creek includes excavation of a meander north of its current channel. The bottom of the proposed channel is planned at 8 to 11 feet bgs (Elevation 8 to 10 feet MLLW). The total estimated excavated/graded area is approximately 543,000 square feet, with a volume of approximately 161,000 cubic yards.

SITE HISTORY

To form an understanding of the history of the site, we reviewed various site-specific and regional studies and reports, historical topographic maps, aerial photographs, and historical information obtained during discussions with Port personnel. We obtained historical aerial photographs from 1931, 1940, 1941, 1950, 1957, 1968, 1973, 1990, 1996, 1998, 2005, 2006 and 2009. These aerial photographs are presented in Appendix A. Based on the gathered information, we developed the following summary of site history:

- Prior to development, the Project site was a tidally influenced salt marsh and Wapato Creek flowed in several small channels.
- Sometime before 1931 the site was developed for agriculture and Wapato Creek generally flowed in a single channel in the approximate location shown on Figure 3.
- Farming continued on the site until sometime between 1957 and 1968.
- Fill was placed in the area between 1964 and 1968 based on discussions with Port personnel and the *Geology of the Port of Tacoma* report (Hart Crowser, 1975). The fill material was likely hydraulically placed spoils derived from the dredging during the expansion of the Blair and Hylebos waterways.
- Around the time of fill placement, Wapato Creek was diverted from the historical channel to the current location shown on Figure 3.
- After filling, it appears that the site remained vacant and undeveloped until about 1990.
- We understand that in 1990 a portion of the site was leased to PORTAC, who currently operates a log yard to the north of the site. Based on discussions with Port personnel, PORTAC stored logs and equipment on the leased portion of the stie. Review of an aerial photo from 1990 suggests that clearing, grading and minor filling associated with PORTAC's use may have occurred in the northeastern portion of the site. PORTAC's lease appeared to be for a relatively short duration, as the site was again vacant and covered with brush by 1996.
- From 1996 to present, the site has been undeveloped, but may have undergone periodic maintenance by clearing or mowing.

SITE CONDITIONS

General

Properties surrounding the Project area are currently occupied by residential, commercial and industrial facilities. The site is bordered to the north by eastbound SR 509, west by Alexander Avenue East, south by 12th Street East and east by commercial facilities. Directly south of Parcel 14 are single-family residences and commercial facilities. Other Port facilities and properties are located north of SR 509.

Topography

The topography of the Project area is relatively flat, with a gradual slope down to the west. The surface elevation of Parcel 14 ranges from approximately Elevation 18 feet to 24 feet MLLW. The current channel bottom of Wapato Creek ranges from approximately Elevation 8 to 10 feet MLLW.

Vegetation

The proposed wetland mitigation area on Parcel 14 is dominated by the invasive shrub species of Himalayan blackberry (*Rubus armeniacus*) and scotch broom (*Cytisus scoparius*). Herbaceous species of orchard grass (*Dactylis glomerata*) and colonial bentgrass (*Agrostis capillaries*) were observed interspersed with the shrub and within clearings. Trees on Parcel 14 are predominately Black cottonwood (*Populus balsamifera*). Most of the trees are located on the western half of the parcel in stands that are outside the proposed wetland and stream excavation areas.

Geologic History of the Port of Tacoma

Geomorphic Setting

The Port is situated on the delta formed at the mouth of the Puyallup River as it enters Commencement Bay. Prior to human modification, this delta consisted of a tidal marsh extending to approximately between present-day Lincoln Avenue and 11th Street, located approximately 1.5 miles northwest of Parcel 14, and a tidal flat that was exposed only during the lowest tides and extended approximately to the line formed by the seaward ends of the present-day peninsulas approximately 3 miles northwest of Parcel 14.

The Puyallup River delta is a prograding delta, meaning that, during recent geologic history, it has been advancing toward Commencement Bay as the Puyallup River deposits sediment near the mouth. Based on the *Geology of the Port of Tacoma* report (Hart Crowser, 1975), the general model of delta progradation begins with deposition of a series of clayey and silty deep-water beds known as prodelta deposits. These beds are overlain by a thick series of inclined sandy delta-front deposits known as foreset beds. Silt layers and lenses are often present within the delta-front deposits. The foreset beds are in turn overlain by silty and clayey shallow water beds called delta-plain deposits or topset beds. Generally, an abundance of sand deposits indicates periods of relatively high-energy deposition and a rapid rate of delta progradation, while more abundant silt characterizes periods of low-energy deposition and little or no delta progradation.

Geologic History

Prior to about 14,000 years ago (14 ka), during the Vashon Stade of the Frasier Glaciation, Puget Sound was covered by thick glacial ice. Between 14 ka and 13 ka, the glacial ice retreated northward uncovering deep marine embayments, including the Puyallup embayment, throughout Puget Sound (Dragovich, et. al, 1994). The Vashon Stade ended about 13 ka, when ice retreat opened the Strait of Juan de Fuca and allowed marine inundation of Puget Sound and the marine embayments. From about 13 ka to 9 ka, isostatic rebound after glacial retreat created an erosional environment in the Puyallup embayment and resulted in little to no marine deposition. After about 9 ka, isostatic rebound slowed and marine waters filled the embayments, resulting in increased deposition and the beginning of progradation of the Puyallup delta. During this time period, the Puyallup delta is thought to have been located near the City of McMillin, approximately

15 miles upstream of Commencement Bay. Delta progradation continued until about 5 ka, at which time the Puyallup delta had advanced to the northwestern outskirts of the City of Puyallup.

Approximately 5.7 ka, an eruption of Mount Rainier caused a massive mudflow known as the Osceola Mudflow. Calculations indicate that the minimum volume of the Osceola Mudflow was 0.89 cubic miles (about 4.8 billion cubic yards), and the estimated areal extent of the flow was at least 71 square miles. The Osceola Mudflow originated on the summit and northeastern flank of Mount Rainier and flowed down the White River valley, spilling into the Puyallup River valley and extending into the Puyallup embayment beyond the current location of the Port (Dragovich, et. al, 1994). In the vicinity of the Port, this deposit is currently between about 250 to 300 feet bgs.

After the Osceola Mudflow, progradation of the Puyallup delta continued, advancing the delta front down the Puyallup embayment past the City of Fife, to its current location. The average Puyallup delta progradation rate over the past 5,700 years is about 8 feet/year, indicating a very high sedimentation rate.

Human Modification

As part of the growth of Tacoma and the Port, much of the Puyallup delta has been developed to create usable land. The Puyallup River and creeks throughout the delta were channelized and/or re-routed to facilitate development and control flooding. The Blair and Hylebos waterways were dredged and built to their current configurations to improve shipping access and increase deepwater shoreline. Fill, much of which was derived from dredging of the waterways, has been placed over most of the natural ground surface in the Port. Developed portions of the Port northwest of 11th Street may be underlain by as much as 25 feet of fill.

Post-Vashon Geologic Units

FILL

As discussed above, fill covers much of the natural ground surface in the Port. The properties of the fill vary greatly depending on the source and type of fill, as well as the method of placement. Evidence suggests that much of the fill was placed without any engineering design or inspection. Significant portions of the fill consist of uncompacted, hydraulically placed sand and silt collected during dredging of the waterways. Some areas of the Port were historically used as landfills, and various types of debris may be present in different areas of the fill.

ALLUVIUM

Underlying the fill material, the native soils in the Port are generally alluvial sand and silt deposits. The composition ranges from very dense sand with trace silt to very soft silt with trace sand, and includes a variety of relative densities and grain-size distributions between these end members. Alluvium thickness in the Port ranges from less than 50 feet near the northwest and southeast edges of the Port area to over 300 feet near the ends of the current peninsulas.

OSCEOLA MUDFLOW

Within the alluvium unit, at a depth of about 250 to 300 feet bgs, Osceola Mudflow deposits are present. The Osceola Mudflow deposits are typically loose to medium dense silty sand with gravel or sandy silt with gravel and often have random inclusions of wood and occasional cobbles and

boulders. It is generally thought that other mudflow deposits may be present within the alluvium unit; however, they are generally not differentiated.

INVESTIGATION

Subsurface Explorations

Nine borings were completed during the preliminary investigation on October 28 and 29, 2009 at the locations shown on Figure 3. The borings were completed using track-mounted, hollow-stem auger drilling equipment owned and operated by Holocene Drilling of Edgewood, Washington, under subcontract to GeoEngineers. Borings B-1 through B-5 extended from the ground surface to depths ranging from 15 to 19 feet bgs. Four of the borings, all located within the proposed wetland excavation area, were drilled to approximately 20 feet bgs. These four borings were completed as 2-inch-diameter PVC monitoring wells (MW-1 through MW-4). Each of the wells consists of 10 feet of 2-inch PVC casing over 10 feet of 0.020-inch-slot screen packed with 10x20 silica sand.

To supplement the soil borings, we excavated 27 test pits on October 13, 2010, at the locations shown on Figure 3. The 27 test pits, labeled TP-1 through TP-27, were completed using a rubber-tired backhoe owned and operated by Homestead Excavating of Lakewood, Washington, under subcontract to GeoEngineers. Test pits were excavated from the ground surface to depths ranging from about 2.5 to 15 feet bgs.

Soil samples were collected from each of the borings and test pits. The samples were examined, visually classified and screened in the field for indications of petroleum hydrocarbons by a representative from GeoEngineers. The soil samples from the borings were also examined and described according to wetland soil characteristics and nomenclature.

Field activities are described in detail and summary boring and test pit logs are presented in Appendix B. The wetland-related field activities and soil descriptions are presented in Appendix C.

Soil Units and Target Zones

Soil samples were collected from each of the nine boreholes during the preliminary investigation for potential chemical analyses to evaluate four target zones, presented in descending order:

1. Fill soils - The fill soils were a target zone because they are likely to be excavated at each of the borehole locations. The fill was found to be relatively uniform in composition and grain size in the borings and, thus, samples were composited for this target zone. Distinct fill layers were observed in the test pits, and discrete soil samples were collected to evaluate the extent of arsenic contaminated soil.
2. Buried pre-fill soil horizon - The buried pre-fill soil horizon is a target zone because of the potential for chemical application within this zone associated with agricultural activities.
3. Proposed (designed) excavation surface - The proposed excavation surface was a target zone in order to evaluate the soils that would be exposed at the surface as a result of the Project.
4. Native soils - The underlying native soils were a target zone because of the potential for excavation during the construction of the wetland. The samples from this zone were to be

analyzed only if contamination was found in the third target zone (excavation surface) immediately above.

Soil samples from only the fill soils target zone were collected within 27 test pits excavated during the expanded investigation.

Chemical Analyses

Soil Sampling

At least one soil sample from the four target zones in each borehole was collected for potential analysis. However, only samples from five of the boreholes and the upper three target zones were analyzed. No samples from the native soil target zone (target zone 4) were analyzed because contaminants were not found at the overlying proposed excavation surface (target zone 3).

Fifteen soil samples from five boreholes were submitted for chemical analysis to Analytical Resources, Inc. (ARI) laboratory in Tukwila, Washington, following appropriate chain-of-custody procedures. The samples were submitted for hydrocarbon identification with appropriate follow-up of gasoline-, diesel- and lube oil-range petroleum hydrocarbons (using Ecology Methods NWTPH-HCID, NWTPH-Gx and NWTPH-Dx, respectively), RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) plus copper and zinc (using EPA Method 6000/ 7000 Series), VOCs (using EPA Method 8260), SVOCs (using EPA Method 8270) and PCBs mixtures (using EPA Method 8082).

The samples collected from the buried pre-fill soil horizon were also submitted for chemical analysis of chlorinated pesticides by EPA Method 8151A and organochlorine herbicides by using EPA Method 8081A.

Seven test pits, TP-3 through TP-6 and TP-25 through TP-27, were excavated in the northeastern portion of Parcel 14 in the vicinity of borehole B-5 where arsenic was detected during the preliminary investigation in 2009 (described below in the "Chemical Analysis Results" section). Selected soil samples from these test pits were submitted for chemical analysis to evaluate the vertical and lateral extent of arsenic contaminated soil detected in boring B-5.

Groundwater Quality Sampling

Groundwater sampling for field water quality parameters was conducted for monitoring wells MW-1 through MW-4 on October 30, 2009. Groundwater sampling methods are described in more detail in Appendix B.

Water Level Monitoring

Pressure transducers/dataloggers were installed in the four monitoring wells (shown on Figure 3) to record groundwater levels between October 30, 2009 and September 30, 2010. A 2-inch-diameter PVC pipe and a sensor/datalogger was installed on November 19, 2009 in Wapato Creek beneath the eastbound crossing of SR 509. The pipe, acting as a stilling well to calm wave action, was marked at 0.1-foot increments and served as a staff gage for relative stage heights of the creek.

RESULTS

The following section presents our interpretation of subsurface conditions beneath Parcel 14 and the results of chemical analyses and water level monitoring.

Soil Conditions

General

Subsurface soils encountered in our explorations generally consisted of fill overlying native soil, except in the southwestern portion of the site, where fill was not observed. The contact between the fill and the underlying native soil was generally marked by: coarser materials of fine to medium sand; darker brown/gray color; and/or, an organic horizon indicative of the pre-fill ground surface.

Fill

The fill observed in our explorations generally consisted of sandy silt and silty sand with variable amounts of organics (primarily roots and wood). We interpret at least four different periods of filling and/or re-working of fill material at this site based on our explorations and our understanding of site history:

- Prior to filling, much of the site was disturbed and re-worked from the ground surface to depths of about 1 to 2 feet by plowing and/or tilling as part of the agricultural use of the site.
- The historical Wapato Creek channel and the portion of the site east of the channel were covered with hydraulically placed fill material associated with dredging of the Blair and Hylebos waterways.
- Around the time of fill placement, Wapato Creek was diverted from the historical channel to the current location shown on Figure 3. Spoils generated during excavation of the new channel were generally piled alongside the new channel, creating a fill berm along portions of the southern and western boundaries of the site.
- Minor filling and grading likely occurred during PORTAC's use of the site around 1990. The fill observed in the northwestern portion of the site may be associated with either the hydraulic fill placement or PORTAC's filling and grading activities.

Figure 4 shows our interpretation of fill conditions on Parcel 14, including location, approximate thickness, and interpreted fill types and sources.

Slag deposits within the fill were observed in four of the seven test pits excavated near borehole B-5. The slag is a potential source of arsenic contamination. The slag likely originated from the ASARCO refinery at Ruston and was brought to Parcel 14 within the fill, potentially during PORTAC's use of the site. Occasional slag was observed from approximately 0 to 5 feet bgs in test pit TP-3, from 0 to 1.5 feet bgs in test pits TP-4 and TP-5, and from 0 to 1 feet bgs in test pit TP-26. Slag was not observed in test pits TP-6, TP-25 and TP-27.

Native Alluvium

Beneath the fill material, our explorations generally encountered native soil to the full depths explored, except in the southwestern portion of the site, where native soils were observed from the

ground surface to the full depths explored. Native soils were observed to generally consist of fine to medium sand, silty sand and silt, interpreted to be native alluvial deposits. The finer-grained silty deposits were likely deposited in the tidal marsh and during flooding events and coarser-grained sandy deposits were likely deposited in the channel of Wapato Creek as it migrated across the tidal marsh.

SUBSURFACE CROSS SECTIONS

Two cross sections were developed to provide a schematic summary of our general subsurface interpretations relative to the proposed constructed wetland excavation. Cross section A-A' (Figure 5) shows a west to east section through both the proposed realigned Wapato Creek channel and the forested wetland area, from approximately Alexander Avenue to the eastern boundary of Parcel 14. Cross section B-B' (Figure 6) shows a southwest to northeast section through both the proposed realigned Wapato Creek channel and the forested wetland area, from approximately 12th Street East to the northeastern corner of Parcel 14.

As shown on Figures 5 and 6, we anticipate that the planned excavations will be terminated in native alluvium deposits, generally either silty sand or sand. In general, we anticipate that the planned excavations will encounter moist soils above the groundwater table. Only the lower 1 to 4 feet of the excavations are expected to extend below the groundwater table observed at the time of our test pit excavations.

Wetland Soils Conditions

A description of the observation methods used by the GeoEngineers biologist is presented in Appendix C. Soil samples were observed to show similar soil texture, color and hydric soil characteristics at each boring location. The fill soil, encountered from ground surface to approximately 8.5 feet bgs, contained redoximorphic (redox) features throughout. The redox features included redox concentrations, oxidized rhizospheres and reduced soil that are indicators of hydric soils. Redox features, such as redox concentrations and oxidized rhizospheres, are typically observed in soil where fluctuations between aerobic and anaerobic conditions have occurred. The redox concentrations were observed in the form of pore linings, oxidized rhizospheres, and redox depletions, indicated by a gray soil color.

The native soil profile, encountered below the fill to the total depth explored, contained wetland hydrology features throughout. A hydrogen sulfide odor, an indicator of a reducing environment, was typically observed at and within the saturated soil encountered at approximately 8.5 to 12 feet bgs. Tabulated wetland soils characteristics descriptions are provided in Appendix C.

Groundwater Levels During Subsurface Explorations

Groundwater is present in the fill and native soil units as an unconfined water table. At the time of exploration on October 28 and 29, 2009, groundwater was encountered in all of the borings in the native soil unit at depths ranging from approximately 8.5 to 12 feet bgs. During the test-pit excavation, on October 13, 2010, groundwater was observed between 9 and 13 feet bgs. Groundwater was not observed in 14 of the 27 test pits excavated between 2.5 and 15 feet bgs.

Chemical Analyses Results

Soil

Sample locations and chemical analytical results for soil are presented in Table 1 and Table 2 (attached). Boring and test pit locations are shown on Figure 3. No sheen, petroleum odor or other indications of potential contaminants were observed in the fill or native material. Analytical results are discussed below relative to Model Toxics Control Act (MTCA) Method A unrestricted land use (ULU) cleanup levels for soil. The laboratory chemical analytical data report is attached as Appendix D.

PETROLEUM HYDROCARBONS

- Gasoline-range petroleum hydrocarbons were not detected in the soil samples submitted for chemical analysis.
- Diesel- and heavy oil-range petroleum hydrocarbons were not detected in the soil samples submitted for chemical analysis.

VOCS

- VOCs were either not detected or were detected at concentrations less than the respective MTCA Method A ULU or Method B cleanup levels in the analyzed soil samples.

SVOCS

- SVOCs were either not detected or were detected at concentrations less than MTCA Method A ULU or Method B cleanup levels in the analyzed soil samples.

PCBS

- PCBs were not detected in the soil samples submitted for chemical analysis.

METALS

- Arsenic was detected at concentrations greater than the MTCA Method A ULU cleanup level (20 milligrams per kilogram [mg/kg]) in soil samples B5-7C and TP3-3-5 (53 mg/kg and 152 mg/kg, respectively). Soil sample B5-7C was a composite sample collected from within the fill unit in boring B-5 between 0 and 7 feet bgs. Soil sample TP3-3-5 was collected within a distinct layer within the fill containing slag from 3 to 5 feet bgs. Test pit TP-3 was completed adjacent to boring B-5. Arsenic was either not detected or was detected at concentrations less than the respective MTCA Method A ULU cleanup level in the other analyzed soil samples.
- All other metals tested for were either not detected or were detected at concentrations less than MTCA Method A ULU cleanup levels.

PESTICIDES

- Chlorinated pesticides were not detected in the soil samples submitted for chemical analysis.

HERBICIDES

- Organochlorine herbicides were not detected in the soil samples submitted for chemical analysis.

In-Field Groundwater Quality

The results of the in-field analysis of groundwater quality in the four monitoring wells are summarized in Table 3 below. A major concern of the groundwater quality was whether there was relic saltwater or brackish water that may inhibit wetland plant growth. Indicators of salinity include high conductivity (greater than 1,000 microSiemens) or salinity (greater than 0.05 percent). The results indicated that the groundwater has no evidence of salinity and is within

the expected range for background concentrations for fresh water. Parameters of pH and dissolved oxygen are also within the expected range for shallow groundwater. A negative oxidation reduction potential indicates a reducing environment, which confirms field observations of soil indicators and hydrogen sulfide odor.

TABLE 3. SUMMARY OF IN-FIELD WATER QUALITY SAMPLING RESULTS

Well Name	Salinity (percent)	Conductivity (microSiemens)	pH (pH units)	Dissolved Oxygen (ppm)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	0.00	51	5.8	6.1	-133	>1,000
MW-2	0.00	112	6.7	6.9	-59	>1,000
MW-3	0.00	98	6.5	4.8	-53	>1,000
MW-4	0.00	91	6.5	6.1	-155	>1,000

Water Level Monitoring Results

Groundwater Levels

The record of the water level data from October 30, 2009 to September 30, 2010, is shown on Figure 7. The plot shows the groundwater elevations in each of the monitoring wells rose between October 2009 and January 2010 and thereafter generally fell through the end of the monitoring period. Results of the groundwater level monitoring are summarized below in Table 4.

TABLE 4. SUMMARY OF GROUNDWATER MONITORING DATA

	Monitoring Well MW-1	Monitoring Well MW-2	Monitoring Well MW-3	Monitoring Well MW-4
Highest Recorded Elevation (date)	13.13 feet MLLW (1/16/10)	19.42 feet MLLW (1/13/10)	13.07 feet MLLW (1/18/10)	17.62 feet MLLW (1/19/10)
Lowest Recorded Elevation (date)	10.07 feet MLLW (9/30/10)	10.46 feet MLLW (10/30/09)	10.23 feet MLLW (10/30/09)	11.70 feet MLLW (1/19/10)
Difference Between Highest and Lowest Elevations	3.06 feet	8.96 feet	2.84 feet	5.92 feet
Tidal Influence	0.035 feet	0.05 feet	<0.01 feet	0.15 feet

All recorded groundwater elevations are higher than the floor of the proposed constructed wetland excavation. The data show that the groundwater elevations at MW-2, located in the southeast corner of the proposed excavation, were the highest and varied the most of the four monitoring points. The groundwater elevations appear to rapidly respond to precipitation events also shown on Figure 7.

The groundwater levels in all the monitoring wells appear to be influenced by tidal fluctuations. MW-4, located in the northeast corner of the proposed excavation, showed the largest fluctuations of up to 0.15 foot due to tidal influences.

The general flow direction of shallow groundwater beneath Parcel 14 is likely to the north towards Commencement Bay and west toward Wapato Creek based on the groundwater elevations recorded in the four monitoring wells. However, local groundwater flow directions are likely variable as evident in the reversals of gradient seen between MW-2 and MW-4. For example, at the start of the monitoring period in the fall of 2009, groundwater elevations in MW-4 were higher than in MW-2, implying a southerly gradient, whereas in the summer of 2010 the relative groundwater elevations were reversed, implying a northerly gradient.

Wapato Creek Levels

The relative stage height data for Wapato Creek is also shown on Figure 7. Note that data was lost when the monitoring equipment was submerged and damaged in January 2010. The transducer was replaced in February 2010. The data indicates that Wapato Creek fluctuates more than the groundwater, especially during the summer months when groundwater levels are relatively stable. The creek stage heights are influenced by precipitation events and diurnal tidal fluctuations, showing up to 6.4 feet of change in stage height in a single day. The recorded stage elevation ranged for about 8.7 feet to 15.01 feet MLLW. The highest elevation was recorded on November 20, 2009. The creek likely reached higher elevations during the period of record that was lost.

SUMMARY

Site History

Based on our observation of subsurface soils and our review of historical photos and published and unpublished reports, we interpret the following general historical timeline for Parcel 14 (all dates are approximate):

- Prior to development – Site was a tidally influenced salt marsh; Wapato Creek flowed in several small channels across site.
- 1931 to 1964 – Site was developed for agricultural use. Wapato Creek flowed in a single channel.
- 1964 to 1968 – Site was filled with hydraulically placed dredge spoils. Wapato Creek was diverted from the original channel to the current location.
- 1968 to 1990 – Site remained vacant and undeveloped.
- 1990 to 1996 – Site was leased by PORTAC and used for equipment and log storage. Clearing, grading and minor filling occurred over portions of the site.
- 1996 to Present – Site remained vacant and undeveloped.

Chemical Analytical Results

Arsenic was detected at a concentration greater than the MTCA ULU cleanup level in the composite soil sample B5-7C collected from the fill unit in boring B-5 between the ground surface and approximately 7 feet bgs. Test pits were completed in the area of boring B-5 to delineate the source and the vertical and lateral extent of the arsenic contaminated soil. The source of the arsenic contaminated soil appears to be related to slag in the fill. Slag was observed from approximately 0 to 5 feet bgs in test pits TP-3 and from 0 to 1.5 feet bgs in test pits TP-4 and TP-5.

Minor slag was observed from 0 to 1 feet bgs in test pit TP-26. Slag was not observed in test pits TP-6, TP-25 and TP-27.

Arsenic was detected at a concentration greater than the MTCA ULU cleanup level in the soil sample TP3-3-5 collected between the 3 and 5 feet bgs in test pit TP-3. Arsenic was either not detected or detected at concentrations less than the MTCA ULU cleanup level in remaining soil samples collected from test pit TP-3 and soil samples collected from test pits TP-6, TP-25 and TP-26.

The arsenic-contaminated soil appears to be bound to the west and south by test pits TP-6 and TP-25. The arsenic-contaminated soil appears to extend near the property boundary north and east of test pits TP-4 and TP-5 based on observation of slag in the fill. The arsenic-contaminated soil appears to extend to 5 feet bgs in the area of test pit TP-3 and grades to 1.5 feet bgs in the area of test pits TP-4 and TP-5.

The other analyzed samples from the five boreholes indicate that chemicals of concern were either not detected or were detected at concentrations less than the respective MTCA cleanup levels in the fill, buried pre-fill soil horizon and the designed excavation surface soils.

Groundwater Water Quality

Groundwater parameters measured in the field indicate that conductivity and salinity were generally within expected background concentrations for fresh water. There were no indications of saline conditions. Oxidation reduction potential results indicated a reducing environment. Results for other parameters were within ranges expected for shallow groundwater.

Water Levels

Shallow groundwater levels ranged from Elevation 10 to 19 feet MLLW over an 11-month period in four monitoring wells located within the proposed constructed wetland excavation. Groundwater levels responded quickly to precipitation events, showing 1 to 3 feet of rise within a few days. The overall trend was a groundwater level rise in all monitoring wells from October 30, 2009 to early January 2010 and then a falling groundwater level until the end of the monitoring period on September 30, 2010. The general groundwater flow direction beneath Parcel 14 is likely to the north towards Commencement Bay and west toward Wapato Creek. Flow gradients are locally variable as evident in changes of relative groundwater elevations between wells.

The groundwater levels in all the monitoring wells appear to be influenced up to 0.15 foot by tidal fluctuations. All recorded groundwater elevations are higher than the floor of the proposed excavation.

Monitoring data indicates that Wapato Creek fluctuates up to 6.4 feet in a single day as result of diurnal tidal fluctuations. The recorded creek stage elevation varied from between 8.7 and 15 feet MLLW. The creek likely reached higher elevations during the period of record that was lost.

Suitability of Constructed Wetland

The proposed location of the constructed forested wetland is likely suitable for a constructed wetland based the hydrology and hydric soil conditions observed during the subsurface

explorations. Hydrogen sulfide odor observed during the boring explorations at or near the design depth of the proposed wetland suggests anaerobic conditions at proposed depth. The anaerobic condition, hydrology and hydric soils likely will provide a suitable habitat for hydrophytic (wetland) vegetation. Groundwater elevations remained higher than the designed excavation floor of the proposed constructed wetland throughout the entire period of record. This indicates that there will likely be a significant depth of open water within the constructed wetland. The water level within the wetland is unlikely to show a measurable change during diurnal tidal fluctuations based on the groundwater data. There may be a seasonal fluctuation of 5 feet or more for the wetland water surface.

RECOMMENDATIONS

The arsenic-contaminated soil within the fill unit appears isolated to the northeast portion of the site based on the results of this investigation. The source of the arsenic-contaminated soil appears to be related to slag in the fill. Management of arsenic-contaminated soil may include the following options:

1. The Port could modify design of the project so the arsenic-contaminated soil is not excavated during construction and not in contact with groundwater or surface water.
2. Considering the arsenic-contaminated soil appears to be isolated, the fill material containing slag excavated near boring B-5 could be evaluated for arsenic at the time of construction to consider disposal options. Evaluating at the time of construction would likely include collection of stockpile samples to evaluate disposal options and confirmation sampling of the base and sidewalls of the excavation to evaluate if any arsenic-contaminated soil remains. Project plans and specifications could be developed to direct the contractor to segregate the suspected contaminated soils for testing and evaluation of appropriate disposal.
3. The Port could conduct the cleanup of the contaminated soils near B-5 as a separate phase before excavating the constructed wetland.

Project plans and specifications should also include the procedures to follow in the event that additional areas of slag are encountered during project excavations.

LIMITATIONS

This report was prepared for use by Grette Associates LLC, the Port of Tacoma, their representatives and regulatory agencies, as appropriate, for use in evaluating site conditions in Parcel 14. Within the limits of scope, schedule and budget, this report was prepared in accordance with generally accepted practices for environmental investigation in effect in this area at the time this report was prepared.

Please refer to Appendix E titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

TABLE 1

SUMMARY OF CHEMICAL ANALYTICAL RESULTS FOR PETROLEUM AND METALS[1] - SOIL

PORT OF TACOMA - PARCEL 14

TACOMA, WASHINGTON

Sample ID	Approximate Sample Depth (feet bgs)	Sample Date	Subsurface Layer*	NWTPH-HCID[2] (mg/kg)			RCRA Metals with Copper and Zinc[3] (mg/kg)									
				Gasoline Range	Diesel Range	Lube-Oil Range	Arsenic	Barium	Cadmium	Total Chromium	Lead	Mercury	Selenium	Silver	Copper	Zinc
MW1-8C	0 to 8	10/28/09	Fill	U(20)	U(50)	U(100)	9	49.6	U(0.3)	20	8	0.04	U(7)	U(0.04)	41.7	58
MW1-9	9	10/28/09	Horizon	U(20)	U(50)	U(100)	U(6)	19.8	U(0.2)	24.4	U(2)	U(0.02)	U(6)	U(0.4)	8.9	32
MW1-12	12	10/28/09	Design	U(20)	U(50)	U(100)	U(6)	29.0	U(0.2)	16.2	U(2)	U(0.03)	U(6)	U(0.4)	12.9	25
MW3-7C	0 to 7	10/28/09	Fill	U(20)	U(50)	U(100)	6	28.4	U(0.2)	16.4	6	0.23	U(6)	U(0.3)	19.1	29
MW3-8	8	10/28/09	Horizon	U(20)	U(50)	U(100)	U(5)	1,660	U(0.2)	14.1	U(2)	U(0.02)	U(5)	U(0.3)	8.4	23
MW3-13	13	10/28/09	Design	U(20)	U(50)	U(100)	U(6)	27.8	U(0.3)	15.4	U(3)	U(0.03)	U(6)	1.6	11.3	20
B1-5C	0 to 5	10/29/09	Fill	U(20)	U(50)	U(100)	8	1,820	0.7	11.8	8	U(0.02)	U(6)	0.4	35.2	166
B1-6	6	10/29/09	Horizon	U(20)	U(50)	U(100)	U(6)	1,530	U(0.2)	9.2	9	U(0.03)	U(6)	U(0.3)	8.8	29
B1-14	14	10/29/09	Design	U(20)	U(50)	U(100)	U(7)	38.2	U(0.3)	15.6	U(3)	U(0.03)	U(7)	U(0.4)	18.1	25
B4-8C	0 to 8	10/29/09	Fill	U(20)	U(50)	U(100)	U(6)	55.1	U(0.2)	21.5	U(2)	U(0.02)	U(6)	U(0.4)	19.3	29
B4-10	10	10/29/09	Horizon	U(20)	U(50)	U(100)	U(7)	57.8	U(0.3)	21.0	U(3)	U(0.03)	U(7)	U(0.4)	28.9	31
B4-12	12	10/29/09	Design	U(26)	U(66)	U(130)	U(20)	33	U(0.7)	17	U(7)	U(0.09)	U(20)	U(1)	56.0	34
B5-7C	0 to 7	10/29/09	Fill	U(20)	U(50)	U(100)	**53**	37.8	U(0.2)	18.2	26	0.05	U(6)	U(0.3)	39.7	59
B5-8	8	10/29/09	Horizon	U(20)	U(50)	U(100)	U(6)	36.6	U(0.2)	17.3	U(2)	U(0.02)	U(6)	U(0.4)	39.1	38
B5-15	15	10/29/09	Design	U(20)	U(50)	U(100)	U(7)	38.4	U(0.3)	17.9	U(3)	U(0.03)	U(7)	U(0.4)	29.0	34
TP3-0-3	0 to 3	10/13/10	Fill	NA	NA	NA	U(5)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP3 -3-5	3 to 5	10/13/10	Fill	NA	NA	NA	**152**	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP3-5-7	5 to 7	10/13/10	Fill	NA	NA	NA	U(6)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP6-0-2.5	0 to 2.5	10/13/10	Fill	NA	NA	NA	U(6)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP6-2.5-4	2.5 to 4	10/13/10	Fill	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP6-4-5	4 to 5	10/13/10	Fill	NA	NA	NA	U(6)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP25-0-4	0 to 4	10/13/10	Fill	NA	NA	NA	U(5)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP26-0-1	0 to 1	10/13/10	Fill	NA	NA	NA	19	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP26-1-3	1 to 3	10/13/10	Fill	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
MTCA Method A ULU Cleanup Level				2,000	2,000	100	20	5,600 [4]	2.0	2,000	250	2.0	400 [4]	400 [4]	3,000 [4]	24,000 [4]

Notes:

[1] Chemical analysis performed by Analytical Resources Incorporated of Seattle, Washington.

[2] Washington State Department of Ecology Method NWTPH-HCID.

[3] Resource Conservation Recovery Act (RCRA) metals with copper and zinc analyzed by EPA 6000/7000 Series Method.

[4] Method B ULU cleanup level represented since MTCA Method A cleanup level has not been established.

* Fill = artificial fill unit (Target Zone 1); Horizon = Buried pre-fill soil horizon (Target Zone 2); Design = The proposed excavation surface (Target Zone 3)

bgs = below ground surface

MTCA = Model Toxics Control Act

ULU = Unrestricted Land Use

U = Analyte was not detected at or greater than the listed reporting limit

NA = Not Analyzed

mg/kg = milligram per kilogram

Bold type indicates that the detected concentration is greater than the respective MTCA cleanup level

TABLE 2

SUMMARY OF CHEMICAL ANALYTICAL RESULTS FOR VOCs, SVOCs, PESTICIDES, HERBICIDES and PCBs[1] - SOIL

PORT OF TACOMA - PARCEL 14

TACOMA, WASHINGTON

Chemical	Sample ID															MTCA Method A ULU Cleanup Level
	MW1-8C	MW1-9	MW1-12	MW3-7C	MW3-8	MW3-13	B1-5C	B1-6	B1-14	B4-8C	B4-10	B4-12	B5-7C	B5-8	B5-15	
VOCs[2] (µg/kg)																
Acetone[3]	21	U(6.8)	11	43	5.7	19	24	20	11	17	14	250	14	13	24	8,000,000[5]
Carbon Disulfide	U(1.4)	U(1.4)	6.0	6.6	U(1.1)	4.7	U(1.2)	U(1.3)	U(1.2)	U(1.3)	U(1.4)	17	U(1.1)	U(1.1)	U(1.3)	8,000,000[5]
Benzene	U(1.4)	U(1.4)	U(1.3)	U(1.1)	U(1.1)	U(1.1)	U(1.2)	U(1.3)	U(1.2)	U(1.3)	U(1.4)	U(5.9)	U(1.1)	U(1.1)	U(1.3)	30
Toluene	U(1.4)	U(1.4)	U(1.3)	U(1.1)	U(1.1)	U(1.1)	U(1.2)	U(1.3)	U(1.2)	U(1.3)	U(1.4)	U(5.9)	U(1.1)	U(1.1)	U(1.3)	7,000
Ethylbenzene	U(1.4)	U(1.4)	U(1.3)	U(1.1)	U(1.1)	U(1.1)	U(1.2)	U(1.3)	U(1.2)	U(1.3)	U(1.4)	U(5.9)	U(1.1)	U(1.1)	U(1.3)	6,000
Total Xylenes	U(1.4)	U(1.4)	U(1.3)	U(1.1)	U(1.1)	U(1.1)	U(1.2)	U(1.3)	U(1.2)	U(1.3)	U(1.4)	U(5.9)	U(1.1)	U(1.1)	U(1.3)	9,000
2-Butanone	U(6.8)	U(6.8)	U(6.6)	10	U(5.5)	U(5.4)	U(5.8)	U(6.7)	U(5.9)	U(6.6)	U(7.3)	67	U(5.7)	U(5.7)	U(6.4)	4,800,000[5]
Methylene chloride[3]	U(2.7)	U(2.7)	U(2.6)	U(2.2)	U(2.2)	U(2.1)	U(2.3)	U(2.7)	U(2.4)	2.7	U(2.9)	U(12)	U(2.3)	U(2.3)	U(2.6)	20
SVOCs[4] (µg/kg)																
Acenaphthene	U(62)	U(62)	U(62)	U(65)	U(66)	U(62)	U(61)	U(60)	U(61)	U(64)	U(66)	U(65)	U(60)	U(64)	U(62)	4,800,000 [5]
Acenaphthylene	U(62)	U(62)	U(62)	U(65)	U(66)	U(62)	U(61)	U(60)	U(61)	U(64)	U(66)	U(65)	U(60)	U(64)	U(62)	NE
bis (2-Ethylhexyl) phthalate	U(62)	U(62)	U(62)	U(65)	U(66)	U(62)	340	U(60)	83	U(64)	U(66)	U(65)	U(60)	U(64)	U(62)	7,100 [5]
Fluorene	U(62)	U(62)	U(62)	U(65)	U(66)	U(62)	U(61)	U(60)	U(61)	U(64)	U(66)	U(65)	U(60)	U(64)	U(62)	3,200,000 [5]
Pyrene	U(62)	U(62)	U(62)	U(65)	U(66)	U(62)	U(61)	U(60)	U(61)	U(64)	U(66)	U(65)	U(60)	U(64)	U(62)	2,400,000 [5]
Organochlorine Pesticides[6] (µg/kg)																
gamma -BHC	NA	U(1.6)	NA	NA	U(1.6)	NA	NA	U(1.6)	NA	NA	U(1.6)	NA	NA	U(1.6)	NA	10
Dieldrin	NA	U(3.2)	NA	NA	U(3.2)	NA	NA	U(3.1)	NA	NA	U(3.3)	NA	NA	U(3.1)	NA	63 [5]
4, 4' - DDE	NA	U(3.2)	NA	NA	U(3.2)	NA	NA	U(3.1)	NA	NA	U(3.3)	NA	NA	U(3.1)	NA	2,900[5]
4, 4' - DDT	NA	U(3.2)	NA	NA	U(3.2)	NA	NA	U(3.1)	NA	NA	U(3.3)	NA	NA	U(3.1)	NA	3,000
Chlorinated Herbicides[7] (µg/kg)																
Dinoseb	NA	U(19)	NA	NA	U(17)	NA	NA	U(18)	NA	NA	U(22)	NA	NA	U(19)	NA	80,000[5]
Dalapon	NA	U(38)	NA	NA	U(34)	NA	NA	U(36)	NA	NA	U(43)	NA	NA	U(39)	NA	2,400,000[5]
PCBs[8] (µg/kg)																
Aroclor 1016	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(31)	U(30)	U(31)	MTCA ULU cleanup level for the sum of all PCBs is 1,000 µg/kg
Aroclor 1242	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(31)	U(30)	U(31)	
Aroclor 1248	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(120)	U(30)	U(31)	
Aroclor 1254	U(31)	U(30)	U(30)	U(120)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(61)	U(30)	U(31)	
Aroclor 1260	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(31)	U(30)	U(31)	
Aroclor 1221	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(31)	U(30)	U(31)	
Aroclor 1232	U(31)	U(30)	U(30)	U(31)	U(32)	U(31)	U(32)	U(30)	U(31)	U(32)	U(32)	U(33)	U(31)	U(30)	U(31)	

Notes:

[1] Chemical analysis performed by Analytical Resources Incorporated of Seattle, Washington.

[2] Volatile organic compounds (VOCs) were analyzed by EPA Method 5035/8260B. Other VOCs were analyzed but not detected.

[3] Methylene chloride and Acetone are common laboratory contaminants.

[4] Semivolatile organic compounds (SVOCs) were analyzed by EPA Method 8270C. Other SVOCs were analyzed but not detected.

[5] Method B ULU cleanup level represented because MTCA Method A cleanup level has not been established.

[6] Pesticides were analyzed by EPA Method 8010B. Other pesticides were analyzed but not detected.

[7] Herbicides were analyzed by EPA Method 8151A. Other herbicides were analyzed but not detected.

[8] PCBs were analyzed by EPA Method 8020.

MTCA = Model Toxics Control Act

U = Analyte was not detected at or greater than the listed reporting limit

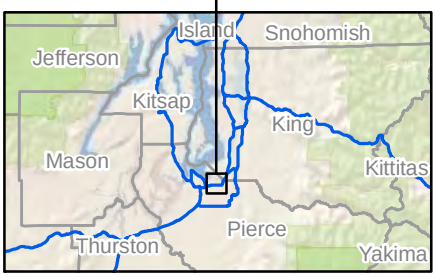
µg/kg = microgram per kilogram

ULU = Unrestricted Land Use

NE = Cleanup level not established for this compound

NA = Not Analyzed





Legend

- Interstate Highway
- Major Road
- Local Road

N W E S

4,000 0 4,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps, Street Maps 2008

Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

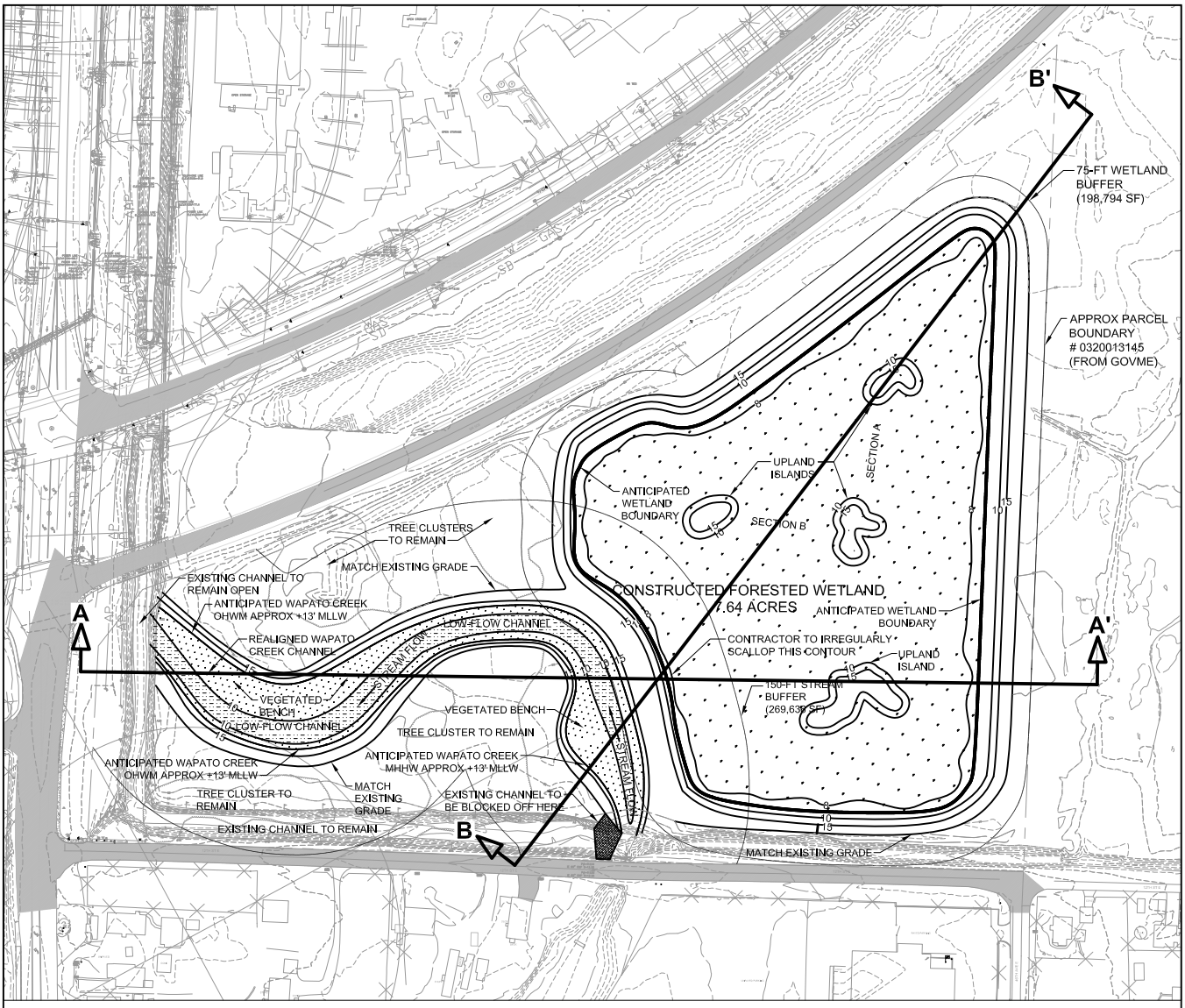
Vicinity Map

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 1

Office: TAC Path: \\Tac\projects\0\045409\4\GIS\045409415 F1 VM Parcel14.mxd Map Revised: January 13, 2010 KKS



VEGETATED WETLAND AND STREAM CHANNEL

PARCEL 14 MITIGATION SITE
EXCAVATION AND GRADING TOTALS

- TOTAL EST AREA OF EXCAVATION/GRADING = 543,000 SF
- TOTAL EST VOLUME OF EXCAVATION/GRADING = 161,000 CY

Legend

A A' Approximate cross section location

N W E S

240 0 240
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawing provided by Parametrix and Grette Associates.

Site Plan - Proposed Actions

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 2

TACO:JWP:MM : SCY

P:\0\0454094\15\CAD\0454094\15_F2.dwg\TAB:F2 modified on Nov 30, 2010 - 12:31pm



Legend

- TP-1 — Test Pit Number and Approximate Location
- B-1 — Boring Number and Approximate Location
- MW-1 — Monitoring Well Number and Approximate Location
- Current path of Wapato Creek
- Original Path of Wapato Creek
- Site Boundary

N W E S

200 0 200

Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
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Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

Data Sources: ESRI I3 Aerial Imagery, 2007.
Pierce County parcel and stream data, 2009.

Existing Features and Explorations

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 3

Office: TAC Path: \\Tac\projects\0\045409\GIS\045409415 F3 SitePlan Parcel14.mxd Map Revised: 12/3/10, KKS, dbc, ras,tck



Map Revised: 12/3/10, KKS, dbc, ras.tck

Path: \\Tac\projects\0\045409\GIS\045409415 F4 FillLocs Parcel14.mxd

Office: TAC

Legend

- Hydraulic fill, generally 4 to 6 feet thick
- Hydraulic fill, generally 6 to 12 feet thick
- Hydraulic fill/PORTAC fill, generally 3 to 5 feet thick
- Unknown fill source, generally 4 to 5 feet thick
- No fill, mature soil at ground surface
- Site Boundary

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
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Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

Data Sources: ESRI I3 Aerial Imagery, 2007.
Pierce County parcel, 2009.

N
W E
S

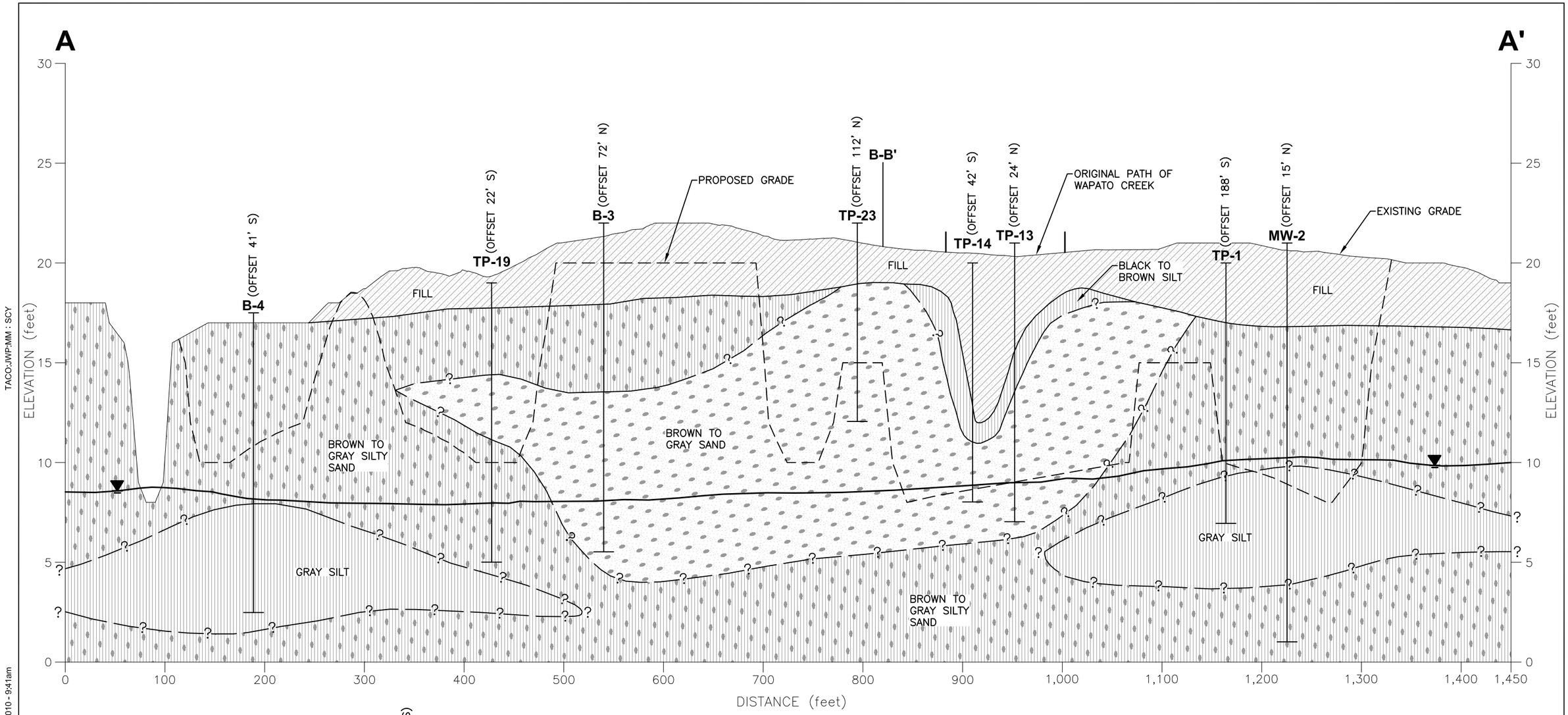
200 0 200
Feet

Approximate Fill Locations, Thicknesses and Sources

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 4



B-4/TP-2 (OFFSET 41' S)

EXPLANATION:

BORING/TEST PIT NUMBER AND APPROXIMATE LOCATION

GROUNDWATER LEVEL AT TIME OF TEST PIT EXPLORATIONS

FILL
SILT
SILTY SAND
SAND

100 0 100
Horizontal Scale in Feet

5 0 5
Vertical Scale in Feet
Vertical Exaggeration: 20X

Notes:
1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. Refer to Figure 2 for location of Cross Section.
3. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

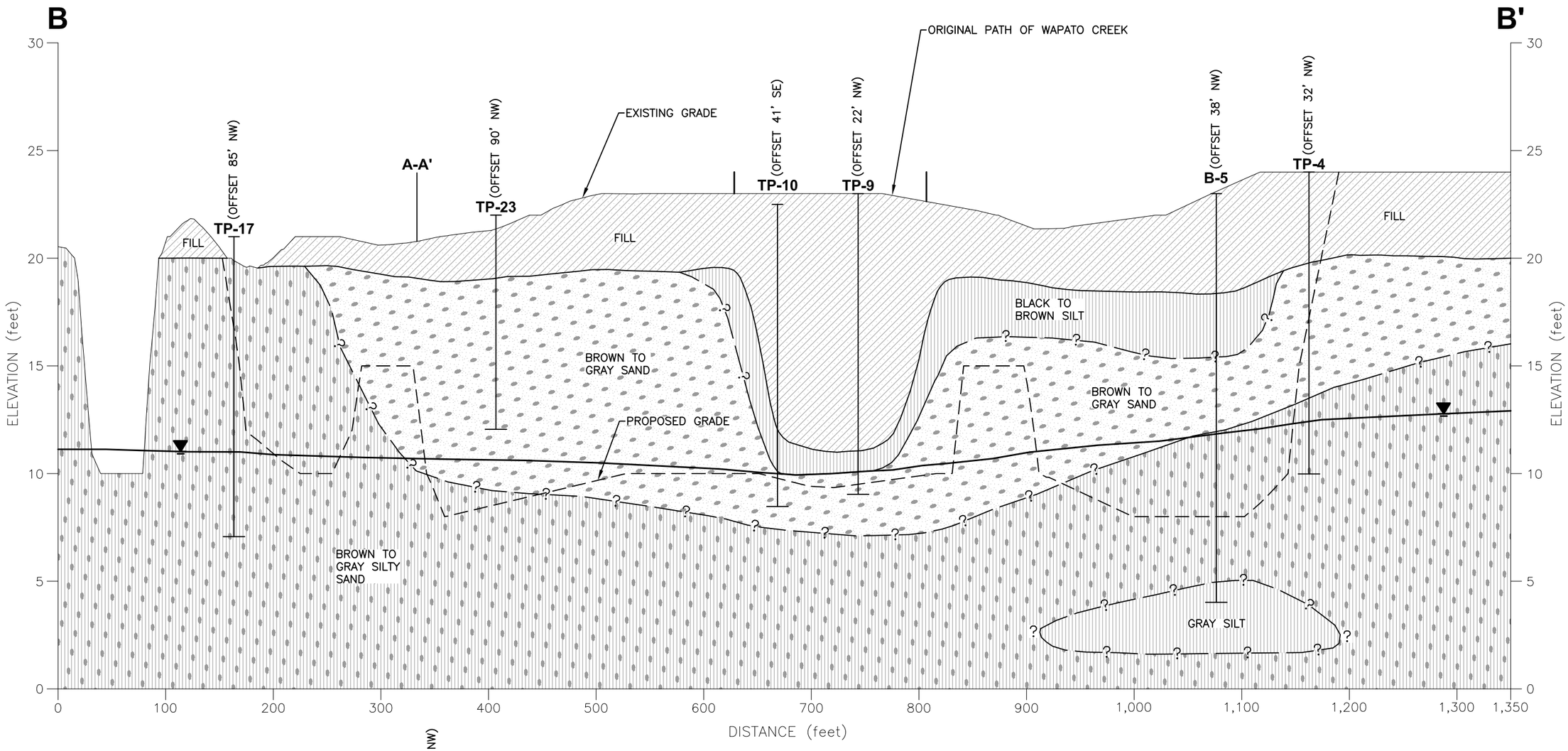
Cross Section A-A'

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 5

TACO:JWP:MM : SCY
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B-5/TP-4 (OFFSET 38' NW)

EXPLANATION:

BORING/TEST PIT NUMBER AND APPROXIMATE LOCATION

GROUNDWATER LEVEL AT TIME OF TEST PIT EXPLORATIONS

FILL
SILT
SILTY SAND
SAND

100 0 100
Horizontal Scale in Feet

5 0 5
Vertical Scale in Feet
Vertical Exaggeration: 20X

Notes:
1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. Refer to Figure 2 for location of Cross Section.
3. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

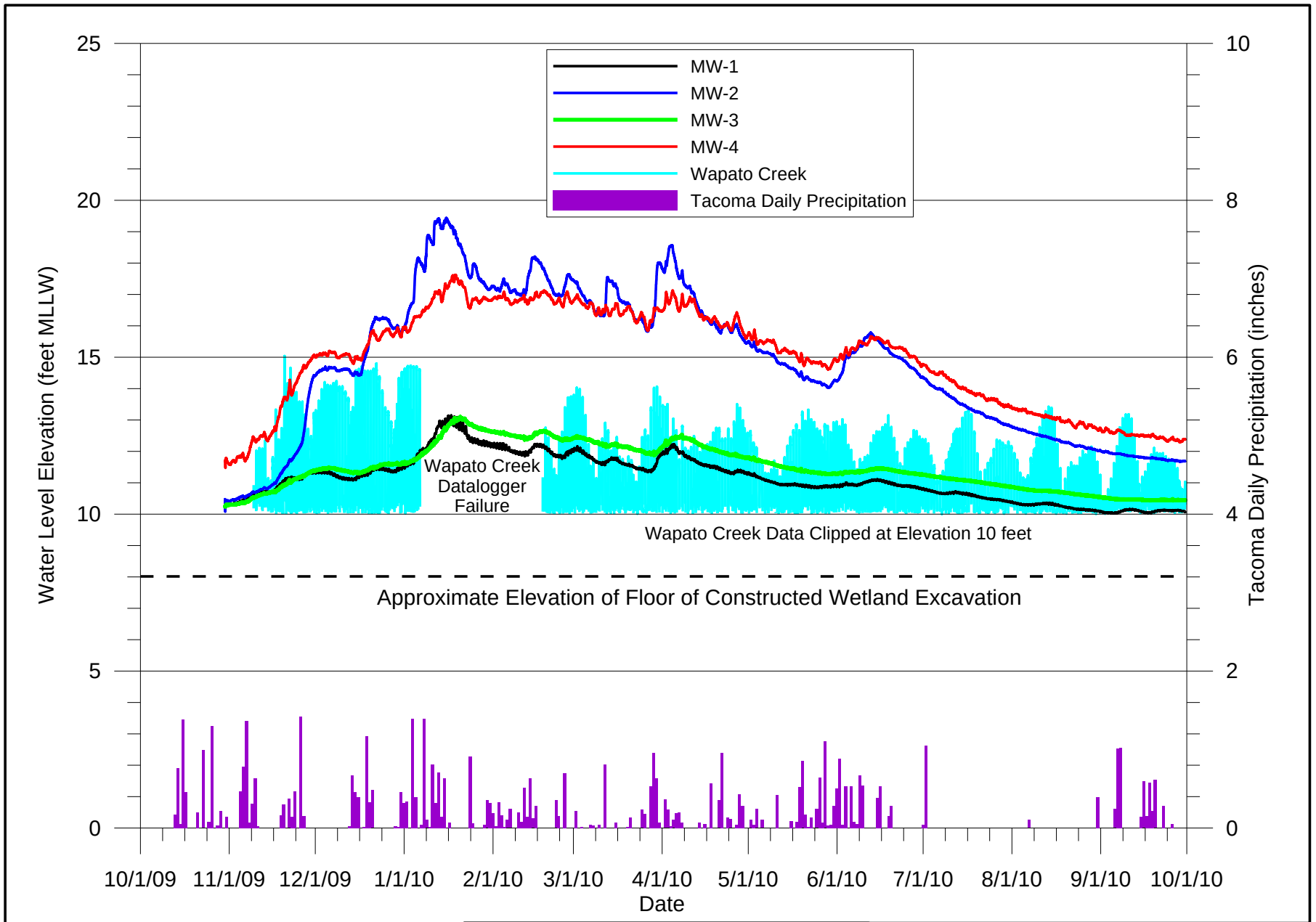
Cross Section B-B'

Port of Tacoma Parcel 14
Tacoma, Washington

GeoEngineers

Figure 6

TACO:JWP:MM : SCY
P:\0\045409\115\CAD\045409415_F5_F6.dwg\TAB:F6 modified on Dec 06, 2010 - 9:41am



GeoEngineers

GROUNDWATER LEVELS AND CREEK STAGE HEIGHTS AT PARCEL 14

FIGURE 7

Office: TACO Path: P:\0\0454094\15\Grapher and Data Plots\Figure7.doc DSP:JWP:jwp December 3, 2010

APPENDIX A
Historical Aerial Photographs

APPENDIX A
HISTORICAL AERIAL PHOTOGRAPHS



1931 aerial photo



1940 aerial photo



1941 aerial photo



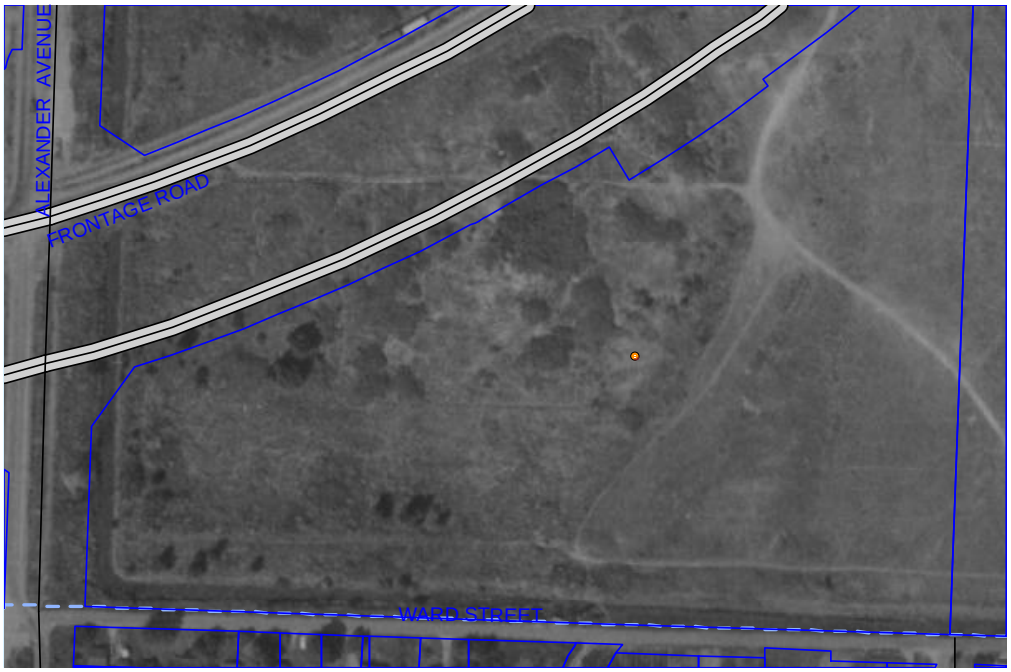
1950 aerial photo



1957 aerial photo



1968 aerial photo



1973 aerial photo



1990 aerial photo



1996 aerial photo



1998 aerial photo



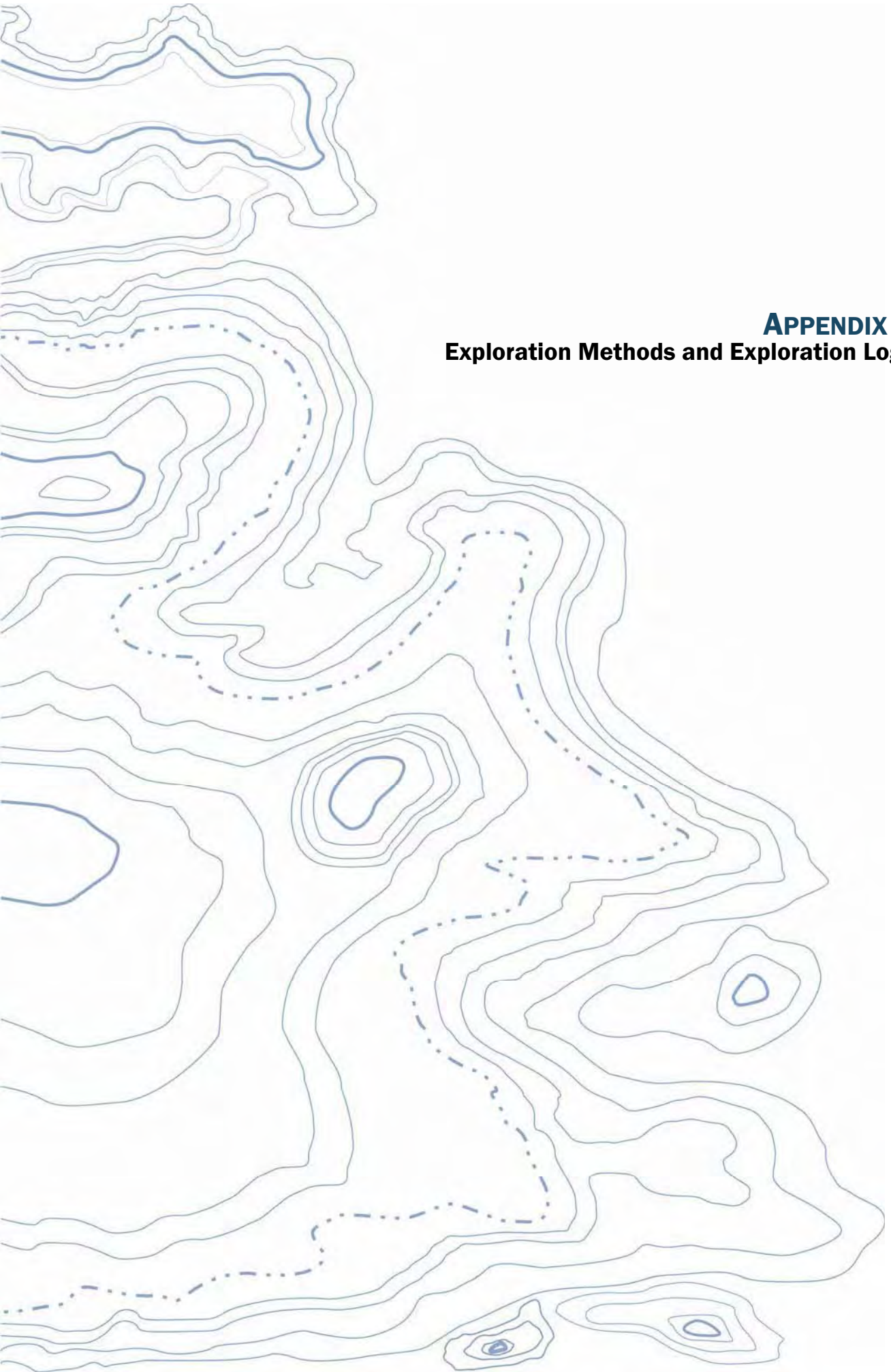
2005 aerial photo



2006 aerial photo



2009 aerial photo



APPENDIX B
Exploration Methods and Exploration Logs

APPENDIX B
EXPLORATION METHODS AND EXPLORATION LOGS

General

Subsurface conditions were investigated by completing nine soil borings (MW-1 through MW-4 and B-1 through B-5) at the Project area on October 28 and 29, 2009. The boring locations were marked in the field by Grette Associates prior to the commencement of drilling activities.

A representative from GeoEngineers observed and classified the soils encountered and prepared a detailed log of each boring. An explanation of boring log symbols is presented in Figure B-1. The boring logs are presented in Figures B-2 through B-10.

The titles of Figures B-2 through B-10 include a reference to a "Location", for example Location B. These location labels were carried forward to cross-reference borehole locations that were originally labeled and marked in the field by Grette at a preliminary stage of the project. The original locations appear on field maps used by Grette and the Port. Locations 1 through 5 refer to the original location labels for boreholes designated by GeoEngineers in this report as B-1 through B-5 and Locations A through D refer to the original location labels for monitoring wells designated by GeoEngineers in this report as MW-1 through MW-4.

To supplement the soil borings, we excavated 27 test pits on October 13, 2010. The excavations were completed using a rubber-tired backhoe owned and operated by Homestead Excavating of Lakewood, Washington, under subcontract to GeoEngineers. Test pit locations were marked in the field using a hand-held GPS unit. Test pits were excavated from the ground surface to depths ranging from about 4 to 15 feet bgs. A representative from GeoEngineers observed and classified the soils encountered and prepared a detailed log of each test pit. An explanation of test pit symbols is presented in Figure B-1. The test pit logs are presented in Figures B-11 through B-37.

Soil Sampling

Soil samples were collected using hollow-stem auger drilling equipment owned and operated by Holocene Drilling, Inc. of Edgewood, Washington. The sampler was driven into the soil using an automatic hammer and, upon retrieval, the sampler was opened and the material was logged in general accordance with the Unified Soil Classification System (ASTM International [ASTM] D 2488-90). The soil samples were selected and then collected into laboratory-supplied glass jars, labeled and stored on ice in a cooler pending delivery to Analytical Resources, Inc. of Tukwila, Washington. Samples collected for analysis of volatile organic compounds (VOCs) were collected using Environmental Protection Agency (EPA) Method 5025A. The soils were classified according to the system described in Figure B-1.

Field Screening Methods

The GeoEngineers' representative conducted field screening of each of the soil samples obtained from the borings. Field screening results can be used as a general guideline to delineate areas of potential petroleum-related contamination in soils. In addition, screening results are often used as a basis for selecting soil samples for chemical analyses. The screening methods employed included:

- Visual examination, and
- Water sheen testing.

Visual screening consists of observing the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons such as motor oil or when hydrocarbon concentrations are high. Sheen screening is a more sensitive screening method that can be effective in detecting petroleum-based products at concentrations lower than regulatory cleanup guidelines.

Water sheen testing involves placing soil in water and observing the water surface for signs of sheen. The results of water sheen testing on soil samples from the borings completed for this Project are presented on the boring logs. Sheens are classified as follows:

No Sheen (NS)	No visible sheen on water surface.
Slight Sheen (SS)	Light colorless film, spotty to globular; spread is irregular, not rapid; areas of no sheen remain; film dissipates rapidly.
Moderate Sheen (MS)	Light to heavy film, may have some color or iridescence, globular to stringy, spread is irregular to flowing; few remaining areas of no sheen on water surface.
Heavy Sheen (HS)	Heavy colorful film with iridescence; stringy, spread is rapid; sheen flows off the sample; most of water surface may be covered with sheen.

Groundwater Sampling

The GeoEngineers field representative analyzed in the field groundwater samples from the four monitoring wells MW-1, MW-2, MW-3 and MW-4. On October 30, 2009, each well was purged using a dedicated disposable bailer and the sample was analyzed using a Horiba U-22 XD multi-parameter water quality monitoring system. Purge volumes and concentrations of dissolved oxygen, pH, conductivity, temperature, turbidity, Oxidation Reduction Potential and salinity were recorded after each 0.5 gallon of purging.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE			SP	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	CC	Cement Concrete
	AC	Asphalt Concrete
	CR	Crushed Rock/ Quarry Spalls
	TS	Topsoil/ Forest Duff/Sod

Measured groundwater level in exploration, well, or piezometer

Groundwater observed at time of exploration

Perched water observed at time of exploration

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Material Description Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

Laboratory / Field Tests

%F	Percent fines
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
NT	Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

GeoEngineers

FIGURE B-1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/28/2009	10/28/2009	20	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Hammer Data	Auto 140 (lbs) / 30 (in) Drop	Drilling Equipment	Track Rig Diedrich D-50
Surface Elevation (ft) Vertical Datum	20.0	Top of Casing Elevation (ft)	22.1
Latitude Longitude	47°14' 48.92" N 122°22' 8.44" W	Horizontal Datum	Geographic MLLW

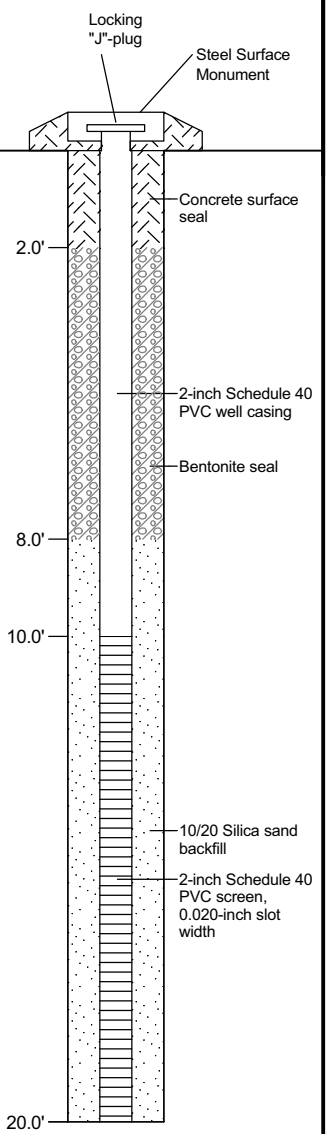
A 2 (in) well was installed on 10/28/2009 to a depth of 20 (ft).
Well was developed on 10/30/2009.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/30/2009	10.2	9.77

Notes: Sampler Data- 2.4" I.D. Sampler

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
	0							ML	Brown fine sandy silt (stiff, moist) iron staining, abundant organics (fill)	NS	
		16	16		1					NS	
								SM	Brown silty fine sand (loose, moist) iron staining (fill)	NS	
15	5	18	4		2			ML	Brown silt with fine sand (soft, moist) iron staining, abundant organics (roots) (fill)	NS	
		16			3 CA				Grades to fine sandy silt	NS	
		14	10		4 CA				Grades to gray, scattered organics (medium stiff)	NS	
10	10		11			▼		SP	Charcoal debris 8 to 8.3 Gray fine to medium sand with occasional coarse sand, trace silt (loose, moist)	NS	
		16	11		5 CA	▽			Wet at 12 feet Wood debris at 13 to 13.2 feet	NS	
5	15									NS	
		16	6		6			SM	Dark gray silty fine sand (very loose, wet)		
0	20										

WELL LOG



Note: See Figure B-1 for explanation of symbols.

Log of Monitoring Well MW-1 (Location "B")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-2
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045094\GINT\0454094.GPJ DBTemplate/LibTemplate/GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/28/2009	10/28/2009	20	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Hammer Data	Auto 140 (lbs) / 30 (in) Drop	Drilling Equipment	Track Rig Diedrich D-50
Surface Elevation (ft) Vertical Datum	20.0	Top of Casing Elevation (ft)	21.9
Latitude Longitude	47°14' 49.19" N 122°22' 4.28" W	Horizontal Datum	Geographic MLLW

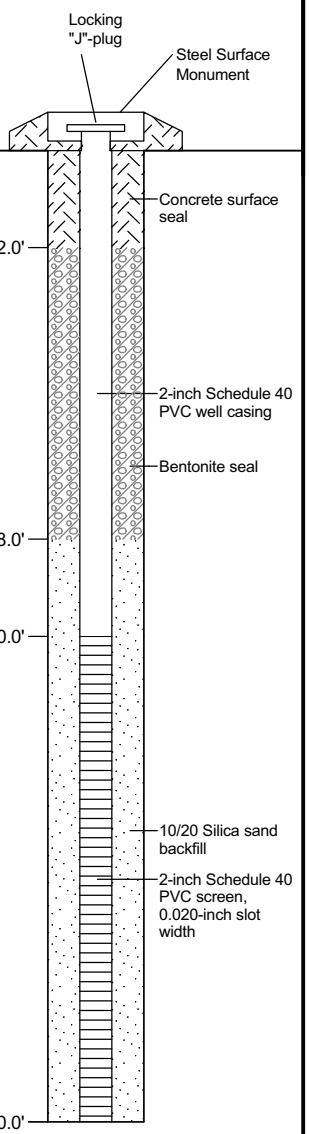
A 2 (in) well was installed on 10/28/2009 to a depth of 20 (ft).
Well was developed on 10/30/2009.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/30/2009	10.5	9.50

Notes: Sampler Data- 2.4" I.D. Sampler

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
	0							ML	Brown to gray fine sandy silt (medium stiff, moist) scattered organic (roots) iron staining (fill)	NS	
		16	8		1					NS	
15	5	18	8		2						
		14									
			8		3					NS	
			8		4			SP-SM	Brown fine sand with silt (very loose, moist) iron staining		
10	10					▼				NS	
						▽		ML	Gray silt with fine sand (medium stiff, wet) scattered organics (roots)		
		18	6		5						
										NS	
5		0	8		6				No recovery 13.5-15 feet		
	15									NS	
		18	11		7			SM	Gray silty fine sand (loose, wet)		
										NS	
								ML	Gray fine sandy silt (soft, wet) 0.3 inch organic silt/peat layer at 18.5 feet		
0	20							ML	Gray silt with fine sand (wet) scattered organics (roots) (medium stiff, wet)	NS	

WELL LOG



Note: See Figure B-1 for explanation of symbols.

Log of Monitoring Well MW-2 (Location "A")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-3
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate:LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL

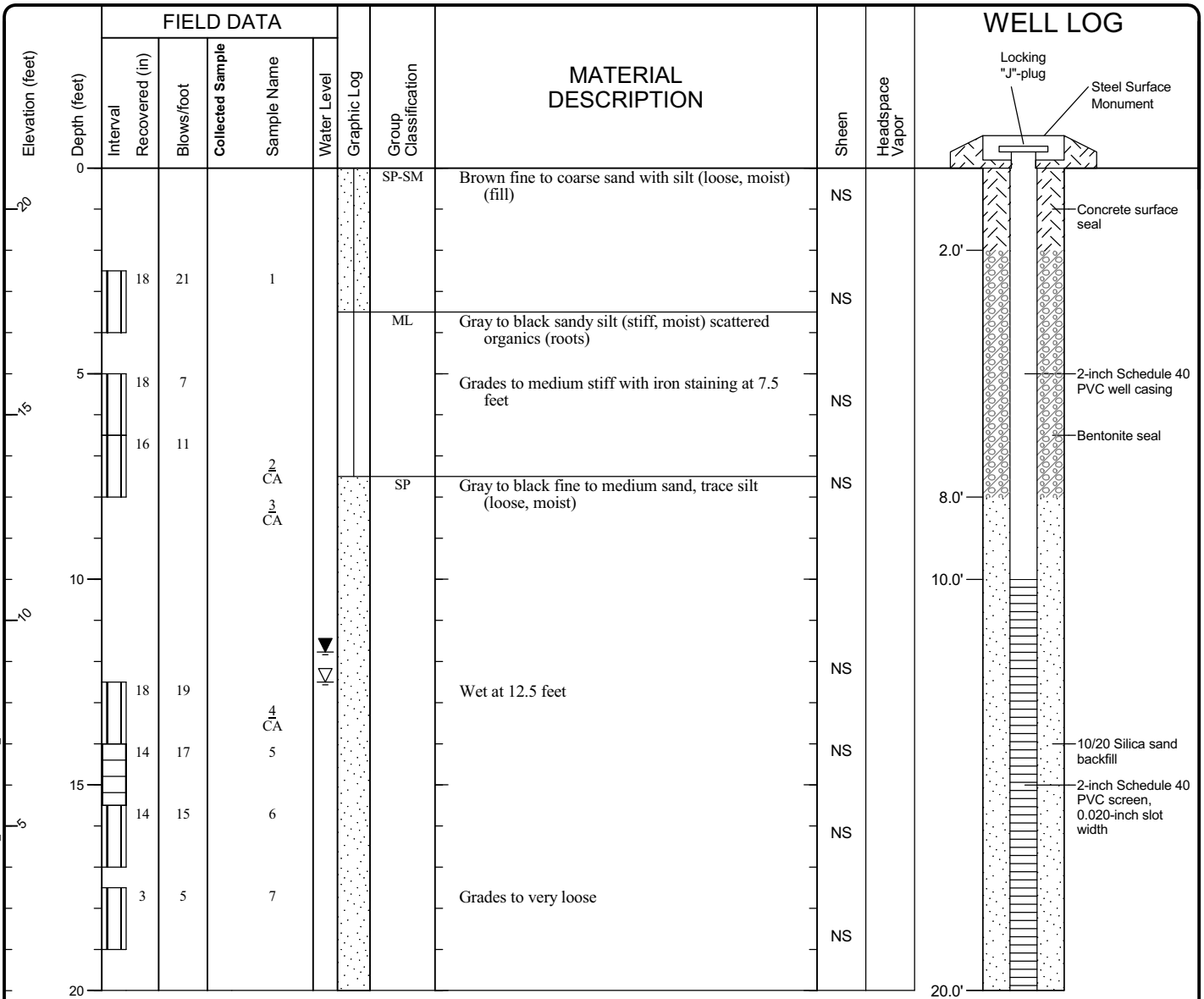
Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/28/2009	10/28/2009	20	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Hammer Data	Auto 140 (lbs) / 30 (in) Drop	Drilling Equipment	Track Rig Diedrich D-50
Surface Elevation (ft) Vertical Datum	21.0	Top of Casing Elevation (ft)	23.3
Latitude Longitude	47°14' 52.49" N 122°22' 10.10" W	Horizontal Datum	Geographic MLLW

A 2 (in) well was installed on 10/28/2009 to a depth of 20 (ft).
Well was developed on 10/30/2009.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/30/2009	11.8	9.23

Notes: Sampler Data- 2.4" I.D. Sampler



Note: See Figure B-1 for explanation of symbols.

Log of Monitoring Well MW-3 (Location "D")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-4
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL

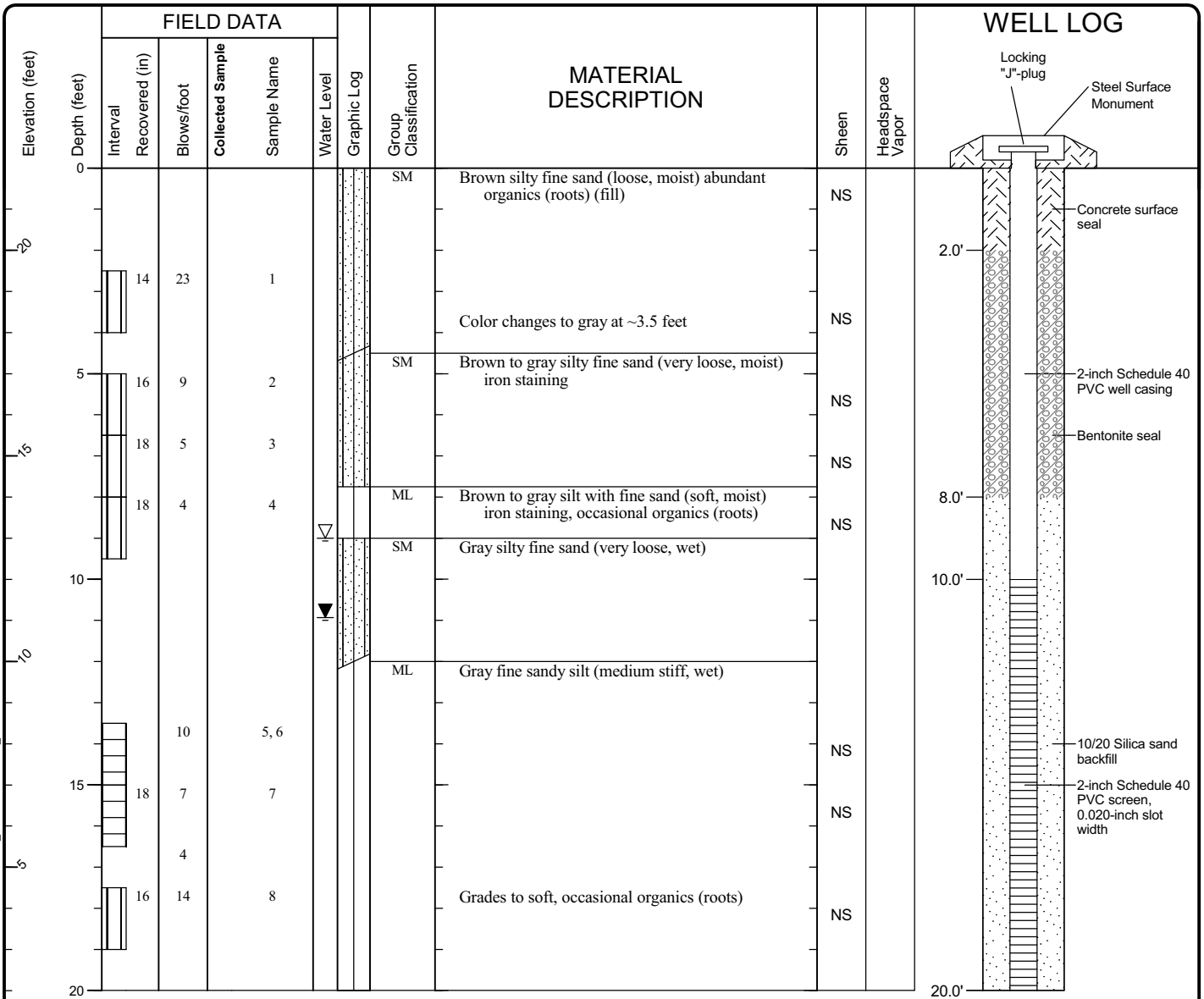
Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/28/2009	10/28/2009	20	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Hammer Data	Auto 140 (lbs) / 30 (in) Drop	Drilling Equipment	Track Rig Diedrich D-50
Surface Elevation (ft) Vertical Datum	22.0	Top of Casing Elevation (ft)	24.1
Latitude Longitude	47°14' 53.09" N 122°22' 4.56" W	Horizontal Datum	Geographic MLLW

A 2 (in) well was installed on 10/29/2009 to a depth of 20 (ft).
Well was developed on 10/30/2009.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/30/2009	10.9	11.07

Notes: Sampler Data- 2.4" I.D. Sampler



Note: See Figure B-1 for explanation of symbols.

Log of Monitoring Well MW-4 (Location "C")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-5
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL

Drilled: Start 10/29/2009 End 10/29/2009	Total Depth (ft): 19	Logged By: JCD/RWL Checked By: JWP	Driller: Holocene	Drilling Method: Hollow Stem Auger	
Surface Elevation (ft) Vertical Datum: 21.0		Hammer Data: Auto 140 (lbs) / 30 (in) Drop		Drilling Equipment: Track Rig Diedrich D-50	
Latitude: 47°14' 41.74" N Longitude: 122°22' 05.86" W		System Datum: Geographic MLLW		Groundwater: Date Measured 10/29/2009; Depth to Water (ft) 9.0; Elevation (ft) 12.0	
Notes: Sampler Data- 2.4" I.D. Sampler					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
20	0						SM	Brown silty fine sand (loose, moist) iron staining, occasional organics (roots) (fill)	NS		No hydrocarbon odor observed
		18	23	1					NS		
							SM	Gray silty fine to medium sand with occasional organics (very loose, moist)			
	5	14	8	2 CA							
15		16		3 CA			SP-SM	Gray fine to medium sand with silt (very loose, moist) (native)	NS		
									NS		
		18	12	4				Grades to loose			
					▽			Wet at 9 feet	NS		
	10										
10							ML	Gray fine sandy silt (medium stiff, wet)			
		16	6	5							
									NS		
		16	15	6 CA				Grades to stiff			
	15						SP-SM	Gray fine to medium sand with silt (loose, wet)	NS		
5											
		18	5	7 CA			ML	Gray fine sandy silt (soft, wet) with abundant organics at 18.5 to 18.7 feet	NS		
							SP-SM	Gray fine sand with silt (very loose, wet)			

Note: See Figure B-1 for explanation of symbols.

Log of Boring B-1 (Location "4")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-6
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled: Start 10/29/2009 End 10/29/2009	Total Depth (ft): 16.5	Logged By: JCD/RWL Checked By: JWP	Driller: Holocene	Drilling Method: Hollow Stem Auger	
Surface Elevation (ft) Vertical Datum: 20.0		Hammer Data: Auto 140 (lbs) / 30 (in) Drop		Drilling Equipment: Track Rig Diedrich D-50	
Latitude: 47°14' 47.47" N Longitude: 122°22' 10.41" W		System Datum: Geographic MLLW		Groundwater: Date Measured 10/29/2009; Depth to Water (ft) 10.0; Elevation (ft) 10.0	
Notes: Sampler Data- 2.4" I.D. Sampler					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0						ML	Dark brown fine sandy silt (soft, moist) iron staining, occasional organics to 3.7 feet (fill)			
		10	4	1					NS		
								Grades to light brown, abundant organics (roots)			
15	5	16	9	2					NS		
		16	23	3							
							SP	Brown to gray fine to medium sand, trace silt (loose, moist)	NS		
10	10				▽			Wet at 10 feet			
		18	28	4				Grades to medium dense			
		12	23	5				Grades to loose	NS		
									NS		
5	15		25	6				Color changes to gray			
									NS		

Note: See Figure B-1 for explanation of symbols.

Log of Boring B-2 (Location "3")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-7
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/29/2009	10/29/2009	16.5	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
22.0	Auto 140 (lbs) / 30 (in) Drop	Track Rig Diedrich D-50

Latitude / Longitude	System Datum	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
47°14' 50.04" N / 122°22' 14.34" W	Geographic MLLW	10/29/2009	10.5	11.5

Notes: Sampler Data- 2.4" I.D. Sampler

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0						SM	Brown silty fine sand (loose, moist) iron staining, with abundant organics (roots) (fill)			
20		16	19	1					NS		
							SM	Brown to gray silty fine to medium sand (very loose, moist)			
	5	8	2	2				Grades to very loose	NS		
15		10	3	3					NS		
		8	2	4							
				5			SP	Brown to gray fine to medium sand, trace silt (very loose, moist)	NS		
	10	18	14		▽				NS		
								Grades to gray (loose, wet)			
10		14	8	6				Grades to very loose	NS		
	15	14	11	7					NS		

Note: See Figure B-1 for explanation of symbols.

Log of Boring B-3 (Location "2")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-8
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/29/2009	10/29/2009	15	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
19.0	Auto 140 (lbs) / 30 (in) Drop	Track Rig Diedrich D-50

Latitude / Longitude	System Datum	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
47°14' 48.71" N / 122°22' 18.19" W	Geographic MLLW	10/29/2009	8.5	10.5

Notes: Sampler Data- 2.4" I.D. Sampler

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0						SM	Brown to gray silty fine sand (loose, moist) iron staining, abundant organics (roots)			
15		14	17	1					NS		
	5	14	11	2				Grades to mottled	NS		
		14	6	3				Grades to very loose	NS		
		18	5	4 CA	▽						
10							ML	Gray fine sandy silt (soft, wet)	NS		
		18	15	5 CA				Grades to stiff	NS		
5		18	25	6 CA				Grades to very stiff with abundant organics (grass, roots)			
	15						SP-SM	Gray fine to medium sand with silt (loose, wet)	NS		

Note: See Figure B-1 for explanation of symbols.

Log of Boring B-4 (Location "1")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-9
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/29/2009	10/29/2009	19	JCD/RWL / JWP	Holocene	Hollow Stem Auger

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
22.0	Auto 140 (lbs) / 30 (in) Drop	Track Rig Diedrich D-50

Latitude / Longitude	System Datum	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
47°14' 55.16" N / 122°22' 04.07" W	Geographic MLLW	10/29/2009	11.0	11.0

Notes: Sampler Data- 2.4" I.D. Sampler

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0						SP-SM	Brown to gray sand with silt (medium dense, moist) iron staining, occasional organics (roots) (fill)			
20		18	30	1					NS		
	5	14	9	2			ML	Brown to gray sandy silt (medium stiff, moist) iron staining, occasional organics (roots)	NS		
15		16	11	3 CA					NS		
		16	9	4 CA			SM	Brown to gray silty fine sand (loose, moist)	NS		
	10				▽			Wet at 11 feet			
10							SM-ML	Gray silty fine sand to fine sandy silt (very loose, wet)			
		18	8	5					NS		
	15	18	8	6 CA					NS		
5			12	7			ML	Gray fine sandy silt (stiff, wet) occasional organics (roots)	NS		

Note: See Figure B-1 for explanation of symbols.

Log of Boring B-5 (Location "5")

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-10
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 13.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SOD		3 inches sod			
1			SM		Brown silty fine to medium sand with trace organics (loose, moist) (fill)			
2			ML		Brown sandy silt with orange staining (medium stiff, moist) (fill)			
5			SM		Brown silt fine to medium sand (loose, moist)			
10				▽	Grades to gray, wet			
11			ML		Gray sandy silt (soft, wet)			
13					Test pit completed at 13 feet Minor groundwater seepage observed at 10 to 11 feet Minor caving observed at 10 to 11 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-1

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-11

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		4 inches sod			
	1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	5				ML		Gray to brown sandy silt with trace organics (soft, moist)			
	7				SM		Gray silty fine to medium sand with occasional lenses of sandy silt (loose, moist)			
	11					▽	Grades to wet			Orange staining at 11 feet
	13				SP-SM		Dark gray fine to medium sand with silt (loose, wet)			
	14						Test pit completed at 14 feet Minor groundwater seepage observed at 13 feet No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-2

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-12

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 12.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		3 inches sod			
1–5	☒	1		SM		Brown silty fine to coarse sand with occasional gravel, cobbles and clasts of sandy silt and trace organic roots (medium dense, moist) (fill)			Occasional slag pieces from 0 to 5 feet
3–5	☒	2		ML		Brown sandy silt with orange staining and trace roots (stiff, moist) (fill)			
5–8	☒	3		ML		Gray sandy silt with black staining (medium stiff, moist)			
8–10	☒	4		SM		Gray silty fine to medium sand (loose, wet)			
10–12	☒	5		ML		Gray silt with sand and trace organics (soft, wet)			
12						Test pit completed at 12 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-3

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-13

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		3 inches sod			
1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
2				ML		Brown sandy silt with orange staining and trace organics (stiff, moist) (fill)			
3	☒	1							Occasional slag pieces from 0 to 1 foot
4	☒	2		SP-SM		Brown/gray fine to medium sand with silt (medium dense, moist)			
5									
6									
7						Grades to loose			
8	☒	3							
9									
10				ML		Brown to gray sandy silt with trace organics (stiff, moist)			
11									
12				SM		Gray silty fine to medium sand (loose, wet)			
13									
14						Test pit completed at 14 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-4

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-14

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		4 inches sod			Occasional slag pieces from 0 to 1.5 feet
1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
2	☒	1		ML		Brown sandy silty with orange staining and trace organics (stiff, moist) (fill)			
3									
4				SP-SM		Gray/brown fine to medium sand with silt (loose, moist)			
5									
6									
7									
8									
9									
10				ML		Brown silt with sand and organics (stiff, moist)			
11						Grades to gray, wet			
12				SM		Gray silty fine to medium sand (loose, wet)			
13									
14						Test pit completed at 14 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-5

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-15

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 10.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					SOD		6 inches sod			
	1	☒	1		SM		Brown silty fine to medium sand with large clasts of sandy silt and trace organics (roots) (medium dense, moist) (fill)			
	2									
	3				ML		Brown sandy silt with orange staining and occasional black staining (stiff, moist) (fill)			
	4	☒	2							
	5				SP-SM		Gray fine to medium sand with silt (loose, moist)			
	6	☒	3							
	7									
	8				SM		Gray silty fine to medium sand with occasional staining and organics (loose, wet)			
	9	☒	4							
	10						Test pit completed at 10 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-6

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-16

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 15.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod			
	1				SM		Brown silty fine to medium sand and clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	2				ML		Brown sandy silty with orange staining and occasional lenses of fine to medium sand with silt (stiff, moist) (fill)			
	3									
	4									
	5				ML		Gray silt with sand and occasional organics (soft, moist) (fill)			
	6									
	7									
	8									
	9	☒	1		ML		Black sandy silt with organics, roots, wood (stiff, moist) (fill)			
	10									
	11									
	12	☒	2		SM		Brown silty sand with black and white speckled debris (fill)			
	13				SP	▽	Dark gray fine to medium sand with silt (loose, wet)			
	14	☒	3							
	15						Test pit completed at 15 feet Minor groundwater seepage observed at 13 to 15 feet Minor caving observed at 13 to 15 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-7

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-17

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		3 inches sod			
1–2				SP-SM		Brown fine to coarse sand and clasts of sandy silt and trace organics (medium dense, moist) (fill)			
3–6				SM		Brown to gray silty fine to medium sand (loose, moist) (fill)			
7–10	☒	1		ML		Brown to gray sandy silt (soft, moist) (fill)			
11				ML		Dark gray silt with sand and organics (soft, moist)			
12–13				SP-SM		Brown fine to medium sand with silt (loose, moist)			
14						Test pit completed at 14 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-8

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-18

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		3 inches sod			
1				SM		Brown silty fine to medium sand with clasts of sandy silt (medium dense, moist) (fill)			
2				ML		Brown sandy silt with orange staining and occasional lenses (stiff, moist) (fill)			
5				ML		Gray sandy silt with occasional organics (soft, moist) (fill)			
8				SM		Gray silty fine to medium sand with occasional organics (loose, moist) (fill)			
12	☒	1		ML		Brown to black silt with sand and organics (medium stiff, moist)			
13				SP-SM		Dark gray fine to medium sand with silt (loose, wet)			
14						Test pit completed at 14 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-9

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-19

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		6 inches sod			
1	☒	1		SM		Brown silty fine to medium sand with occasional gravel and trace organics (medium dense, moist) (fill)			
2				ML		Brown sandy silt with trace organics and occasional gravel and cobbles (stiff, moist) (fill)			
3									
4	☒	2							Charred organic zone at 3.5 feet
5									
6				SP-SM		Gray fine to medium sand with silt (loose, moist) (fill)			
7									
8									
9				ML		Gray silt with sand (soft, moist) (fill)			
10									
11				ML		Gray to black silt with sand and organics (soft, moist)			
12									
13				SP-SM	▽	Dark gray fine to medium sand (loose, wet)			
14									

Test pit completed at 14 feet
Minor groundwater seepage observed at 13 to 14 feet
No caving observed

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-10

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-20
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		6 inches sod			
1–3	☒	1		SM		Brown silty fine to medium sand with trace organics (loose, moist) (fill)			
3–6				ML		Brown sandy silt (soft, moist) (fill)			
6–7				SP-SM		Gray fine to medium sand with silt (loose, moist) (fill)			
7–8	☒	2							
8–10				SM		Gray silty fine to medium sand (loose, moist) (fill)			
10–11				ML		Brown to black silt with sand and organics (soft, moist)			
11–14				SP-SM	▽	Dark gray fine to medium sand with silt (loose, moist) Grades to wet			

Test pit completed at 14 feet
Minor groundwater seepage observed at 12 feet
No caving observed

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-11

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-21
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 13.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SOD		3 inches sod			
1–2			SP-SM		Brown fine to coarse sand with silt and clasts of sandy silt and trace organics (medium dense, moist) (fill)			
3–6			SM		Brown to gray silty fine to medium sand (loose, moist) (fill)			
7–9			ML		Gray silt with sand (soft, moist) (fill)			
10–11			ML		Gray to brown silt with sand and organics (soft, moist)			
12			SP-SM		Dark gray fine to medium sand with silt (loose, moist) Grades to wet			
13					Test pit completed at 13 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-12

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-22

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SOD		4 inches sod			
1–2			SM		Brown silty fine to medium sand with occasional clasts of sandy silt and trace organics (medium dense, moist) (fill)			
3–4			ML		Gray to brown sandy silt with orange staining and trace organics (stiff, moist) (fill)			
5–6			ML		Gray silt with sand and organics (soft, moist)			
7–11			SP-SM		Dark gray fine to medium sand with silt (loose, moist)			
12				▽	Grades to wet			
13–14								

Test pit completed at 14 feet
Minor groundwater seepage observed at 12 to 14 feet
Minor caving observed at 12 to 14 feet

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-13

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-23
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 12.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		4 inches sod			
	1				SM		Brown silty fine to medium sand with occasional clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	2				ML		Brown sandy silt with orange staining (stiff, moist) (fill)			
	3									
	4									
	5									
	6									Log at 6 feet
	7									
	8				ML		Gray to black silt with sand and organics (soft, moist)			
	9				SP-SM		Dark gray fine to coarse sand with silt (loose, moist)			
	10									
	11					▽	Grades to wet			
	12						Test pit completed at 12 feet Minor groundwater seepage observed at 11 to 12 feet No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-14

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-24

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 12.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		4 inches sod			
	1				ML		Brown sandy silt with orange staining and trace occasional organics (stiff, moist) (fill)			
	2									
	3	☒	1							
	4									
	5									
	6									
	7				SP-SM		Brow fine to medium sand with silt (loose, moist)			Log at 7 feet
	8									
	9									
	10					▽	Grades to dark gray, wet			Water at 9.5 feet after 30 minutes
	11									
	12									

Test pit completed at 12 feet
Rapid groundwater seepage observed at 10 to 12 feet
Minor caving observed at 10 to 12 feet

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-15

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-25
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 11.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		2 inches sod			
	1				ML		Brown sandy silt with orange staining and trace organics (medium stiff, moist) (fill)			
	2									
	3									
	4				SM		Red to brown silty fine to medium sand (loose, moist) (fill)			
	5									
	6									
	7				SP-SM		Brown fine to medium sand with silt (loose, moist)			
	8									
	9					▽	Grades to dark gray, wet			Roots
	10									
	11						Test pit completed at 11 feet Rapid groundwater seepage observed at 9 to 11 feet Moderate caving observed at 9 to 11 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-16

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-26

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					SOD		6 inches sod			
	1				SM		Brown silty fine to medium sand with trace organics (roots) (medium dense, moist)			
	2									
	3	☒	1							
	4									
	5				SM		Gray to brown silty fine sand with orange staining (loose, moist)			
	6									
	7	☒	2							Log at 7.5 feet
	8						Grades to gray, wet			
	9									
	10					▽				
	11									
	12									
	13									
	14	☒	3							

Test pit completed at 14 feet
Minor groundwater seepage observed at 10 to 14 feet
No caving observed

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-17

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-27
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 12.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod			
	1				SM		Brown silty fine to medium sand with trace organics (medium dense, moist)			
	2	☒	1				Grades to loose with decreasing organics			
	3									
	4									
	5									
	6									
	7						Grades to gray			
	8									
	9									
	10	☒	2			▽				
	11						Grades to dark gray, wet			
	12									

Test pit completed at 12 feet
Minor groundwater seepage observed at 10 to 12 feet
No caving observed

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-18

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-28
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod and roots			
	1				SM		Brown silty fine to medium sand with trace organics (medium dense, moist)			
	2									
	3						Grades to loose			
	4									
	5				SP-SM		Brown fine to medium sand with silt (loose, moist)			
	6									
	7									
	8				SM		Dark gray silty fine to medium sand (loose, moist)			
	9									
	10									
	11					▽	Grades to wet			
	12									
	13									
	14						Test pit completed at 14 feet Minor groundwater seepage observed at 11 to 14 feet Minor caving observed at 11 to 14 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-19

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-29

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SOD		3 inches sod and roots			
1			SM		Brown silty fine to medium sand with trace organics (roots) (medium dense, moist)			
5					Orange staining			
9			SM		Gray silty fine to medium sand (loose, wet)			
12	☒ 1			▽	Includes occasional lenses and sandy silt			
14					Test pit completed at 14 feet Minor groundwater seepage observed at 10 to 14 feet No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-20

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-30

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045094\GINT\0045094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 14.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod and roots			
	1				SP-SM		Brown fine to coarse sand with silt and trace organics (medium dense, moist) (fill)			
	2				ML		Brown sandy silt with orange staining and trace of fine to medium sand with occasional gravel and cobbles (stiff, moist) (fill)			
	3	☒	1							
	4									
	5				SM		Brown silty fine to medium sand with orange staining (loose, moist)			
	6									
	7									
	8									
	9									
	10									
	11									
	12						Grades to gray with lenses of sandy silt, wet			
	13									
	14						Test pit completed at 14 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-21

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-31

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 15.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod			
	1				SP-SM		Brown fine to coarse sand with silt and clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	4				SM		Brown silty fine to medium sand with trace organics (medium dense, moist)			
	6						Grades to loose with less organics			
	7				SP-SM		Brown fine to medium sand with silt (loose, moist)			
	8	☒	1							
	15						Test pit completed at 15 feet No groundwater seepage observed Minor caving observed at 8 to 15 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-22

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-32

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 10.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
1			ML		Brown sandy silty with orange staining and occasional gravel and cobbles (stiff, moist) (fill)			
2								
3			SP-SM		Brown fine to medium sand with silt (loose, moist)			
4								
5								
6								
7								
8								
9								
10					Test pit completed at 10 feet No groundwater seepage observed Moderate caving observed at 6 to 10 feet			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-23

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-33

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 13.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0				SOD		4 inches sod			
1				SP-SM		Brown fine to coarse sand with silt and clasts of silty sand and occasional gravel and trace organics (medium dense, moist) (fill)			
2	☒	1							
3									
4				ML		Gray sandy silt with organics (charred wood) (very stiff, moist)			
5	☒	2							
6						Grades to soft with fewer organics			
7				SP-SM		Dark gray fine to medium sand with silt (loose, moist)			
8									
9									
10									
11									
12									
13						Test pit completed at 13 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-24

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-34

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0045409\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 4.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod			
	1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	2				ML		Brown sandy silt with orange staining and trace organics and occasional lenses of fine to medium sand (stiff, moist) (fill)			
	3									
	4						Test pit completed at 4 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-25

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-35

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0454094\GINT\0454094.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 2.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					SOD		3 inches sod			
	1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			Occasional slag from 0 to 1 foot
	2				ML		Brown sandy silt with orange staining and trace organics (stiff, moist) (fill)			

Test pit completed at 2.5 feet
No groundwater seepage observed
No caving observed

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-26

GeoEngineers

Project: Port of Tacoma Parcel 14
Project Location: Tacoma, Washington
Project Number: 0454-094-15

Figure B-36
Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Date Excavated: 10/13/2010 Logged By: MM

Equipment: Case 580 Super M w/Extendahoe Total Depth (ft) 4.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	0				SOD		3 inches sod			
	1				SM		Brown silty fine to medium sand with clasts of sandy silt and trace organics (medium dense, moist) (fill)			
	2				ML		Brown sandy silt with orange staining and trace organics (stiff, moist) (fill)			
	3									
	4						Test pit completed at 4 feet No groundwater seepage observed No caving observed			

Note: See Figure B-1 for explanation of symbols.

Log of Test Pit TP-27

GeoEngineers

Project: Port of Tacoma Parcel 14

Project Location: Tacoma, Washington

Project Number: 0454-094-15

Figure B-37

Sheet 1 of 1

Tacoma: Date:12/3/10 Path:P:\0\0454094\GINT\0454094.GPJ DBTemplate\LibTemplate\GEOENGINEERS8.GDT/GEI8_TESTPIT_1P_ENV

Appendix B
Anchor QEA 2014 Completion Report – Removal of Arsenic Impacted Soil, Habitat Enhancement Project

ANCHOR QEA

1119 Pacific Avenue, Suite 1600
Tacoma, Washington 98402-4374
Phone 206.287.9130
www.anchorqea.com

MEMORANDUM

To:	Rob Healy and Dave Myers, Port of Tacoma	**Date:**	October 20, 2014
From:	Mark Larsen and Nik Bacher, Anchor QEA, LLC	**Project:**	140092-01.02
Cc:	Project File 140092-01.02		
Re:	Completion Report – Removal of Arsenic Impacted Soil Habitat Enhancement Project – 1131 East Alexander Avenue, Tacoma, 98424 Environmental Incident Reporting System ID (ERTS) #649884		

This memorandum summarizes the completed removal of arsenic-impacted soils from the property owned by the Port of Tacoma (Port) and located at 1131 East Alexander Avenue (Property) in Tacoma, Washington. That Property is being developed by the Port as a habitat enhancement project. The soil removal described in this memorandum was completed during September 2014. Confirmation sampling data described in this memorandum confirms that soil arsenic concentrations at the Property currently comply with conservative Model Toxics Control Act (MTCA) Method A cleanup levels (20 milligrams per kilogram [mg/kg]).

1. PROJECT BACKGROUND

Figure 1 shows the location of the Property. The Property is irregularly shaped and is located between Wapato Creek and Highway 409. The Property has remained vacant until the present time.

Address:	1131 East Alexander Avenue Tacoma, Washington 98424
Pierce County Parcel ID:	0320013145
Current Land Use:	Vacant Industrial
Proposed Use:	Habitat Enhancement Area

The Property is being developed as a habitat enhancement project, including relocation of Wapato Creek, development of wetland and riparian habitat, and associated grading, planting, and maintenance.

Environmental and geotechnical testing has been performed throughout the Property and adjacent areas in advance of the planned habitat enhancement work. As summarized in

Attachment A, (Anchor QEA 2014) three localized areas of arsenic-impacted soil were identified in the northern portion of the Property. These areas were delineated laterally and vertically during multiple rounds of investigation as shown in Figure 1. The contamination was confined to surficial fill soils, up to 5 feet in depth. No contamination was present in the underlying hydraulic fill materials present on the Property.

2. PREVIOUS TESTING AND REMOVAL AREA DELINEATION

As described in Attachment A, Anchor QEA conducted extensive soil test pit investigations, with bulk soil mercury testing to assess the extent of soil contamination, leaching tests using the synthetic precipitation leaching procedure (SPLP) to evaluate whether the contamination was a potential concern for stormwater or groundwater, and data analysis to evaluate compliance with MTCA requirements.

Bulk soil testing and data analysis included comparison of soil arsenic concentrations to both MTCA Method C industrial soil cleanup levels (88 mg/kg), and to MTCA Method A unrestricted soil cleanup levels (20 mg/kg). Results confirmed that soil conditions at the Property did not exceed industrial soil criteria, as follows:

- Out of the 54 soil samples (including 24 soil samples collected previously by GeoEngineers and 30 soil samples collected by Anchor QEA) tested for arsenic concentrations, only 2 samples (3.7%) exceeded the MTCA Method C soil cleanup level for industrial land uses (88 mg/kg).
- The true mean concentration was well below the cleanup level.
- No samples exceed a concentration two times the cleanup level.

Compliance with the MTCA Method A cleanup level (20 mg/kg) applicable to unrestricted land uses was also evaluated. Relative to that standard, 4 of the 54 soil samples exceeded the MTCA Method A cleanup level. Areas of soil exceeding the MTCA Method A cleanup level are identified in Figure 1. These samples include the following (see Figure 1 for locations):

- TP-05A-0-1 (49 mg/kg)
- TP-13A-2-3 (95 mg/kg)
- TP3 3-5 (152 mg/kg) (GeoEngineers 2010)
- B5-7C (53 mg/kg) (GeoEngineers 2010)

SPLP testing was performed on eight samples. None of the soil samples contained detectable arsenic in the SPLP leachate (see Attachment A). This demonstrates that the arsenic in soil is not a potential source of stormwater or groundwater contamination.

Testing was also performed using the toxicity characteristic leaching procedure (TCLP) to evaluate disposal options for soils removed from the Property. Results of that testing demonstrate that soils managed by off-site disposal do not require management as hazardous waste or Dangerous Waste.

After review of the sampling data, the Port elected to remove the soil contained within the three areas identified in Figure 1 prior to developing the habitat enhancement project. This work was completed during the 90 days following submittal of ERTS notification #649884 to Ecology. Confirmation sampling was performed as described in Section 3. All impacted soils exceeding the MTCA Method A cleanup level (20 mg/kg) were removed and managed by disposal in an appropriately permitted, off-site commercial landfill. The eastern most excavation area straddles the proposed habitat area boundary, but was included to facilitate complete removal of impacted soils within the vicinity of the habitat enhancement project.

3. SUMMARY OF COMPLETED SOIL REMOVAL

Soil removal activities were completed during September 2014 by the Port's selected contractor, Road Construction Northwest. Soil excavations were field located based on the delineation work previously conducted. Soil removals were overseen by the Port's construction management team. A total of 943 tons of soils were removed from the three areas and transported to the LRI landfill in Graham, Washington. Soils were disposed of as non-hazardous material. Disposal tickets are included in Attachment B.

Anchor QEA conducted performance and confirmation sampling during and following soil removal. Two of the initial confirmation samples (AQ-CONF-CC and AQ-CONF-C3) collected from one of the excavations had total arsenic concentrations exceeding MTCA Method A cleanup values. Additional soil was excavated in these areas to verify complete removal of all arsenic-impacted soil. Following overexcavation, two additional confirmation samples were collected (AQ-CONF-CC-2 and AQ-CONF-C3-2). The resulting data are contained in Table 1, and the confirmation sampling locations are shown in Figure 2.

Analytical laboratory data packages and chain-of-custody forms are included as Attachment C.

Table 1
Results of Soil Sampling During and Following Soil Removal

Soil Sample Type	Total Arsenic (mg/kg)
Previous Testing of Soil in Removal Areas *(see Figure 1)*	
TP-3-3	152
B5-7C	53
TP-05A	49
TP-13A	95
Samples of Removed Material *(Material Removed and Disposed at LRI)*	
AQ-conf-C3	101
AQ-conf-CC	24.4
Results of Confirmation Samples *(see Figure 2)*	
AQ-conf-A2	2.2
AQ-conf-A3	1.8
AQ-conf-A4	2.3
AQ-conf-A5	8.7
AQ-conf-AC	2.6
AQ-conf-B1	4.3
AQ-conf-B2	7.5
AQ-conf-B3	1.5
AQ-conf-B4	8.5
AQ-conf-BC	4.1
AQ-conf-C1	4
AQ-conf-C2	5.1
AQ-conf-C3-2	1
AQ-conf-C4	16.4
AQ-conf-CC-2	1.5
MTCA Method A Cleanup Level	**20 mg/kg**

Note:
Total arsenic concentrations in underlined samples exceeded MTCA Method A Cleanup Levels for Unrestricted Land Use. Soil associated with these samples was removed as part of the soil removal action.

Following soil removal, all remaining soil within the excavation areas had arsenic concentrations below the MTCA Method A cleanup level for unrestricted land uses. The post-excavation soil conditions at the site are presented in Figure 2.

4. SUMMARY AND CONCLUSIONS

All of the objectives of the soil removal were successfully accomplished. Key components include the following:

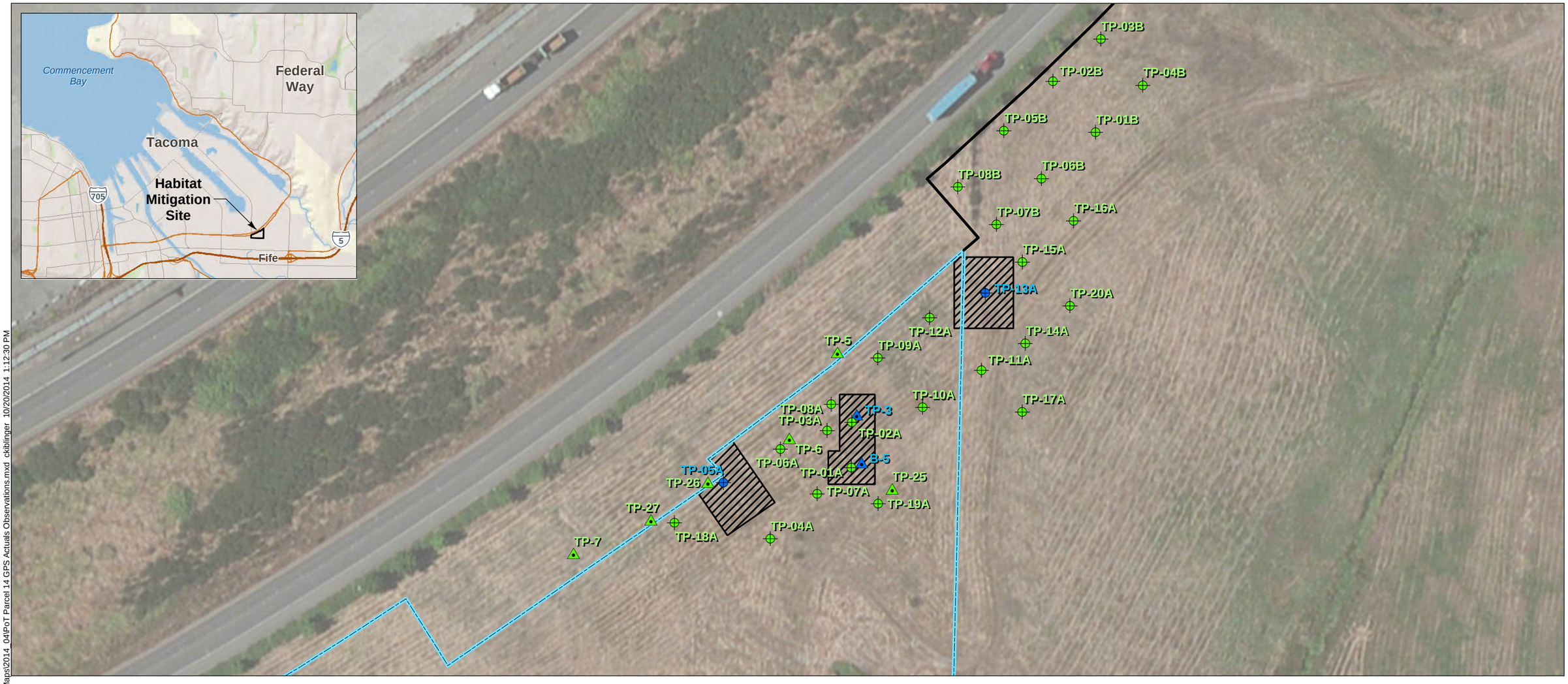
- A total of 943 tons of arsenic-contaminated soil was removed from the Property and disposed at the LRI landfill facility as non-hazardous materials.
- Following soil removal, soil quality at the site complies with MTCA Method A soil cleanup levels for arsenic applicable to unrestricted uses (20 mg/kg).
- Previous investigations (Anchor QEA 2014) included SPLP testing to evaluate the potential for arsenic in soil to leach into stormwater and/or groundwater. None of the soil samples tested contained detectable arsenic in the SPLP leachate, demonstrating that arsenic in soil is not a potential source of stormwater or groundwater contamination.
- The site is being developed for habitat mitigation uses consistent with existing plans and permits.
- No further actions are required on or adjacent to the habitat mitigation parcel to comply with MTCA cleanup levels.

5. REFERENCES

GeoEngineers (GeoEngineers, Inc.), 2010. *Site Investigation, Port of Tacoma Parcel 14, Tacoma, Washington*. File No. 0454-094-15. December 6, 2010.

Anchor QEA (Anchor QEA, LLC.), 2014. *Results of Test Pits and Soil Sampling at Parcel 14.* May 6, 2014.

FIGURES



2014 Test Pits

Previous Sampling Locations by Others

Arsenic concentration below MTCA Method A Unrestricted Land Use Cleanup Level (20 mg/kg)

Arsenic concentration above MTCA Method A Unrestricted Land Use Cleanup Level (20 mg/kg)

Excavation Footprint

Port Property Boundary[1]

Habitat Mitigation Site Boundary[1]

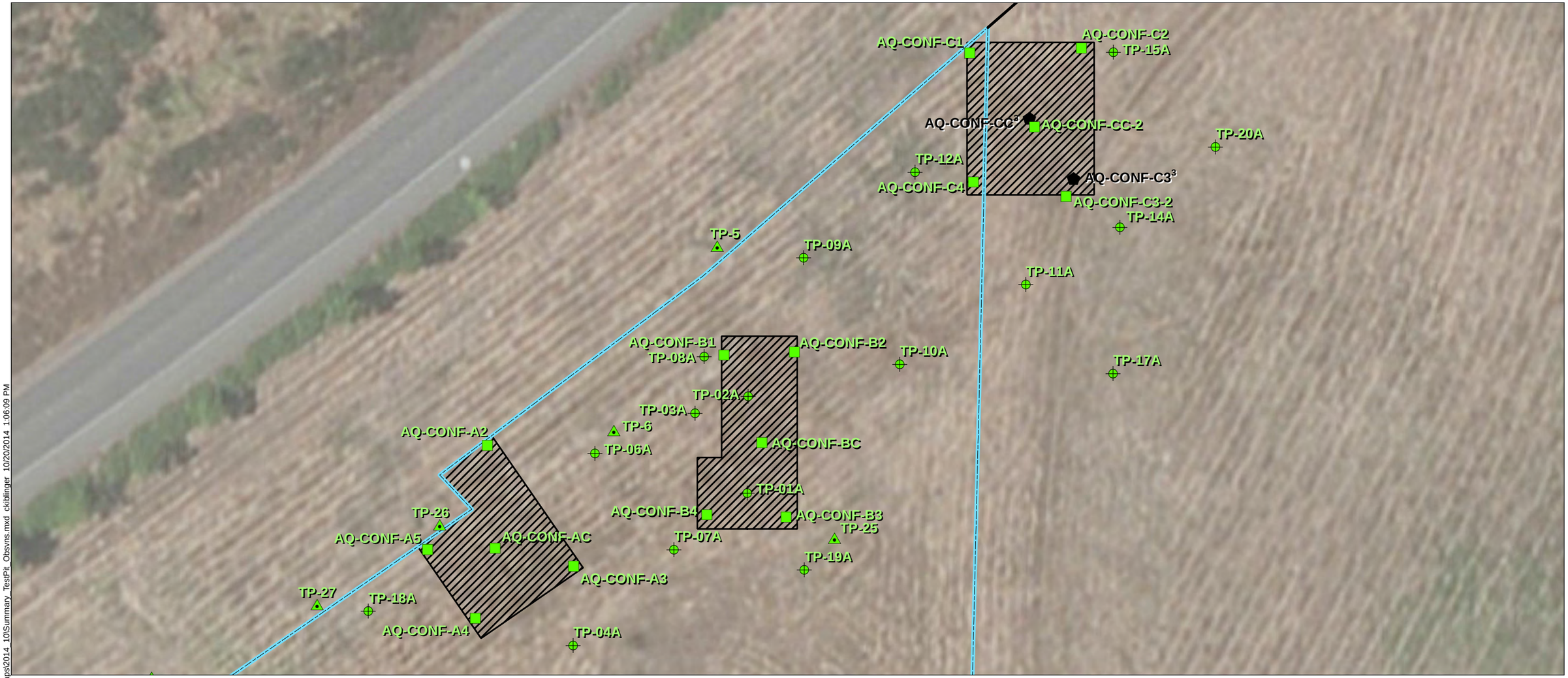
NOTES:
1. Boundaries are approximate, based on drawing titled "PARCEL 14 GRADING AND SITE STABILIZATION PROJECT, PROPOSED SAMPLING LOCATIONS," Port of Tacoma, 1/15/2014.
2. Excavation footprints are the "floor" of the excavation extent and does not include lay back of excavation edges.

Feet
0 25 50 75

Q:\Jobs\Port_of_Tacoma_0092\Parcel_14_SamplingMaps\2014_04PoT Parcel 14 GPS Actuals Observations.mxd ckiblinger 10/20/2014 1:12:30 PM

ANCHOR QEA

Figure 1
Initial Soil Conditions
Port of Tacoma



2014 Test Pits

Previous Sampling Locations by Others

Confirmation Sample

Interim Confirmation Sample[3]

Arsenic concentration below MTCA Method A Unrestricted Land Use Cleanup Level (20 mg/kg)

Excavation Footprint

Port Property Boundary[1]

Habitat Mitigation Site Boundary[1]

NOTES:
1. Boundaries are approximate, based on drawing titled "PARCEL 14 GRADING AND SITE STABILIZATION PROJECT, PROPOSED SAMPLING LOCATIONS," Port of Tacoma, 1/15/2014.
2. Excavation footprints are the "floor" of the excavation extent and does not include lay back of excavation edges.
3. Interim confirmation sample that exceeded MTCA Method A Cleanup Level. Additional material was excavated from this area to ensure complete removal of arsenic impacted soil.

Feet
0 35 70

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ANCHOR QEA

Figure 2
Post-Excavation Site Conditions
Port of Tacoma

ATTACHMENT A
SUMMARY OF PREVIOUS SOIL TESTING DATA

ANCHOR QEA

1119 Pacific Avenue, Suite 1600
Tacoma, Washington 98402-4374
Phone 206.287.9130
www.anchorqea.com

MEMORANDUM

To:	Dave Myers and Leslee Conner, Port of Tacoma	**Date:**	May 6, 2014
From:	Mark Larsen and Nik Bacher, Anchor QEA, LLC	**Project:**	140092-01.02
Cc:	Project File 140092-01.02		
Re:	Results of Test Pits and Soil Sampling at Parcel 14		

This memorandum summarizes the findings of test pit surveys and soil sampling performed by Anchor QEA, LLC (Anchor QEA) on behalf of the Port of Tacoma (Port). The sampling was performed in the northern portion of the Port-owned Parcel 14 property (Parcel 14) to inform planned excavation and grading activities in this area.

Figure 1 shows the location of Parcel 14. The western portion of Parcel 14 is to be used for development of a habitat mitigation area by the Port. The eastern portion of Parcel 14 will be used as an industrial development parcel. Figure 1 also shows the areas investigated as part of the current test pit and soil sampling investigation.

1. BACKGROUND

Numerous environmental investigations have been performed at Parcel 14, including recent soil testing by GeoEngineers, Inc. (GeoEngineers; 2010). As part of that sampling effort, GeoEngineers excavated test pits throughout Parcel 14, evaluated soil types, and conducted analytical testing of the soil. Soil quality complied with existing Model Toxics Control Act (MTCA) soil cleanup levels applicable to industrial land uses. However, in one localized area, lower-level arsenic concentrations were detected that exceeded the more stringent cleanup levels for unrestricted land uses. The following summarizes the 2010 soil testing data:

- Out of 24 soil samples tested for arsenic during the GeoEngineers investigation, only one sample exceeded the MTCA Method C soil cleanup level for industrial land uses (88 milligrams per kilogram [mg/kg]). Based on MTCA procedures for evaluating compliance with soil cleanup levels (WAC 173-340-740(7)(d)) the Parcel 14 property complies with MTCA cleanup levels for industrial properties. Specifically, the data meet the requirements of the three-part test under MTCA: 1) the true mean

concentration is less than the cleanup level; 2) no samples exceed twice the cleanup level; and 3) no more than 10 percent of the samples exceed the cleanup level.

- Out of 24 soil samples tested by GeoEngineers, only two soil samples exceeded the more stringent MTCA Method A soil cleanup level (20 mg/kg) for unrestricted land use. This cleanup level is not applicable to Parcel 14 because land uses remain restricted (the western portion of Parcel 14 is to be deed-restricted for habitat mitigation uses, and the uses within the eastern portion of Parcel 14 remain zoned industrial). The soil samples exceeding the Method A cleanup level for unrestricted land uses were both located within an area along the northern boundary of Parcel 14. Those two samples included test pit sample TP3 3 to 5 feet below ground surface (152 mg/kg arsenic), and soil boring sample B5-7C (53 mg/kg arsenic). The locations of test pit TP3 and boring B5 are shown in Figure 1.

The current sampling effort was conducted to supplement existing information from the GeoEngineers study, and to inform Port planning for site reuse, including potential excavation and grading activities. The specific objectives and methods of the sampling program are defined in Section 2. Findings and conclusions are presented in Sections 3 and 4, respectively.

2. METHODS

The scope of soil testing was developed in coordination with the Port. Specific objectives of the testing program included the following:

- Verify compliance of Parcel 14 soils with MTCA Method C soil cleanup levels for arsenic applicable to industrial land uses (88 mg/kg) by excavating additional test pits and analyzing additional soil samples for total arsenic.
- Assess the leachability of the soils to stormwater or groundwater by testing multiple soil samples using the synthetic precipitation leaching procedure (SPLP) test method.
- Determine the volume of soil exceeding the MTCA Method A cleanup level for arsenic applicable to unrestricted land uses (20 mg/kg) to inform Port evaluations for potential excavation of those soils.

- Profile soils for potential off-site disposal using the toxicity characteristic leaching procedure (TCLP) test method for arsenic and the other heavy metals specified in the TCLP test method.

Soil samples were evaluated visually using test pits. Test pits were excavated by Clearcreek Contractors from Everett, Washington, at the direction of Anchor QEA field staff. Twenty test pits were excavated on March 20th, and eight additional test pits were excavated on March 26th (Figure 1). The test pits were excavated to an average depth of 6 feet and the side walls were evaluated for the presence of anthropogenic materials including debris or slag.

Soil samples were collected at 2 to 3 feet and 5 to 6 feet below grade at all test pit locations. In addition, one sample was collected from the 0- to 1-foot and 0- to 1.5-foot interval below grade at TP-05A and TP-12A, respectively. Additional samples were collected at these two locations due to the presence of anthropogenic material in those shallow intervals.

Samples were sent to Analytical Resources, Inc., in Tukwila, Washington, where they were archived pending sample analysis. The samples chosen for analysis, and associated results, are presented in Table 1 and laboratory data packages are located in Attachment A. Test pit observations are presented in Table 2.

Analytical samples collected were analyzed for total arsenic via U.S. Environmental Protection Agency (EPA) Method 6010C. Consistent with MTCA requirements (WAC 173-340-740(7)(a)), the testing was performed on the soil fraction less than 2 millimeters (mm) in size. Under existing and proposed land uses, it is not reasonable to expect that larger soil particles will be reduced to 2 mm or less.

Eight soil samples, including the samples with the highest total arsenic concentrations, were tested for leaching potential using the SPLP method (EPA Method SW-846/1311). Two of these samples, including the sample with the highest total arsenic concentration, were tested using the TCLP method (EPA Method SW-846/1312), including analysis for eight metals as specified in the Resource Conservation and Recovery Act (RCRA) waste characterization procedures. Leaching tests were performed on bulk soil samples, including materials with diameters exceeding 2 mm.

3. FINDINGS

Arsenic testing was performed on 30 individual soil samples and two duplicate samples. Measured arsenic concentrations in the soil samples ranged from 6 to 95 mg/kg. The average arsenic soil concentration for all samples was 13.8 mg/kg. The average concentration of all soil samples is well below MTCA Method C (88 mg/kg). Only one individual sample exceeded this cleanup level (TP-13A-2-3; 95 mg/kg). If the new data are pooled with the GeoEngineers soil testing data, the average soil arsenic concentration remains well below the 88 mg/kg Method C cleanup level for industrial sites. The Parcel 14 soil dataset demonstrates compliance with soil cleanup levels following the criteria in WAC 173-340-740(7)(d):

- Out of the 54 soil samples (plus two duplicate samples) tested for arsenic during the GeoEngineers investigation, only two samples (3.7%) exceeded the MTCA Method C soil cleanup level for industrial land uses (88 mg/kg).
- The true mean concentration is well below the cleanup level.
- No samples exceed a concentration two times the cleanup level.

SPLP testing was performed on eight samples. None of the soil samples contained detectable arsenic in the SPLP leachate. This demonstrates that the arsenic in soil is not a potential source of stormwater or groundwater contamination.

As requested by the Port, compliance with the soil cleanup level for unrestricted land uses was also evaluated using the combined Parcel 14 dataset, though this cleanup level is not applicable to current or anticipated land use at Parcel 14. Relative to the MTCA Method A cleanup level for unrestricted land uses (20 mg/kg), four of 54 soil samples contained arsenic at concentrations in excess of the cleanup level. This included two samples collected by GeoEngineers and two samples collected by Anchor QEA. Each of these four samples exceeds the Method A cleanup level by more than a factor of two. These samples include the following (see Figure 1 for locations):

- TP-05A-0-1 (49 mg/kg)
- TP-13A-2-3 (95 mg/kg)
- TP3 3-5 (152 mg/kg) (GeoEngineers, 2010)
- B5-7C (53 mg/kg) (GeoEngineers, 2010)

To help inform Port planning for excavation and grading activities, the soil data were used to estimate the areas and volumes of soil that contain exceedances of the MTCA Method A cleanup level for unrestricted land use (20 mg/kg). These areas are identified in Figure 1. Two of these areas (Area A and Area C) are based on the results from the current investigation. The boundary of Area B is based on the 2010 GeoEngineers data, including two samples collected in this area with arsenic concentrations of 53 and 152 mg/kg, respectively. The lateral boundary of Area B as shown in Figure 1 likely overestimates the extent of arsenic-impacted soil, as soil samples from two Anchor QEA test pits (TP-01A and TP-02A) within this area contained arsenic at concentrations less than the MTCA Method A soil cleanup level.

Based on the areas as defined in Figure 1, the estimated soil volumes (excluding side-slope allowances) for areas A through C are as follows:

- Area A: 155 cubic yards (cy)
- Area B: 356 cy
- Area C: 340 cy
- Total: 851 cy

TCLP testing was conducted on two soil samples from the current sampling effort, including the soil with the highest total arsenic concentration. The resulting TCLP test data are presented in Table 1. Concentrations of all TCLP metals were below method reporting limits in both samples.

4. SUMMARY AND CONCLUSIONS

All of the objectives of the current study were successfully accomplished. Key findings of the study include the following:

- Based on the 54 soil samples analyzed for total arsenic by Anchor QEA and GeoEngineers, soil quality at Parcel 14 complies with MTCA Method C soil cleanup levels for arsenic applicable to industrial land uses (88 mg/kg).
- The arsenic contained within the soil was found to be immobile. Arsenic was not detected in soil leachability tests performed using the SPLP test method. This

demonstrates that the soils are not a potential concern to stormwater or groundwater quality.

- While not applicable to current or anticipated Parcel 14 land uses, the Port requested evaluation of the volume of soil exceeding the MTCA Method A soil cleanup level for unrestricted land uses (20 mg/kg). Three localized areas at Parcel 14 (Figure 1) were identified containing arsenic concentrations in excess of this cleanup level. The estimated volume of soil contained within those three areas is 851 cy (excluding side-slope allowances).
- Two soil samples tested TCLP-leachable metals demonstrated that soils managed by off-site disposal do not require management as hazardous waste or dangerous waste.

5. REFERENCES

GeoEngineers (GeoEngineers, Inc.), 2010. *Site Investigation, Port of Tacoma Parcel 14, Tacoma, Washington*. File No. 0454-094-15. December 6, 2010.

Table 1
Parcel 14 Soil Analytical Data

Soil Station	Arsenic (mg/kg)	SPLP Arsenic (mg/L)	TCLP (mg/L)							
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TP-01A-2-3	13	-	-	-	-	-	-	-	-	-
TP-01A-2-3 (duplicate)	17	-	-	-	-	-	-	-	-	-
TP-01A-5-6	8	-	-	-	-	-	-	-	-	-
TP-02A-2-3	9	-	-	-	-	-	-	-	-	-
TP-02A-5-6	13	-	-	-	-	-	-	-	-	-
TP-04A-2-3	7	-	-	-	-	-	-	-	-	-
TP-05A-0-1	49	< 0.05	-	-	-	-	-	-	-	-
TP-05A-2-3	7	< 0.05	-	-	-	-	-	-	-	-
TP-05A-5-6	7	< 0.05	-	-	-	-	-	-	-	-
TP-06A-2-3	7	-	-	-	-	-	-	-	-	-
TP-07A-2-3	7	-	-	-	-	-	-	-	-	-
TP-09A-2-3	8	< 0.05	< 0.2	< 0.02	< 0.01	< 0.02	< 0.1	< 0.0001	< 0.2	< 0.02
TP-09A-5-6	8	< 0.05	-	-	-	-	-	-	-	-
TP-10A-2-3	12	-	-	-	-	-	-	-	-	-
TP-11A-2-3	20	-	-	-	-	-	-	-	-	-
TP-11A-2-3 (duplicate)	20	-	-	-	-	-	-	-	-	-
TP-12A-0-1.5	14	-	-	-	-	-	-	-	-	-
TP-12A-2-3	15	-	-	-	-	-	-	-	-	-
TP-12A-5-6	8	-	-	-	-	-	-	-	-	-
TP-13A-2-3	95	< 0.05	< 0.2	< 0.02	< 0.01	< 0.02	< 0.1	< 0.0001	< 0.2	< 0.02
TP-13A-5-6	7	-	-	-	-	-	-	-	-	-
TP-14A-2-3	8	-	-	-	-	-	-	-	-	-
TP-15A-2-3	7	< 0.05	-	-	-	-	-	-	-	-
TP-15A-5-6	6	< 0.05	-	-	-	-	-	-	-	-
TP-16A-2-3	8	-	-	-	-	-	-	-	-	-
TP-18A-2-3	11	-	-	-	-	-	-	-	-	-
TP-19A-2-3	15	-	-	-	-	-	-	-	-	-
TP-20A-2-3	8	-	-	-	-	-	-	-	-	-
TP-02B-2-3	8	-	-	-	-	-	-	-	-	-
TP-02B-5-6	7	-	-	-	-	-	-	-	-	-
TP-08B-2-3	7	-	-	-	-	-	-	-	-	-
TP-08B-5-6	6	-	-	-	-	-	-	-	-	-

Note:
- = not analyzed

Table 2
Test Pit Observations

Station	Slag Observations
TP-01A	None
TP-02A	None
TP-03A	None
TP-04A	None
TP-05A	5 slag pieces approximately 2”-4" diameter
TP-06A	None
TP-07A	None
TP-08A	None
TP-09A	Few slag pieces
TP-10A	None
TP-11A	None
TP-12A	3 slag pieces
TP-13A	Few slag pieces up to 6" diameter
TP-14A	None
TP-15A	3-4 small pieces of slag
TP-16A	None
TP-17A	None
TP-18A	None
TP-19A	None
TP-20A	None
TP-01B	None
TP-02B	1 piece of slag
TP-03B	None
TP-04B	None
TP-05B	None
TP-06B	None
TP-07B	None
TP-08B	2 pieces of slag

FIGURE



2014 Test Pits

Previous Sampling Locations by Others

Excavation Footprint

Future Habitat Area Boundary[1]

Parcel Boundary[1]

NOTES:
1. Boundaries are approximate, based on drawing titled "PARCEL 14 GRADING AND SITE STABILIZATION PROJECT, PROPOSED SAMPLING LOCATIONS," Port of Tacoma, 1/15/2014.
2. Excavation footprints are the "floor" of the excavation extent and does not include lay back of excavation edges.
3. * = occasional slag encountered in test pits.

Area	Size (ft^2)	Excavation Depth (ft)	Excavation Volume (yd^3)
A	2,099	2'	155
B	1,925	5'	356
C	2,294	4'	340

Feet
0 25 50 75

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ANCHOR QEA

Figure 1
Summary of Test Pit Observations and Planned Excavations - Parcel 14
Port of Tacoma

ATTACHMENT A

Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 10, 2014

Ben Howard
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14
ARI Job Nos.: YE51 & YE52

Dear Ben:

Please find enclosed the Chain of Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: YE51_YE52

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: YE51, YE52

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard
ARI Client Company: Anchor QEA	Phone:
Client Contact: Ben Howard	
Client Project Name: Port of Tacoma Parcel 14	
Client Project #:	Samplers: BHJM

Page: 1 of 4	
Date: 3/20/14	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 3.4

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive								Notes/Comments
TP-01A-2-3	3/20/14	0837	Soil	1	X								
TP-01A-5-6		0840		1	X								
TP-02A-2-3		0851		1	X								
TP-02A-5-6		0855		1	X								
TP-03A-2-3		0916		1	X								
TP-03A-5-6		0920		1	X								
TP-04A-2-3		0940		1	X								
TP-04A-5-6		0944		1	X								
TP-05A-0-1		1005		1	X								
TP-05A-2-3		1008		1	X								

Comments/Special Instructions

Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name: Ben Howard	Printed Name: DALE D. HANES	Printed Name:	Printed Name:
Company: Anchor QEA	Company: ARI	Company:	Company:
Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES1 : 00003

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 2 of 4	
ARI Client Company: Anchor QEA	Phone:	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 4			
Client Project #:	Samplers: BH/JM		

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive								Notes/Comments
TP-05A-5-6	3/20/14	1011	Soil	1	X								
TP-06A-2-3		1035		1	X								
TP-06A-5-6		1038		1	X								
TP-07A-2-3		1130		1	X								
TP-07A-5-6		1134		1	X								
TP-08A-2-3		1303		1	X								
TP-08A-5-6		1306		1	X								
TP-09A-2-3		1323		1	X								
TP-09A-5-6		1327		1	X								
TP-10A-2-3		1350		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: HALE D. HAMES	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

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206-695-6200 206-695-6201 (fax)
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Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES4 : 0000H

YD93

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard
ARI Client Company: Anchor QEA	Phone:
Client Contact: Ben Howard	
Client Project Name: Port of Tacoma Parcel 14	
Client Project #:	Samplers: BE/JM

Page: 1	of 4
Date: 3/20/14	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 3.4

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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TCLP					Notes/Comments
TP-01A-2-3	3/20/14	0837	Soil	1	X	X							
TP-01A-5-6		0840		1	X	X							
TP-02A-2-3		0851		1	X	X							
TP-02A-5-6		0855		1	X	X							3/26/14
TP-03A-2-3		0916		1	X								
TP-03A-5-6		0920		1	X								
TP-04A-2-3		0940		1	X	X							
TP-04A-5-6		0944		1	X								
TP-05A-0-1		1005		1	X	X	X						
TP-05A-2-3		1008		1	X	X	X						

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: DALE D. HAGEN	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/24/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES1 : 000095

YD 93

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 2 of 4	
ARI Client Company: Anchor QEA	Phone:	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 4			
Client Project #:	Samplers: BH/JM		

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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TZLP					Notes/Comments
TP-05A-5-6	3/20/14	1011	Soil	1	X	X	X						
TP-06A-2-3		1035		1	X	X							
TP-06A-5-6		1038		1	X								
TP-07A-2-3		1130		1	X	X							3/26/14
TP-07A-5-6		1134		1	X								
TP-08A-2-3		1303		1	X								
TP-08A-5-6		1306		1	X								
TP-09A-2-3		1323		1	X	X	X	X					
TP-09A-5-6		1327		1	X	X	X						
TP-10A-2-3		1350		1	X	X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HALLS	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

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Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES1:00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

COC No(s): _____ NA

Assigned ARI Job No: YD93

Project Name: Port of Tacoma Parcel 14

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 3.4

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877452

Cooler Accepted by: IS (MH) Date: 3-21-14 Time: 1612

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI...	NA		

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JS Date: 3-21-14 Time: 1050

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 3 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-8431	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers:	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Notes/Comments
TP-10A-5-6	3/20/14	1353	Soil	1	X	
TP-11A-2-3		1414		1	X	
TP-11A-5-6		1417		1	X	
TP-12A-0-1.5		1438		1	X	
TP-12A-2-3		1441		1	X	
TP-12A-5-6		1445		1	X	
TP-13A-2-3		1519		1	X	
TP-13A-5-6		1524		1	X	
TP-14A-2-3		1541		1	X	
TP-14A-5-6		1545		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HAHN	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES1 09008

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3, 4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive								Notes/Comments
TP-15A-2-3	3/20/14	1600	Soil	1	X								
TP-15A-5-6	"	1604	"	1	X								
TP-16A-2-3	"	1620	"	1	X								
TP-16A-5-6	"	1623	"	1	X								
TP-17A-2-3	"	1640	"	2	X								
TP-17A-5-6	"	1643	"	1	X								
~~TP-18A-2-3~~ 39													
TP-18A-5-6	"	1658	"	1	X								
TP-19A-5-6	↓	1719	↓	1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MIKE D. HARRIS	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YES1 : 000009

YD94 YE52

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 3 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TZLP					Notes/Comments
TP-10A-5-6	3/20/14	1353	Soil	1	X								
TP-11A-2-3		1414		1	X	X							
TP-11A-5-6		1417		1	X								
TP-12A-0-1.5		1438		1	X	X							
TP-12A-2-3		1441		1	X	X							3/26/14
TP-12A-5-6		1445		1	X	X							
TP-13A-2-3		1519		1	X	X							
TP-13A-5-6		1524		1	X	X							
TP-14A-2-3		1541		1	X	X							
TP-14A-5-6		1545		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HARLOW	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

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Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YE51:00010

YD94

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3, 4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BE/JM		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TZLP					Notes/Comments
TP-15A-2-3	3/20/14	1600	Soil	1	X	X	X						
TP-15A-5-6		1604		1	X	X	X						
TP-16A-2-3		1620		1	X	X							
TP-16A-5-6		1623		1	X								
TP-17A-2-3		1640		2	X								
TP-17A-5-6		1643		1	X								
~~TP-18A-2-3~~ BH													
TP-18A-5-6		1658		1	X								
TP-19A-5-6		1719		1	X								

3/26/14

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HARRIS	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612 PDT	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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YES1 : 00011

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

COC No(s): NA

Assigned ARI Job No: YDQM

Project Name: Port of Tacoma Parcel 14

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.4		
Time:		

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877452

Cooler Accepted by: IS (MH) Date: 3-21-14 Time: 1112

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI : NA YES Date/Time: Equipment: Split by:

Samples Logged by: Date: 3-21-14 Time: 1050

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: YE51, YE52

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14
ARI Job Nos.: YE51 & YE52

Sample Receipt

Thirty-eight soil samples were received on March 4, 2014 under ARI jobs YD93 and YD94. The cooler temperature measured by IR thermometer following ARI SOP was 3.4°C. All samples were archived upon receipt. Select samples were removed from archive on March 26, 2014 and logged under ARI jobs YE51 and YE52. For further details regarding sample receipt, please refer to the Cooler Receipt Forms.

Total Metals, SPLP Metals, and TCLP Metals

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

All SPLP results have been J-flagged to the detection limit.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YE51
Client: Anchor QEA LLC
Project Event: N/A
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	TP-01A-2-3	YE51A	14-5676	Soil	03/20/14 08:37	03/21/14 16:12
2.	TP-01A-5-6	YE51B	14-5677	Soil	03/20/14 08:40	03/21/14 16:12
3.	TP-02A-2-3	YE51C	14-5678	Soil	03/20/14 08:51	03/21/14 16:12
4.	TP-02A-5-6	YE51D	14-5679	Soil	03/20/14 08:55	03/21/14 16:12
5.	TP-04A-2-3	YE51E	14-5680	Soil	03/20/14 09:40	03/21/14 16:12
6.	TP-05A-0-1	YE51F	14-5681	Soil	03/20/14 10:05	03/21/14 16:12
7.	TP-05A-2-3	YE51G	14-5682	Soil	03/20/14 10:08	03/21/14 16:12
8.	TP-05A-5-6	YE51H	14-5683	Soil	03/20/14 10:11	03/21/14 16:12
9.	TP-06A-2-3	YE51I	14-5684	Soil	03/20/14 10:35	03/21/14 16:12
10.	TP-07A-2-3	YE51J	14-5685	Soil	03/20/14 11:30	03/21/14 16:12
11.	TP-09A-2-3	YE51K	14-5686	Soil	03/20/14 13:23	03/21/14 16:12
12.	TP-09A-5-6	YE51L	14-5687	Soil	03/20/14 13:27	03/21/14 16:12
13.	TP-10A-2-3	YE51M	14-5688	Soil	03/20/14 13:50	03/21/14 16:12
14.	TP-09A-2-3	YE51N	14-5689	Soil	03/20/14 13:23	03/21/14 16:12

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YE52
Client: Anchor QEA LLC
Project Event: N/A
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	TP-11A-2-3	YE52A	14-5690	Soil	03/20/14 14:14	03/21/14 16:12
2.	TP-12A-0-1.5	YE52B	14-5691	Soil	03/20/14 14:38	03/21/14 16:12
3.	TP-12A-2-3	YE52C	14-5692	Soil	03/20/14 14:41	03/21/14 16:12
4.	TP-12A-5-6	YE52D	14-5693	Soil	03/20/14 14:45	03/21/14 16:12
5.	TP-13A-2-3	YE52E	14-5694	Soil	03/20/14 15:19	03/21/14 16:12
6.	TP-13A-5-6	YE52F	14-5695	Soil	03/20/14 15:24	03/21/14 16:12
7.	TP-14A-2-3	YE52G	14-5696	Soil	03/20/14 15:41	03/21/14 16:12
8.	TP-15A-2-3	YE52H	14-5697	Soil	03/20/14 16:00	03/21/14 16:12
9.	TP-15A-5-6	YE52I	14-5698	Soil	03/20/14 16:04	03/21/14 16:12
10.	TP-16A-2-3	YE52J	14-5699	Soil	03/20/14 16:20	03/21/14 16:12

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 6010C (EPA 6010C) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g				**Hold Time:** 180 days		
Aluminum	0.757	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Antimony	0.628	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic	0.333	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Barium	0.133	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium	0.0160	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Boron	0.739	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium	0.0180	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Calcium	1.13	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Chromium	0.124	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Copper	0.0920	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Iron	0.750	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Lead	0.155	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium	0.961	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Manganese	0.0280	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum	0.0790	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel	0.386	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Potassium	6.57	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Selenium	0.499	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Silver	0.0430	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Sodium	1.14	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-1	114	5000 mg/kg		20	75 - 125	20	80 - 120	20
Strontium	0.00900	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium	0.310	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Tin	0.141	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Titanium	0.211	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Zinc	0.145	1.00 mg/kg		20	75 - 125	20	80 - 120	20

YE51 : 00017

Metals Analysis
Report and Summary QC Forms

ARI Job ID: YE51, YE52

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA LLC

PROJECT: Port of Tacoma Parce

SDG: YE51

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
TP-01A-2-3	YE51A	14-5676	
TP-01A-2-3D	YE51ADUP	14-5676	
TP-01A-2-3S	YE51ASPK	14-5676	
TP-01A-5-6	YE51B	14-5677	
PBS	YE51MB1	14-5677	
LCSS	YE51MB1SPK	14-5677	
TP-02A-2-3	YE51C	14-5678	
TP-02A-5-6	YE51D	14-5679	
TP-04A-2-3	YE51E	14-5680	
TP-05A-0-1	YE51F	14-5681	
TP-05A-0-1	YE51Fa	14-5681	
TP-05A-0-1D	YE51FaDUP	14-5681	
TP-05A-0-1S	YE51FaSPK	14-5681	
PBS	YE51MB2	14-5681	
TP-05A-2-3	YE51G	14-5682	
TP-05A-2-3	YE51Ga	14-5682	
TP-05A-5-6	YE51H	14-5683	
TP-05A-5-6	YE51Ha	14-5683	
TP-06A-2-3	YE51I	14-5684	
TP-07A-2-3	YE51J	14-5685	
TP-09A-2-3	YE51K	14-5686	

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 4/8/14 Title: Inorganics Director

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA LLC

PROJECT: Port of Tacoma Parce

SDG: YE51

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
TP-09A-2-3	YE51Ka	14-5686	
TP-09A-5-6	YE51L	14-5687	
TP-09A-5-6	YE51La	14-5687	
TP-10A-2-3	YE51M	14-5688	
PBS	YE51MB3	14-5689	
TP-09A-2-3	YE51N	14-5689	
TP-09A-2-3D	YE51NDUP	14-5689	
TP-09A-2-3S	YE51NSPK	14-5689	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 4/8/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-01A-2-3
SAMPLE

Lab Sample ID: YE51A
LIMS ID: 14-5676
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 83.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**13**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-01A-5-6
SAMPLE

Lab Sample ID: YE51B
LIMS ID: 14-5677
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 72.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	7	**8**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-02A-2-3
SAMPLE

Lab Sample ID: YE51C
LIMS ID: 14-5678
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 80.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**9**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-02A-5-6
SAMPLE

Lab Sample ID: YE51D
LIMS ID: 14-5679
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 76.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	7	**13**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-04A-2-3
SAMPLE

Lab Sample ID: YE51E
LIMS ID: 14-5680
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 83.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	5	7	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-05A-0-1
SAMPLE

Lab Sample ID: YE51F
LIMS ID: 14-5681
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 76.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**49**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-05A-2-3
SAMPLE

Lab Sample ID: YE51G
LIMS ID: 14-5682
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 81.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**7**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-05A-5-6
SAMPLE

Lab Sample ID: YE51H
LIMS ID: 14-5683
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 75.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	7	7	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-06A-2-3
SAMPLE

Lab Sample ID: YE51I
LIMS ID: 14-5684
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 84.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	7	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-07A-2-3
SAMPLE

Lab Sample ID: YE51J
LIMS ID: 14-5685
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 85.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	5	7	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-09A-2-3
SAMPLE

Lab Sample ID: YE51K
LIMS ID: 14-5686
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 83.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**8**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-09A-5-6
SAMPLE

Lab Sample ID: YE51L
LIMS ID: 14-5687
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 71.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**8**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: TP-10A-2-3
SAMPLE

Lab Sample ID: YE51M
LIMS ID: 14-5688
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Percent Total Solids: 80.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	**7440-38-2**	**Arsenic**	6	**12**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: TP-01A-2-3
MATRIX SPIKE

Lab Sample ID: YE51A
LIMS ID: 14-5676
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	13	252	220	109%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP-01A-2-3
DUPLICATE

Lab Sample ID: YE51A
LIMS ID: 14-5676
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	13	17	26.7%	+/- 6	L

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: YE51LCS
LIMS ID: 14-5677
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	212	200	106%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: YE51MB
LIMS ID: 14-5677
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/02/14	6010C	04/04/14	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-05A-0-1
SAMPLE

Lab Sample ID: YE51F
LIMS ID: 14-5681
Matrix: Soil
Data Release Authorized:
Reported: 04/09/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	0.003	0.050	**0.014**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-05A-2-3
SAMPLE

Lab Sample ID: YE51G
LIMS ID: 14-5682
Matrix: Soil
Data Release Authorized:
Reported: 04/10/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	7440-38-2	Arsenic	0.003	0.05	0.05	U

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-05A-5-6
SAMPLE

Lab Sample ID: YE51H
LIMS ID: 14-5683
Matrix: Soil
Data Release Authorized:
Reported: 04/10/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	7440-38-2	Arsenic	0.003	0.05	0.05	U

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-09A-2-3
SAMPLE

Lab Sample ID: YE51K
LIMS ID: 14-5686
Matrix: Soil
Data Release Authorized:
Reported: 04/09/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	0.003	0.050	**0.031**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-09A-5-6
SAMPLE

Lab Sample ID: YE51L
LIMS ID: 14-5687
Matrix: Soil
Data Release Authorized:
Reported: 04/09/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	0.003	0.050	**0.004**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS

Sample ID: TP-05A-0-1
MATRIX SPIKE

Lab Sample ID: YE51F
LIMS ID: 14-5681
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	0.05 U	4.29	4.00	107%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked or diluted near or below detection limit

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-05A-0-1
DUPLICATE

Lab Sample ID: YE51F
LIMS ID: 14-5681
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	0.05 U	0.05 U	0.0%	+/- 0.05	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS **Sample ID: METHOD BLANK**
Page 1 of 1

Lab Sample ID: YE51MB
LIMS ID: 14-5681
Matrix: Soil
Data Release Authorized:
Reported: 04/09/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/03/14	6010C	04/07/14	7440-38-2	Arsenic	0.003	0.05	0.05	U

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: TP-09A-2-3
SAMPLE

Lab Sample ID: YE51N
LIMS ID: 14-5689
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/L	Q
1311	04/03/14	6010C	04/07/14	7440-38-2	Arsenic	0.2	0.2	U
1311	04/03/14	6010C	04/07/14	7440-39-3	Barium	0.02	0.02	U
1311	04/03/14	6010C	04/07/14	7440-43-9	Cadmium	0.01	0.01	U
1311	04/03/14	6010C	04/07/14	7440-47-3	Chromium	0.02	0.02	U
1311	04/03/14	6010C	04/07/14	7439-92-1	Lead	0.1	0.1	U
1311	04/03/14	7470A	04/03/14	7439-97-6	Mercury	0.0001	0.0001	U
1311	04/03/14	6010C	04/07/14	7782-49-2	Selenium	0.2	0.2	U
1311	04/03/14	6010C	04/07/14	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: TP-09A-2-3
MATRIX SPIKE

Lab Sample ID: YE51N
LIMS ID: 14-5689
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	0.2 U	4.2	4.0	105%	
Barium	6010C	0.02 U	4.03	4.00	101%	
Cadmium	6010C	0.01 U	1.05	1.00	105%	
Chromium	6010C	0.02 U	1.01	1.00	101%	
Lead	6010C	0.1 U	4.0	4.0	100%	
Mercury	7470A	0.0001 U	0.0012	0.0010	120%	
Selenium	6010C	0.2 U	4.2	4.0	105%	
Silver	6010C	0.02 U	1.05	1.00	105%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked or diluted near or below detection limit

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: TP-09A-2-3
DUPLICATE

Lab Sample ID: YE51N
LIMS ID: 14-5689
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	0.2 U	0.2 U	0.0%	+/- 0.2	L
Barium	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L
Cadmium	6010C	0.01 U	0.01 U	0.0%	+/- 0.01	L
Chromium	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L
Lead	6010C	0.1 U	0.1 U	0.0%	+/- 0.1	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Selenium	6010C	0.2 U	0.2 U	0.0%	+/- 0.2	L
Silver	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS **Sample ID: METHOD BLANK**

Lab Sample ID: YE51MB
LIMS ID: 14-5689
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE51-Anchor QEA LLC
Project: Port of Tacoma Parcel 14
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/L	Q
1311	04/03/14	6010C	04/07/14	7440-38-2	Arsenic	0.2	0.2	U
1311	04/03/14	6010C	04/07/14	7440-39-3	Barium	0.02	0.02	U
1311	04/03/14	6010C	04/07/14	7440-43-9	Cadmium	0.01	0.01	U
1311	04/03/14	6010C	04/07/14	7440-47-3	Chromium	0.02	0.02	U
1311	04/03/14	6010C	04/07/14	7439-92-1	Lead	0.1	0.1	U
1311	04/03/14	7470A	04/03/14	7439-97-6	Mercury	0.0001	0.0001	U
1311	04/03/14	6010C	04/07/14	7782-49-2	Selenium	0.2	0.2	U
1311	04/03/14	6010C	04/07/14	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 11, 2014

Nick Bacher
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14, 140092-01
ARI Job No.: YE83

Dear Nik:

Please find enclosed the Chain of Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: YE83

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: YE83

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: Anchor QEA	Phone: 206.903.3376
Client Contact: Nik Bacher	
Client Project Name: Port of Tacoma Parcel 14	
Client Project #: 140092-01	Samplers: Jason McKinney

Page: 1 of 2	
Date: 3/26/14	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 5.6

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: Archive								Notes/Comments
TP01B 2-3	3/26/14	0953	Soil	1	X								
TP01B 5-6	3/26/14	0953		1	X								
TP02B 2-3	3/26/14	1027		1	X								
TP02B 5-6	3/26/14	1027		1	X								
TP03B 2-3	3/26/14	1044		1	X								
TP03B 5-6	3/26/14	1044		1	X								
TP04B 2-3	3/26/14	1056		1	X								
TP04B 5-6	3/24/14	1056		1	X								
TP05B 2-3	3/24/14	1125		1	X								
TP05B 5-6	3/26/14	1125		1	X								

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by: (Signature)	Received by (Signature)
	Printed Name: Jason McKinney	Printed Name: A. Volgardsen	Printed Name	Printed Name
	Company: Anchor QEA	Company: ARI	Company	Company
	Date & Time: 3/27/14 11:44	Date & Time: 3/27/14 1144	Date & Time	Date & Time

YE83:00003

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: Anchor QEA	Phone: 206.903.3376
Client Contact: Nik Bacher	
Client Project Name: Port of Tacoma Parcel 14	
Client Project #:	Samplers:

Page: 2 of 2	
Date: 3/26/14	Ice Present?
No. of Coolers:	Cooler Temps:

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Analytical Chemists and Consultants
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206-695-6200 206-695-6201 (fax)
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Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: Archive								Notes/Comments
TP06B 2-3	3/24/14	1139	Soil	1	X								
TP06B 5-6		1139		1	X								
TP07B 2-3		1211		1	X								
TP07B 5-6		1211		1	X								
TP08B 2-3		1233		1	X								
TP08B 5-6		1233		1	X								
TP18A 2-3		1451		1	X								
TP19A 2-3		1428		1	X								
TP20A 2-3		1406		1	X								
TP20A 5-6		1406		1	X								

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
	Printed Name: Jason McKinney	Printed Name: A. Violgardsen	Printed Name	Printed Name
	Company: Anchor QEA	Company: ARI	Company	Company
	Date & Time: 3/27/14 11:44	Date & Time: 3/27/14 1144	Date & Time	Date & Time

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YE83:0000

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor | Project Name: POT Parcel 14

COC No(s): _____ (NA) | Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No.: YE83 | Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry)
Time: 1144 — 5.6

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 12211222A

Cooler Accepted by: AV Date: 3/27/14 Time: 1144

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES) AV	(NO)
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs).	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	_____	

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 3/28/14 Time: 1410

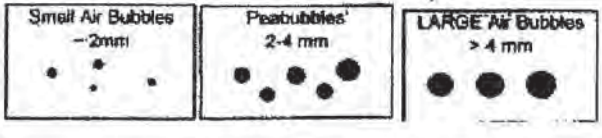
***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

All samples have a dash '-' between TP-#B except; TP07B 2-3 TP08B 5-6, TP18A 2-3, TP19A 2-3

By: AV Date: 3/28/14



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Subject: RE: Analysis request for YD93 and YD94.
From: Nik Bacher <nbacher@anchorqea.com>
Date: 3/28/2014 12:00 PM
To: Cheronne Oreiro <cheronneo@arilabs.com>
CC: Cindy Fields <cfields@anchorqea.com>, Jason McKinney <jmckinney@anchorqea.com>, Ben Howard <bhoward@anchorqea.com>

Cheronne

Got an additional add-on analytical request for your. See attached COC. These samples were delivered yesterday so I don't have an ARI job number for them yet.

Thanks
Nik

Niklas Bacher, L.G.

ANCHOR QEA, LLC
nbacher@anchorqea.com

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Wednesday, March 26, 2014 12:46 PM
To: Nik Bacher
Cc: Cindy Fields; Jason McKinney; Ben Howard
Subject: Re: Analysis request for YD93 and YD94.

Thanks.

On 3/26/2014 12:37 PM, Nik Bacher wrote:

> Thanks
>
> RCRA 8 for TCLP
> SLPL for arsenic only
>
> **Niklas Bacher, L.G.**
>
> **ANCHOR QEA, LLC**
> nbacher@anchorqea.com
>
> **From:** Cheronne Oreiro [mailto:cheronneo@arilabs.com]
> **Sent:** Wednesday, March 26, 2014 12:31 PM
> **To:** Nik Bacher
> **Cc:** Cindy Fields; Jason McKinney; Ben Howard

YE83 : 00006/28/2014 12:11 PM

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: YE83	Turn-around Requested:	Page: 1 of 2	
ARI Client Company: Anchor QEA	Phone: 206.903.3376	Date: 3/26/14	Ice Present? Y
Client Contact: Nik Bacher		No of Coolers: 1	Cooler Temps: 5.0
Client Project Name: Port of Tacoma Parcel 14			
Client Project #: 140092-01	Samplers: Jason McKinney		

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206-695-6200 206-695-6201 (fax)
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Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: Archive	Arsenic (6010)	Notes/Comments
TP01B 2-3	3/26/14	0953	Soil	1	X		
TP01B 5-6	3/26/14	0953	"	1	X		
TP02B 2-3	3/26/14	1027	"	1	X	X	
TP02B 5-6	3/26/14	1027	"	1	X	X	
TP03B 2-3	3/26/14	1044	"	1	X		
TP03B 5-6	3/26/14	1044	"	1	X		
TP04B 2-3	3/26/14	1056	"	1	X		
TP04B 5-6	3/26/14	1056	"	1	X		
TP05B 2-3	3/26/14	1125	"	1	X		
TP05B 5-6	3/26/14	1125	"	1	X		

Comments/Special Instructions

Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Printed Name: Jason McKinney	Printed Name: [illegible]	Printed Name:	Printed Name
Company: Anchor QEA	Company: ARI	Company	Company:
Date & Time: 3/27/14 11:44	Date & Time: 3/27/14 1144	Date & Time	Date & Time

[illegible] 3/28/14

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Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YE83:00007

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested	Page: 2 of 2	
ARI Client Company: Anchor QEA	Phone: 206.903.3376	Date: 3/24/14	Ice Present?
Client Contact: N.K Bocher		No. of Coolers:	Cooler Temps:
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers:		

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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
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Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Analysis Requested: Arsenic (6010)	Notes/Comments
TP06B 2-3	3/24/14	1139	Soil	1	X		
TP06B 5-6		1139		1	X		
TP07B 2-3		1211		1	X		
TP07B 5-6		1211		1	X		3/28/14
TP08B 2-3		1233		1	X	X	
TP08B 5-6		1233		1	X	X	
TP18A 2-3		1451		1	X	X	
TP19A 2-3		1428		1	X	X	
TP20A 2-3		1406		1	X	X	
TP20A 5-6		1406		1	X		

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by (Signature)
	Printed Name: Jason McKinney	Printed Name: [illegible]	Printed Name	Printed Name
	Company: Anchor QEA	Company: ARI	Company	Company
	Date & Time: 3/27/14 11:44	Date & Time: 3/27/14 11:44	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YE83:00008

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: YE83

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14, 140092-01
ARI Job No.: YE83

Sample Receipt

Twenty soil samples were received on March 27, 2014 under ARI job YE83. The cooler temperature measured by IR thermometer following ARI SOP was 5.6°C. Select sample were archived upon receipt. For further details regarding sample receipt, please refer to the Cooler Receipt Forms.

Total Metals

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The matrix spike percent recovery and duplicate RPD were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YE83
Client: Anchor QEA
Project Event: 140092-01
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	TP02B 2-3	YE83A	14-5967	Soil	03/26/14 10:27	03/27/14 11:44
2.	TP02B 5-6	YE83B	14-5968	Soil	03/26/14 10:27	03/27/14 11:44
3.	TP08B 2-3	YE83C	14-5969	Soil	03/26/14 12:33	03/27/14 11:44
4.	TP08B 5-6	YE83D	14-5970	Soil	03/26/14 12:33	03/27/14 11:44
5.	TP18A 2-3	YE83E	14-5971	Soil	03/26/14 14:51	03/27/14 11:44
6.	TP19A 2-3	YE83F	14-5972	Soil	03/26/14 14:28	03/27/14 11:44
7.	TP20A 2-3	YE83G	14-5973	Soil	03/26/14 14:06	03/27/14 11:44
8.	TP01B 2-3	YE83H	14-5974	Soil	03/26/14 09:53	03/27/14 11:44
9.	TP01B 5-6	YE83I	14-5975	Soil	03/26/14 09:53	03/27/14 11:44
10.	TP03B 2-3	YE83J	14-5976	Soil	03/26/14 10:44	03/27/14 11:44
11.	TP03B 5-6	YE83K	14-5977	Soil	03/26/14 10:44	03/27/14 11:44
12.	TP04B 2-3	YE83L	14-5978	Soil	03/26/14 10:56	03/27/14 11:44
13.	TP04B 5-6	YE83M	14-5979	Soil	03/26/14 10:56	03/27/14 11:44
14.	TP05B 2-3	YE83N	14-5980	Soil	03/26/14 11:25	03/27/14 11:44
15.	TP05B 5-6	YE83O	14-5981	Soil	03/26/14 11:25	03/27/14 11:44
16.	TP06B 2-3	YE83P	14-5982	Soil	03/26/14 11:39	03/27/14 11:44
17.	TP06B 5-6	YE83Q	14-5983	Soil	03/26/14 11:39	03/27/14 11:44
18.	TP07B 2-3	YE83R	14-5984	Soil	03/26/14 12:11	03/27/14 11:44
19.	TP07B 5-6	YE83S	14-5985	Soil	03/26/14 12:11	03/27/14 11:44
20.	TP20A 5-6	YE83T	14-5986	Soil	03/26/14 14:06	03/27/14 11:44

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 6010C (EPA 6010C) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g				**Hold Time:** 180 days		
Aluminum	0.757	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Antimony	0.628	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic	0.333	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Barium	0.133	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium	0.0160	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Boron	0.739	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium	0.0180	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Calcium	1.13	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Chromium	0.124	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Copper	0.0920	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Iron	0.750	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Lead	0.155	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium	0.961	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Manganese	0.0280	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum	0.0790	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel	0.386	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Potassium	6.57	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Selenium	0.499	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Silver	0.0430	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Sodium	1.14	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-1	114	5000 mg/kg		20	75 - 125	20	80 - 120	20
Strontium	0.00900	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium	0.310	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Tin	0.141	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Titanium	0.211	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Zinc	0.145	1.00 mg/kg		20	75 - 125	20	80 - 120	20

YE83:00012

Metals Analysis
Report and Summary QC Forms

ARI Job ID: YE83

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YE83

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
TP02B 2-3	YE83A	14-5967	
TP02B 2-3D	YE83ADUP	14-5967	
TP02B 2-3S	YE83ASPK	14-5967	
TP02B 5-6	YE83B	14-5968	
PBS	YE83MB1	14-5968	
LCSS	YE83MB1SPK	14-5968	
TP08B 2-3	YE83C	14-5969	
TP08B 5-6	YE83D	14-5970	
TP18A 2-3	YE83E	14-5971	
TP19A 2-3	YE83F	14-5972	
TP20A 2-3	YE83G	14-5973	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 4/9/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP02B 2-3
SAMPLE

Lab Sample ID: YE83A
LIMS ID: 14-5967
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 86.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	8	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP02B 5-6
SAMPLE

Lab Sample ID: YE83B
LIMS ID: 14-5968
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 80.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	**7**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP08B 2-3
SAMPLE

Lab Sample ID: YE83C
LIMS ID: 14-5969
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 83.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	7	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP08B 5-6
SAMPLE

Lab Sample ID: YE83D
LIMS ID: 14-5970
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 81.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	**6**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP18A 2-3
SAMPLE

Lab Sample ID: YE83E
LIMS ID: 14-5971
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 82.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	**11**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP19A 2-3
SAMPLE

Lab Sample ID: YE83F
LIMS ID: 14-5972
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 84.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	**15**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP20A 2-3
SAMPLE

Lab Sample ID: YE83G
LIMS ID: 14-5973
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

Percent Total Solids: 82.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	**7440-38-2**	**Arsenic**	6	**8**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: TP02B 2-3
MATRIX SPIKE

Lab Sample ID: YE83A
LIMS ID: 14-5967
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	8	247	230	104%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: TP02B 2-3
DUPLICATE

Lab Sample ID: YE83A
LIMS ID: 14-5967
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: 03/26/14
Date Received: 03/27/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	8	8	0.0%	+/- 6	L

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: YE83LCS
LIMS ID: 14-5968
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	219	200	110%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: YE83MB
LIMS ID: 14-5968
Matrix: Soil
Data Release Authorized:
Reported: 04/08/14

QC Report No: YE83-Anchor QEA
Project: Port of Tacoma Parcel 14
140092-01
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/01/14	6010C	04/07/14	7440-38-2	Arsenic	5	5	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 21, 2014

Ben Howard
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14
ARI Job No.: YG19

Dear Ben:

Please find enclosed the Chain of Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: YG19

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: YG19

Subject: RE: Analysis request for YD93 and YD94.
From: Nik Bacher <nbacher@anchorqea.com>
Date: 4/10/2014 2:42 PM
To: Cheronne Oreiro <cheronneo@arilabs.com>

Thanks Cheronne

I think this might do it for these samples and no additional digestion will be needed. Can you please also run TP-13A-2-3 for both SPLP and TCLP?

Niklas Bacher, L.G.

ANCHOR QEA, LLC
nbacher@anchorqea.com

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Thursday, April 10, 2014 12:40 PM
To: Nik Bacher
Subject: Re: Analysis request for YD93 and YD94.

Nik - Before I send samples back, here are the SPLP results with J-flags to the DL. Let me know what you think.
-Cheronne

On 4/9/2014 1:28 PM, Nik Bacher wrote:

> Ok. Let's go ahead and do another digestion to try to achieve 0.005 mg/L.
>
> **Niklas Bacher, L.G.**
>
> **ANCHOR QEA, LLC**
> nbacher@anchorqea.com

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Wednesday, April 09, 2014 1:27 PM
To: Nik Bacher
Subject: Re: Analysis request for YD93 and YD94.

We may have to re-digest the SPLP leachate by a different method to get that low. I'll have to check but I don't think we can run the 6010 digests on the ICP-MS instrument because of the HCl.
-C

On 4/9/2014 1:22 PM, Nik Bacher wrote:

> Thanks Cheronne

YG19 : 00085

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 3 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-8431	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Notes/Comments
TP-10A-5-6	3/20/14	1353	Soil	1	X	
TP-11A-2-3		1414		1	X	
TP-11A-5-6		1417		1	X	
TP-12A-0-1.5		1438		1	X	
TP-12A-2-3		1441		1	X	
TP-12A-5-6		1445		1	X	
TP-13A-2-3		1519		1	X	
TP-13A-5-6		1524		1	X	
TP-14A-2-3		1541		1	X	
TP-14A-5-6		1545		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HAHN	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YG19:6660h

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3, 4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BE/JM		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Notes/Comments
TP-15A-2-3	3/20/14	1600	Soil	1	X	
TP-15A-5-6		1604		1	X	
TP-16A-2-3		1620		1	X	
TP-16A-5-6		1623		1	X	
TP-17A-2-3		1640		2	X	
TP-17A-5-6		1643		1	X	
~~TP-18A-2-3~~ DU						
TP-18A-5-6		1658		1	X	
TP-19A-5-6		1719		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MIKE HANLEY	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612 1442	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YS19 : 00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

COC No(s): NA

Assigned ARI Job No: YDGM

Project Name: Port of Tacoma Parcel 14

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.4

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877652

Cooler Accepted by: IS (MH) Date: 3-21-14 Time: 1612

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI... NA _____

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

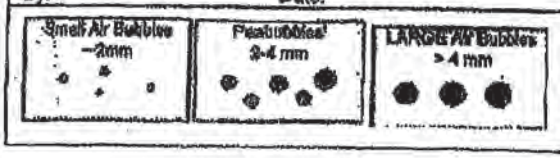
Samples Logged by: _____ Date: 3-21-14 Time: 1050

** *Notify Project Manager of discrepancies or concerns* **.

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

YD94 YE52

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 3 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3.4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TCLP					Notes/Comments
TP-10A-5-6	3/20/14	1353	Soil	1	X								
TP-11A-2-3		1414		1	X	X							
TP-11A-5-6		1417		1	X								
TP-12A-0-1.5		1438		1	X	X							
TP-12A-2-3		1441		1	X	X							3/26/14
TP-12A-5-6		1445		1	X	X							
TP-13A-2-3		1519		1	X	X							
TP-13A-5-6		1524		1	X	X							
TP-14A-2-3		1541		1	X	X							
TP-14A-5-6		1545		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MARK D. HAHN	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1612	Date & Time: 3/21/14 1612	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YS19 : 69667

YD 94

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of 4	
ARI Client Company: Anchor QEA	Phone: 360-733-4311	Date: 3/20/14	Ice Present? Y
Client Contact: Ben Howard		No. of Coolers: 1	Cooler Temps: 3, 4
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: BH/JM		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Arsenic (6010)	SPLP	TCLP					Notes/Comments
TP-15A-2-3	3/20/14	1600	Soil	1	X	X	X						
TP-15A-5-6		1604		1	X	X	X						
TP-16A-2-3		1620		1	X	X							
TP-16A-5-6		1623		1	X								
TP-17A-2-3		1640		2	X								
TP-17A-5-6		1643		1	X								
~~TP-18A-2-3~~ 31													
TP-18A-5-6		1658		1	X								
TP-19A-5-6		1719		1	X								

3/26/14

Comments/Special instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ben Howard	Printed Name: MALD. HARRIS	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 3/21/14 - 1652	Date & Time: 3/21/14 1652	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YG19:00008

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

COC No(s): NA

Assigned ARI Job No: YDQ11

Project Name: Port of Tacoma Parcel 14

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.4
Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877652

Cooler Accepted by: IS (MH) Date: 3-21-14 Time: 1612

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI...	NA		

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JS Date: 3-21-14 Time: 1650

*** Notify Project Manager of discrepancies or concerns ***.

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles >4 mm
		

Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: YG19

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14
ARI Job No.: YG19

Sample Receipt

Per email request, one sample was removed from archive on April 10, 2014 and logged under ARI job YG19. The samples were analyzed for SPLP Arsenic and TCLP RCRA metals. For details regarding sample receipt, please refer to the Cooler Receipt Forms.

SPLP Arsenic and TCLP Metals

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

All SPLP results have been J-flagged to the detection limit.

The third continuing calibration verification (CCV) on 4/16/14 was outside the control limits high for silver. No sample results were associated with this CCV. No corrective action was taken.

The method blanks were clean at the reporting limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YG19
Client: Anchor QEA LLC
Project Event: N/A
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	TP-13A-2-3	YG19A	14-6746	Soil	03/20/14 15:19	03/21/14 16:12
2.	TP-13A-2-3	YG19B	14-6747	Soil	03/20/14 15:19	03/21/14 16:12

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 6010C (EPA 6010C) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g			**Hold Time:** 180 days			
Aluminum	0.757	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Antimony	0.628	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic	0.333	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Barium	0.133	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium	0.0160	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Boron	0.739	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium	0.0180	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Calcium	1.13	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Chromium	0.124	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Copper	0.0920	0.200 mg/kg		20	75 - 125	20	80 - 120	20
Iron	0.750	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Lead	0.155	2.00 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium	0.961	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Manganese	0.0280	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum	0.0790	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel	0.386	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Potassium	6.57	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Selenium	0.499	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Silver	0.0430	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Sodium	1.14	50.0 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-1	114	5000 mg/kg		20	75 - 125	20	80 - 120	20
Strontium	0.00900	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium	0.310	5.00 mg/kg		20	75 - 125	20	80 - 120	20
Tin	0.141	1.00 mg/kg		20	75 - 125	20	80 - 120	20
Titanium	0.211	0.500 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium	0.0270	0.300 mg/kg		20	75 - 125	20	80 - 120	20
Zinc	0.145	1.00 mg/kg		20	75 - 125	20	80 - 120	20

YG19:00013

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 7471B Hg (EPA 7471B) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 2 oz		**Minimum Sample Weight:** 50 g			**Hold Time:** 28 days			
Mercury	0.00210	0.0250 mg/kg		20	75 - 125	20	80 - 120	20

YG19:00014

Metals Analysis
Report and Summary QC Forms

ARI Job ID: YG19

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA LLC

PROJECT: Port of Tacoma Parce

SDG: YG19

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
TP-13A-2-3	YG19Aa	14-6746	
TP-13A-2-3D	YG19AaDUP	14-6746	
TP-13A-2-3S	YG19AaSPK	14-6746	
PBS	YG19MB1	14-6746	
TP-13A-2-3	YG19B	14-6747	
TP-13A-2-3D	YG19BDUP	14-6747	
TP-13A-2-3S	YG19BSPK	14-6747	
PBS	YG19MB2	14-6747	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 4/17/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
SAMPLE

Lab Sample ID: YG19A
LIMS ID: 14-6746
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/15/14	6010C	04/16/14	**7440-38-2**	**Arsenic**	0.003	0.050	**0.004**	J

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
MATRIX SPIKE

Lab Sample ID: YG19A
LIMS ID: 14-6746
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	50.0 U	4,030	4,000	101%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
DUPLICATE

Lab Sample ID: YG19A
LIMS ID: 14-6746
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	50.0 U	50.0 U	0.0%	+/- 50.0	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
SPLP METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: YG19MB
LIMS ID: 14-6746
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/L	Q
1312	04/15/14	6010C	04/16/14	7440-38-2	Arsenic	0.003	0.05	0.05	U

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
SAMPLE

Lab Sample ID: YG19B
LIMS ID: 14-6747
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/L	Q
1311	04/15/14	6010C	04/16/14	7440-38-2	Arsenic	0.2	0.2	U
1311	04/15/14	6010C	04/16/14	7440-39-3	Barium	0.02	0.02	U
1311	04/15/14	6010C	04/16/14	7440-43-9	Cadmium	0.01	0.01	U
1311	04/15/14	6010C	04/16/14	7440-47-3	Chromium	0.02	0.02	U
1311	04/15/14	6010C	04/16/14	7439-92-1	Lead	0.1	0.1	U
1311	04/15/14	7470A	04/16/14	7439-97-6	Mercury	0.0001	0.0001	U
1311	04/15/14	6010C	04/16/14	7782-49-2	Selenium	0.2	0.2	U
1311	04/15/14	6010C	04/16/14	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
MATRIX SPIKE

Lab Sample ID: YG19B
LIMS ID: 14-6747
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	0.2 U	4.1	4.0	102%	
Barium	6010C	0.02 U	4.03	4.00	101%	
Cadmium	6010C	0.01 U	1.02	1.00	102%	
Chromium	6010C	0.02 U	1.00	1.00	100%	
Lead	6010C	0.1 U	3.9	4.0	97.5%	
Mercury	7470A	0.0001 U	0.0010	0.0010	100%	
Selenium	6010C	0.2 U	4.1	4.0	102%	
Silver	6010C	0.02 U	1.05	1.00	105%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked or diluted near or below detection limit

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: TP-13A-2-3
DUPLICATE

Lab Sample ID: YG19B
LIMS ID: 14-6747
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: 03/20/14
Date Received: 03/21/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	0.2 U	0.2 U	0.0%	+/- 0.2	L
Barium	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L
Cadmium	6010C	0.01 U	0.01 U	0.0%	+/- 0.01	L
Chromium	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L
Lead	6010C	0.1 U	0.1 U	0.0%	+/- 0.1	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Selenium	6010C	0.2 U	0.2 U	0.0%	+/- 0.2	L
Silver	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: YG19MB
LIMS ID: 14-6747
Matrix: Soil
Data Release Authorized:
Reported: 04/17/14

QC Report No: YG19-Anchor QEA LLC
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/L	Q
1311	04/15/14	6010C	04/16/14	7440-38-2	Arsenic	0.2	0.2	U
1311	04/15/14	6010C	04/16/14	7440-39-3	Barium	0.02	0.02	U
1311	04/15/14	6010C	04/16/14	7440-43-9	Cadmium	0.01	0.01	U
1311	04/15/14	6010C	04/16/14	7440-47-3	Chromium	0.02	0.02	U
1311	04/15/14	6010C	04/16/14	7439-92-1	Lead	0.1	0.1	U
1311	04/15/14	7470A	04/16/14	7439-97-6	Mercury	0.0001	0.0001	U
1311	04/15/14	6010C	04/16/14	7782-49-2	Selenium	0.2	0.2	U
1311	04/15/14	6010C	04/16/14	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ATTACHMENT B
SOIL DISPOSAL TICKETS

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327758		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	11:41	12:00		

REFERENCE	ORIGIN
15	OTHER

Scale 1 Gross Wt.	94280	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	41260	LB	
Net Weight	53020	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.51	TON	83 SOIL DISPOSAL-OC				

#1411
D23
JLW

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO #	WDA 1778
NOTES	HLW 15

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327811		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	14:13	14:37		

REFERENCE	ORIGIN
13	OTHER

Scale 1 Gross Wt. 110800 LB
Scale 2 Tare Wt. 40600 LB
Net Weight 70200 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
35.10	TON	83 SOIL DISPOSAL-OC				

Hill
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HLW 13

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327766		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	12:01	12:21		

REFERENCE	ORIGIN
12	OTHER

Scale 1 Gross Wt. 87480 LB
Scale 2 Tare Wt. 40500 LB
Net Weight 46980 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
23.49	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 12

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327731		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	10:27	10:53		

REFERENCE	ORIGIN
17	OTHER

Scale 1 Gross Wt.	79000	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	40440	LB	
Net Weight	38560	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
19.28	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 17

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327810		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	14:12	14:34		

REFERENCE	ORIGIN
17	OTHER

Scale 1 Gross Wt. 97340 LB
Scale 2 Tare Wt. 40200 LB
Net Weight 57140 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
28.57	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HLW 17

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327732		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/08/14	09/08/14	10:28	10:55		

REFERENCE	ORIGIN
13	OTHER

Scale 1 Gross Wt.	91820	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	40760	LB	
Net Weight	51060	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
25.53	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 13

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328006		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	12:53	13:08		

REFERENCE	ORIGIN
STAN	OTHER

Scale 1 Gross Wt. 95260 LB
Scale 2 Tare Wt. 41220 LB
Net Weight 54040 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
27.02	TON	83 SOIL DISPOSAL-OC				

#1411

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 15

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327906		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	09:30	09:45		

REFERENCE	ORIGIN
STAN	OTHER

Scale 1 Gross Wt. 98460 LB
Scale 2 Tare Wt. 41420 LB
Net Weight 57040 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
28.52	TON	83 SOIL DISPOSAL-OC				

#1411

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 15

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	327909		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	09:40	09:55		

REFERENCE	ORIGIN
CASEY	OTHER

Manual Gross Wt. 100380 LB
Scale 2 Tare Wt. 40540 LB
Net Weight 59840 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.92	TON	83 SOIL DISPOSAL-OC				

H/411

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARL:OW 12

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328002		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	12:38	13:00		

REFERENCE	ORIGIN
	OTHER

Scale 1 Gross Wt. 93400 LB
Scale 2 Tare Wt. 40680 LB
Net Weight 52720 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.36	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 13

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328011		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	13:01	13:20		

REFERENCE	ORIGIN
CASEY	OTHER

Scale 1 Gross Wt. 92180 LB
Scale 2 Tare Wt. 40360 LB
Net Weight 51820 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
25.91	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # TRL 1778
NOTES HARLOW 12

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328008		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	12:54	12:58		

REFERENCE	ORIGIN
LINDA	OTHER

Manual Gross Wt. 84120 LB
Scale 2 Tare Wt. 40300 LB
Net Weight 43820 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.91	TON	83 SOIL DISPOSAL-OC #1411 023				

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 17

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328061		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/09/14	09/09/14	14:53	15:04		

REFERENCE	ORIGIN
AJ	OTHER

Scale 1 Gross Wt. 89560 LB
Scale 2 Tare Wt. 41300 LB
Net Weight 48260 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
24.13	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 2

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328268		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	15:37	15:51		

REFERENCE	ORIGIN
ALLAM	OTHER

Scale 1 Gross Wt. 107660 LB
Scale 2 Tare Wt. 40580 LB
Net Weight 67080 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
33.54	TON	83 SOIL DISPOSAL-OC				

#1411

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO # WDA 1778

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

SITE	TICKET	GRID	WEIGHMASTER
39	328263		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	15:22	15:36		

REFERENCE	ORIGIN
STAN	OTHER

LLC dba LRI-304th
eridian St E
p, WA 98375

ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

Scale 1 Gross Wt. 93900 LB
Scale 2 Tare Wt. 41100 LB
Net Weight 52800 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
3.40	TON	83 SOIL DISPOSAL-OC				

26.40 Ton

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO # WDA 1778
NOTES HARLOW 15

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328269		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	15:38	15:49		

REFERENCE	ORIGIN
CASEY	OTHER

Scale 1 Gross Wt. 94000 LB
Scale 2 Tare Wt. 40340 LB
Net Weight 53660 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.83	TON	83 SOIL DISPOSAL-OC		#1411 023		

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDS 1778
NOTES HARLOW 12

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328260		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	15:18	15:31		

REFERENCE	ORIGIN
LINDA	OTHER

Scale 1 Gross Wt. 96200 LB
Scale 2 Tare Wt. 40220 LB
Net Weight 55980 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
27.99	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 17

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328195		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	12:05	12:29		

REFERENCE	ORIGIN
ALLEN	OTHER

Scale 1 Gross Wt. 100320 LB
Scale 2 Tare Wt. 40740 LB
Net Weight 59580 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.79	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 13

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328197		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	12:08	12:23		

REFERENCE	ORIGIN
STAN	OTHER

Scale 1 Gross Wt. 98500 LB
Scale 2 Tare Wt. 41260 LB
Net Weight 57240 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
28.62	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO #	WDA 1778
NOTES	HARLOW 15

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328192		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	11:53	12:07		

REFERENCE	ORIGIN
LINDA	OTHER

Scale 1 Gross Wt. 83660 LB
Scale 2 Tare Wt. 40360 LB
Net Weight 43300 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.65	TON	83 SOIL DISPOSAL-OC				

#1411

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 17

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328124		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	08:44	09:02		

REFERENCE	ORIGIN
	OTHER

Scale 1 Gross Wt. 104520 LB
Scale 2 Tare Wt. 40840 LB
Net Weight 63680 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
31.84	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 13

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328196		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	12:07	12:32		

REFERENCE	ORIGIN
CASEY	OTHER

Scale 1 Gross Wt. 94140 LB
Scale 2 Tare Wt. 40520 LB
Net Weight 53620 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.81	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 12

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328128		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	08:47	09:05		

REFERENCE	ORIGIN
STAN	OTHER

Scale 1 Gross Wt. 95160 LB
Scale 2 Tare Wt. 41420 LB
Net Weight 53740 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.87	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 158

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328123		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	08:43	09:01		

REFERENCE	ORIGIN
LINDA	OTHER

Scale 1 Gross Wt. 98700 LB
Scale 2 Tare Wt. 40480 LB
Net Weight 58220 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.11	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 17

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328125		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/10/14	09/10/14	08:45	09:04		

REFERENCE	ORIGIN
CASEY	OTHER

Scale 1 Gross Wt. 92720 LB
Scale 2 Tare Wt. 40680 LB
Net Weight 52040 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.02	TON	83 SOIL DISPOSAL-OC	H 141 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHECK NO.

PO # WDA 1778
NOTES HARLOW 12

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328294		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	08:21	08:39		

REFERENCE	ORIGIN
13	OTHER

Scale 1 Gross Wt. 108800 LB
Scale 2 Tare Wt. 40900 LB
Net Weight 67900 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
33.95	TON	83 SOIL DISPOSAL-OC	# 1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 13

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328307		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	08:33	08:57		

REFERENCE	ORIGIN
12	OTHER

Scale 1 Gross Wt. 99380 LB
Scale 2 Tare Wt. 40720 LB
Net Weight 58660 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.33	TON	83 SOIL DISPOSAL-OC	#1411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 12

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328313		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	08:47	09:05		

REFERENCE	ORIGIN
15	OTHER

Scale 1 Gross Wt. 99980 LB
Scale 2 Tare Wt. 41480 LB
Net Weight 58500 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.25	TON	83 SOIL DISPOSAL-OC	41411 023			

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 15

202.TS TO RE[illegible] CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328286		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	08:14	08:27		

REFERENCE	ORIGIN
17	OTHER

Scale 1 Gross Wt. 91120 LB
Scale 2 Tare Wt. 40540 LB
Net Weight 50580 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
25.29	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 17

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328383		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	11:39	12:03		

REFERENCE	ORIGIN
13	OTHER

Scale 1 Gross Wt. 103580 LB
Scale 2 Tare Wt. 40760 LB
Net Weight 62820 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
31.41	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO #	WDA 1778
NOTES	HLW 13

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
01	00329712		Dana

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/19/14	09/19/14	08:35	08:57		

REFERENCE	ORIGIN
DON	OTHER

Scale 1 Gross Wt.	104260	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	41220	LB	
Net Weight	63040	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
31.52	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HARLOW 16

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328387		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	11:46	12:06		

REFERENCE	ORIGIN
12	OTHER

Scale 1 Gross Wt. 97560 LB
Scale 2 Tare Wt. 40520 LB
Net Weight 57040 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
28.52	TON	83 SOIL DISPOSAL-OC				

#1911

023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

PO #	WDA 1778
NOTES	HLA 12

NET AMOUNT

TENDERED

CHANGE

CHECK NO.

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328392		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	11:57	12:16		

REFERENCE	ORIGIN
15	OTHER

Scale 1 Gross Wt. 100620 LB
Scale 2 Tare Wt. 41260 LB
Net Weight 59360 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
29.68	TON	83 SOIL DISPOSAL-OC				

#1411
023

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # WDA 1778
NOTES HLW 15

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

PCRCD, LLC dba LRI-304th
17925 Meridian St E
Puyallup, WA 98375

001560 ROAD CONSTRUCTION NW INC
PO BOX 188
RENTON WA 98057

SITE	TICKET	GRID	WEIGHMASTER
39	328375		Robin

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
09/11/14	09/11/14	11:22	11:41		

REFERENCE	ORIGIN
17	OTHER

Scale 1 Gross Wt. 92120 LB
Scale 2 Tare Wt. 40400 LB
Net Weight 51720 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
25.86	TON	83 SOIL DISPOSAL-OC #1411 023				

Operating hours 8AM to 4PM M-F & 8AM to Noon on Sat.
304th Landfill-30919 Meridian/SR 161, Graham, WA

NET AMOUNT	
TENDERED	
CHANGE	
CHECK NO.	

PO # WDA 1778
NOTES HLW 17

SIGNATURE _____

ATTACHMENT C
ANALYTICAL TESTING DATA REPORTS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 16, 2014

Nik Bacher
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14
ARI Job No.: YZ54

Dear Jason:

Please find enclosed the Chain of Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details regarding requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: YZ54

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: YZ54

YZ54 : 6661

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 4254	Turn-around Requested:	Page: 1 of 2	
ARI Client Company: Anchor QEA	Phone: 206.903.3376	Date: 9/10/14	Ice Present?
Client Contact: N:K Bacher		No. of Coolers:	Cooler Temps: 2.1
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: JM & CK		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No Containers	Archive	Total Arsenic							Notes/Comments
AQ-conf-A2	9/10/11	1:17	soil	1		X							
AQ-conf-A3		1:11		1		X							
AQ-conf-A4		1:01		1		X							
AQ-conf-A5		12:50		1		X							
AQ-conf-A6		1:24		1	X								
AQ-conf-B7		2:16		1	X								
AQ-conf-A8		1:11		1	X								
AQ-conf-A9		12:58		1	X								
AQ-conf-A7		1:17		1	X								
AQ-conf-AC		1:24		1		X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Jason McKinney	Printed Name: Taylor Stracter	Printed Name:	Printed Name.
	Company: Anchor QEA	Company: ARI	Company	Company:
	Date & Time: 9/11/14 7:11 AM	Date & Time: 9-11-14 711	Date & Time.	Date & Time.

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: YZ54	Turn-around Requested:	Page: 2 of 2	
ARI Client Company: Anchor QEA	Phone: 206-903-3376	Date: 9/10/14	Ice Present? Y
Client Contact: Nik Bacher		No. of Coolers: 1	Cooler Temps: 2.1
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers: JM & CK		

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www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Analysis Requested: Total Arsenic	Notes/Comments
AQ-conf-B1	9/10/14	1:52	soil	1		X	
AQ-conf-B2		2:07		1		X	
AQ-conf-B3		2:21		1		X	
AQ-conf-B4		1:52		1		X	
AQ-conf-B6		2:16		1	X		
AQ-conf-B8		2:07		1	X		
AQ-conf-BC		2:21		1		X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by: (Signature)
	Printed Name: Jason McKenney	Printed Name: Taylor Streeter	Printed Name	Printed Name.
	Company: Anchor QEA	Company: ARI	Company	Company:
	Date & Time: 9/11/14 7:11AM	Date & Time. 9-11-14 711	Date & Time	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client. Anchor

Project Name Port of Tacoma Parcel 14

COC No(s): _____ (NA)

Delivered by Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: YZ54

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.1

Time. _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: TS Date: 9-11-14 Time: 711

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs).. (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI (NA) _____

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

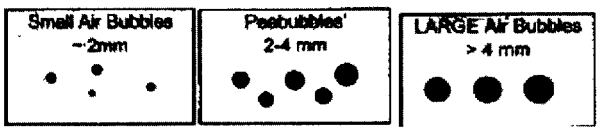
Samples Logged by: JM Date: 9/11/14 Time: 800

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: YZ54

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14
ARI Job No.: YZ54

Sample Receipt

Seventeen soil samples were received on September 11, 2014 under ARI job YZ54. The cooler temperature measured by IR thermometer following ARI SOP was 2.1°C. Select samples were archived upon receipt. For further details regarding sample receipt, please refer to the Cooler Receipt Forms.

Arsenic by SW200.8

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The matrix spike percent recovery was within control limits.

The duplicate RPD of arsenice was outside the control limits for sample **AQ-conf-A2**. All relevant data have been flagged with a "*" qualifier on the Form VI. No further corrective action was taken.

YZ54 : 09007

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YZ54
Client: Anchor QEA
Project Event: N/A
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	AQ-conf-A2	YZ54A	14-18399	Soil	09/10/14 13:17	09/11/14 07:11
2.	AQ-conf-A3	YZ54B	14-18400	Soil	09/10/14 13:11	09/11/14 07:11
3.	AQ-conf-A4	YZ54C	14-18401	Soil	09/10/14 13:01	09/11/14 07:11
4.	AQ-conf-A5	YZ54D	14-18402	Soil	09/10/14 12:50	09/11/14 07:11
5.	AQ-conf-AC	YZ54E	14-18403	Soil	09/10/14 13:24	09/11/14 07:11
6.	AQ-conf-B1	YZ54F	14-18404	Soil	09/10/14 13:52	09/11/14 07:11
7.	AQ-conf-B2	YZ54G	14-18405	Soil	09/10/14 14:07	09/11/14 07:11
8.	AQ-conf-B3	YZ54H	14-18406	Soil	09/10/14 14:21	09/11/14 07:11
9.	AQ-conf-B4	YZ54I	14-18407	Soil	09/10/14 13:52	09/11/14 07:11
10.	AQ-conf-BC	YZ54J	14-18408	Soil	09/10/14 14:21	09/11/14 07:11
11.	AQ-conf-A6	YZ54K	14-18409	Soil	09/10/14 13:24	09/11/14 07:11
12.	AQ-conf-B7	YZ54L	14-18410	Soil	09/10/14 14:16	09/11/14 07:11
13.	AQ-conf-A8	YZ54M	14-18411	Soil	09/10/14 13:11	09/11/14 07:11
14.	AQ-conf-A9	YZ54N	14-18412	Soil	09/10/14 12:58	09/11/14 07:11
15.	AQ-conf-A7	YZ54O	14-18413	Soil	09/10/14 13:17	09/11/14 07:11
16.	AQ-conf-B6	YZ54P	14-18414	Soil	09/10/14 14:16	09/11/14 07:11
17.	AQ-conf-B8	YZ54Q	14-18415	Soil	09/10/14 14:07	09/11/14 07:11

YZ54:66666

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 200.8 (EPA 200.8) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g				**Hold Time:** 180 days		
Aluminum-27	0 00160	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-121	0 0000100	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-123	0 0000110	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75a	0 0000480	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75b	0 0000920	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-135	0 0000200	).000500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-137	0 0000190	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium-9	0 0000210	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-111	0 0000100	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-114	0 00000500	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Calcium-43	0 00398	0.0500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-52	0.0000450	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-53	0 000118	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt-59	0 0000110	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Copper-63	0 000158	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Copper-65	0 000236	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Iron-54	0 00575	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Iron-57	0 00388	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Lead-208	0.0000460	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium-24	0.000297	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Manganese-55	0.0000220	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum-98	0.0000130	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-60	0.0000790	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-62	0 0000890	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Potassium-39	0 00294	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-82	0 000127	).000500 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-78	0 000324	0.00200 mg/kg		20	75 - 125	20	80 - 120	20
Silver-107	0 00000800	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-23	0 00283	0 100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium-205	0 00000400	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51a	0 0000430	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51b	0 0000430	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-66	0 000497	0 00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-67	0.000531	0 00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-68	0.000524	0 00400 mg/kg		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

Metals Analysis
Report and Summary QC Forms

ARI Job ID: YZ54

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YZ54

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
AQ-conf-A2	YZ54A	14-18399	
AQ-conf-A2D	YZ54ADUP	14-18399	
AQ-conf-A2S	YZ54ASPK	14-18399	
AQ-conf-A3	YZ54B	14-18400	
AQ-conf-A4	YZ54C	14-18401	
AQ-conf-A5	YZ54D	14-18402	
AQ-conf-AC	YZ54E	14-18403	
AQ-conf-B1	YZ54F	14-18404	
AQ-conf-B2	YZ54G	14-18405	
AQ-conf-B3	YZ54H	14-18406	
AQ-conf-B4	YZ54I	14-18407	
AQ-conf-BC	YZ54J	14-18408	
PBS	YZ54MB1	14-18408	
LCSS	YZ54MB1SPK	14-18408	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 9/15/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-A2
SAMPLE

Lab Sample ID: YZ54A
LIMS ID: 14-18399
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 96.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**2.2**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54 : 66612

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-A3
SAMPLE

Lab Sample ID: YZ54B
LIMS ID: 14-18400
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 93.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**1.8**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54-00610

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-A4
SAMPLE

Lab Sample ID: YZ54C
LIMS ID: 14-18401
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 92.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**2.3**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54.66614

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-A5
SAMPLE

Lab Sample ID: YZ54D
LIMS ID: 14-18402
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 93.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**8.7**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54.00615

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-AC
SAMPLE

Lab Sample ID: YZ54E
LIMS ID: 14-18403
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 93.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**2.6**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-B1
SAMPLE

Lab Sample ID: YZ54F
LIMS ID: 14-18404
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 97.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**4.3**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54-00017

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-B2
SAMPLE

Lab Sample ID: YZ54G
LIMS ID: 14-18405
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 91.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**7.5**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-B3
SAMPLE

Lab Sample ID: YZ54H
LIMS ID: 14-18406
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 95.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**1.5**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-B4
SAMPLE

Lab Sample ID: YZ54I
LIMS ID: 14-18407
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 92.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**8.5**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54 : 66628

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-BC
SAMPLE

Lab Sample ID: YZ54J
LIMS ID: 14-18408
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

Percent Total Solids: 92.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	**7440-38-2**	**Arsenic**	0.2	**4.1**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54.00021

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: AQ-conf-A2**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: YZ54A QC Report No: YZ54-Anchor QEA
LIMS ID: 14-18399 Project: Port of Tacoma Parcel 14
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14 Date Sampled: 09/10/14
Date Received: 09/11/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	2.2	30.6	24.1	118%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

YZ54 00022

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-A2
DUPLICATE

Lab Sample ID: YZ54A
LIMS ID: 14-18399
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/10/14
Date Received: 09/11/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	2.2	2.9	27.5%	+/- 20%	*

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

YZ54 00023

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: YZ54LCS
LIMS ID: 14-18408
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	29.5	25.0	118%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

YZ54 . 08802H

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: YZ54MB
LIMS ID: 14-18408
Matrix: Soil
Data Release Authorized:
Reported: 09/15/14

QC Report No: YZ54-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/12/14	200.8	09/15/14	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ54 00825

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 17, 2017

Nik Bacher
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14
ARI Job No.: YZ81

Dear Jason:

Please find enclosed the Chain of Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details regarding requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: YZ81

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: YZ81

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

ARI Assigned Number: Y781	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: Anchor QEA	Phone: 206-903-3376	Date: 9/11/14	Ice Present? Y
Client Contact: Nik Bacher		No. of Coolers: 1	Cooler Temps: 0.3
Client Project Name: Port of Tacoma Parcel 14			
Client Project #:	Samplers:		

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive	Total Arsenic							Notes/Comments
AQ-conf-C1	9/11/14	4:14	soil	1		X							
AQ-conf-C2		4:04		1		X							
AQ-conf-C3		3:59		1		X							
AQ-conf-C4		4:08		1		X							
AQ-conf-C5		4:04		1	X								
AQ-conf-C6		4:01		1	X								
AQ-conf-C7		4:09		1	X								
AQ-conf-C8		4:12		1	X								
AQ-conf-CC		3:58		1		X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Jason McKinney	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 9/12/14 7:04 AM	Date & Time: 9/12/14 704	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

Project Name: Port of Tacoma Parcel 14

COC No(s): _____ (NA)

Delivered by Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No 4781

Tracking No _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry) 0.3

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 9/12/14 Time: 704

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	(Bubble Wrap) (Wet Ice) Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs).	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

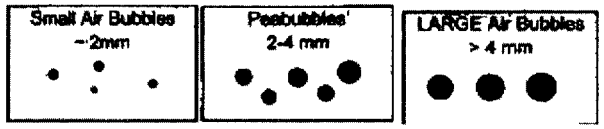
Samples Logged by: JM Date: 9/12/14 Time: 928

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: YZ81

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14
ARI Job No.: YZ81

Sample Receipt

Nine soil samples were received on September 12, 2014 under ARI job YZ81. The cooler temperature measured by IR thermometer following ARI SOP was 0.3°C. Select samples were archived upon receipt. For further details regarding sample receipt, please refer to the Cooler Receipt Forms.

Arsenic by SW200.8

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The matrix spike percent recovery and duplicate RPD were within control limits.

YZ81 : 000006

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YZ81
Client: Anchor QEA
Project Event: N/A
Project Name: Port of Tacoma Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	AQ-conf-C1	YZ81A	14-18556	Soil	09/11/14 16:14	09/12/14 07:04
2.	AQ-conf-C2	YZ81B	14-18557	Soil	09/11/14 16:04	09/12/14 07:04
3.	AQ-conf-C3	YZ81C	14-18558	Soil	09/11/14 15:59	09/12/14 07:04
4.	AQ-conf-C4	YZ81D	14-18559	Soil	09/11/14 16:08	09/12/14 07:04
5.	AQ-conf-CC	YZ81E	14-18560	Soil	09/11/14 15:58	09/12/14 07:04
6.	AQ-conf-C5	YZ81F	14-18561	Soil	09/11/14 16:04	09/12/14 07:04
7.	AQ-conf-C6	YZ81G	14-18562	Soil	09/11/14 16:01	09/12/14 07:04
8.	AQ-conf-C7	YZ81H	14-18563	Soil	09/11/14 16:09	09/12/14 07:04
9.	AQ-conf-C8	YZ81I	14-18564	Soil	09/11/14 16:12	09/12/14 07:04

YZ81 : 00007

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 200.8 (EPA 200.8) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g				**Hold Time:** 180 days		
Aluminum-27	0 00160	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-121	0.0000100	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-123	0 0000110	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75a	0 0000480	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75b	0 0000920	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-135	0 0000200	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-137	0 0000190	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium-9	0 0000210	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-111	0 0000100	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-114	0.00000500	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Calcium-43	0 00398	0 0500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-52	0 0000450	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-53	0 000118	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt-59	0 0000110	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Copper-63	0 000158	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Copper-65	0 000236	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Iron-54	0 00575	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Iron-57	0 00388	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Lead-208	0 0000460	) 000100 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium-24	0 000297	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Manganese-55	0 0000220	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum-98	0 0000130	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-60	0 0000790	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-62	0 0000890	) 000500 mg/kg		20	75 - 125	20	80 - 120	20
Potassium-39	0 00294	0 0200 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-82	0 000127	).000500 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-78	0 000324	0.00200 mg/kg		20	75 - 125	20	80 - 120	20
Silver-107	0.00000800	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-23	0 00283	0 100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium-205	0.00000400	) 000200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51a	0.0000430	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51b	0 0000430	).000200 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-66	0.000497	0.00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-67	0.000531	0.00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-68	0.000524	0.00400 mg/kg		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

YZ61 : 00006

Metals Analysis
Report and Summary QC Forms

ARI Job ID: YZ81

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YZ81

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
AQ-conf-C1	YZ81A	14-18556	
AQ-conf-C1D	YZ81ADUP	14-18556	
AQ-conf-C1S	YZ81ASPK	14-18556	
AQ-conf-C2	YZ81B	14-18557	
PBS	YZ81MB1	14-18557	
LCSS	YZ81MB1SPK	14-18557	
AQ-conf-C3	YZ81C	14-18558	
AQ-conf-C4	YZ81D	14-18559	
AQ-conf-CC	YZ81E	14-18560	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 9/17/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-C1
SAMPLE

Lab Sample ID: YZ81A
LIMS ID: 14-18556
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

Percent Total Solids: 93.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	**7440-38-2**	**Arsenic**	0.2	**4.0**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-C2
SAMPLE

Lab Sample ID: YZ81B
LIMS ID: 14-18557
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

Percent Total Solids: 92.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	**7440-38-2**	**Arsenic**	0.2	**5.1**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ81 : 00012

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-C3
SAMPLE

Lab Sample ID: YZ81C
LIMS ID: 14-18558
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

Percent Total Solids: 86.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	**7440-38-2**	**Arsenic**	0.2	**101**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-C4
SAMPLE

Lab Sample ID: YZ81D
LIMS ID: 14-18559
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

Percent Total Solids: 91.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	**7440-38-2**	**Arsenic**	0.2	**16.4**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ81 : 090214

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-CC
SAMPLE

Lab Sample ID: YZ81E
LIMS ID: 14-18560
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

Percent Total Solids: 89.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	**7440-38-2**	**Arsenic**	0.2	**24.4**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ81-000015

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-conf-C1
MATRIX SPIKE

Lab Sample ID: YZ81A
LIMS ID: 14-18556
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	4.0	33.4	26.3	112%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: AQ-conf-C1
DUPLICATE

Lab Sample ID: YZ81A
LIMS ID: 14-18556
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: 09/11/14
Date Received: 09/12/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	4.0	3.3	19.2%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

YZ81 : 00017

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: YZ81LCS
LIMS ID: 14-18557
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	30.0	25.0	120%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Sample ID: METHOD BLANK

Lab Sample ID: YZ81MB
LIMS ID: 14-18557
Matrix: Soil
Data Release Authorized:
Reported: 09/17/14

QC Report No: YZ81-Anchor QEA
Project: Port of Tacoma Parcel 14

Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	09/15/14	200.8	09/16/14	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

YZ81 : 00019

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YZ81

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS091611	50.0	50.91	**101.8**	50.0	50.59	**101.2**	50.50	**101.0**	49.94	**99.9**				

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

UNITS: ug/L

SDG: YZ81

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	PMS	MS091611	0.2	0.21	**105.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YZ81

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS091611	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				

YZ81_000022

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

ICS SOURCE: I.V.

PROJECT: Port of Tacoma Parce

RUNID: MS091611

SDG: YZ81

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	17.6	**88.0**						
Cadmium		20	0.0	19.2	**96.0**						
Silver		20	0.0	18.5	**92.5**						

YZ81-SDG2.3

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce

SDG: YZ81 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

ANALYSIS METHOD: PMS

PROJECT: Port of Tacoma Parce

ARI PREP CODE: SWN

SDG: YZ81

PREPDATE: 9/15/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
AQ-conf-C1	YZ81A	1.013	0.0	50.0
AQ-conf-C1D	YZ81ADUP	1.013	0.0	50.0
AQ-conf-C1S	YZ81ASPK	1.018	0.0	50.0
AQ-conf-C2	YZ81B	1.029	0.0	50.0
AQ-conf-C3	YZ81C	1.014	0.0	50.0
AQ-conf-C4	YZ81D	1.018	0.0	50.0
AQ-conf-CC	YZ81E	1.033	0.0	50.0
PBS	YZ81MB1	1.000	0.0	50.0
LCSS	YZ81MB1SPK	1.000	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Port of Tacoma Parce | INSTRUMENT ID: NEXION 300D MS | START DATE: 9/16/2014

SDG: YZ81 | RUNID: MS091611 METHOD: PMS | END DATE: 9/16/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09000				X																										
S1	S1	1.00	09040				X																										
S2	S2	1.00	09070				X																										
S3	S3	1.00	09100				X																										
S4	S4	1.00	09140				X																										
S5	S5	1.00	09190																														
ZZZZZZ	Rinse sampl	1.00	09250																														
ICV	MICV	1.00	09310				X																										
ICB	ICB	1.00	09370				X																										
CCV	MCCV1	1.00	09400				X																										
CCB	CCB1	1.00	09460				X																										
CRI	MCRI	1.00	09490				X																										
ICSA	ICSAI	1.00	09520				X																										
ICSAB	ICSABI	1.00	09580				X																										
ZZZZZZ	LR200	1.00	10040																														
ZZZZZZ	LR300	1.00	10100																														
ZZZZZZ	B1	1.00	10160																														
CCV	MCCV2	1.00	10210				X																										
CCB	CCB2	1.00	10270				X																										
PBS	YZ81MB1	20.00	10300				X																										
AQ-conf-C1L	YZ81A-L	100.00	10340				X																										
AQ-conf-C1	YZ81A	20.00	10370				X																										
AQ-conf-C1D	YZ81ADUP	20.00	10400				X																										
AQ-conf-C1S	YZ81ASPK	20.00	10430				X																										
AQ-conf-C2	YZ81B	20.00	10460				X																										
AQ-conf-C3	YZ81C	20.00	10500				X																										
AQ-conf-C4	YZ81D	20.00	10540				X																										
AQ-conf-CC	YZ81E	20.00	10570				X																										
LCSS	YZ81MB1SPK	20.00	11010				X																										
CCV	MCCV3	1.00	11050				X																										
CCB	CCB3	1.00	11110				X																										

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 23, 2014

Nik Bacher
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Port of Tacoma Parcel 14
ARI Job No.: ZB06

Dear Nik:

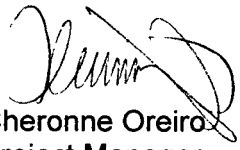
Please find enclosed the Chain of Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details regarding requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.



Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: ZB06

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: ZB06

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: Anchor QEA	Phone: 253-572-0927	Date: 9/19/14	Ice Present?
Client Contact: Nik Bacher		No. of Coolers:	Cooler Temps:
Client Project Name: Parcel 14			
Client Project #:	Samplers: Nik Bacher, Cassie Kendall		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: Total Arsenic	Notes/Comments
ag-conf-cc-2	9/19/14	13:20	Soil	1	X	
ag-conf-cc-2	9/19/14	13:25	Soil	1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Cassie Kendall	Printed Name: C. OREIRO	Printed Name.	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 9/19/14 2:10pm	Date & Time: 9/19/14 1410	Date & Time:	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client. Anchor Project Name: Parcel 141

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 23056 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	25.2	
Time. _____		

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90879152

Cooler Accepted by. TS Date: 9.19.14 Time. 1410

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	_____	

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

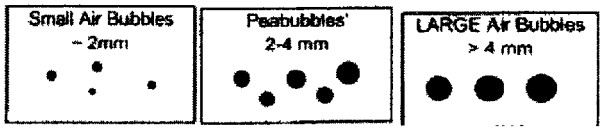
Samples Logged by: TS Date: 9-19-14 Time: 9-19-14

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: ZB06

ZB06 : 000005

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port of Tacoma Parcel 14
ARI Job No.: ZB06

Sample Receipt

Two soil samples were received on September 19, 2014 under ARI job ZB06. The cooler temperature measured by IR thermometer following ARI SOP was 25.2°C. For further details regarding sample receipt, please refer to the Cooler Receipt Forms.

Arsenic by SW200.8

The samples and associated laboratory QC were digested and analyzed within the method recommended holding times.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The matrix spike percent recovery and duplicate RPD were within control limits.

ZB06 : 00006

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ZB06
Client: Anchor QEA
Project Event: N/A
Project Name: Parcel 14

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	AQ-CONF-CC-2	ZB06A	14-19372	Soil	09/19/14 13:20	09/19/14 14:10
2.	AQ-CONF-C3-2	ZB06B	14-19373	Soil	09/19/14 13:25	09/19/14 14:10

ZB06 : 09/19/14

Analytical Method Information

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Met 200.8 (EPA 200.8) in Solid								
Preservation: Cool <6°C								
Container: Glass WM, Clear, 4 oz		**Minimum Sample Weight:** 100 g				**Hold Time:** 180 days		
Aluminum-27	0.00160	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-121	0.0000100	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Antimony-123	0.0000110	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75a	0.0000480	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Arsenic-75b	0.0000920	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-135	0.0000200	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Barium-137	0.0000190	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Beryllium-9	0.0000210	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-111	0.0000100	)00100 mg/kg		20	75 - 125	20	80 - 120	20
Cadmium-114	0.00000500	)00100 mg/kg		20	75 - 125	20	80 - 120	20
Calcium-43	0.00398	0.0500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-52	0.0000450	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Chromium-53	0.000118	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Cobalt-59	0.0000110	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Copper-63	0.000158	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Copper-65	0.000236	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Iron-54	0.00575	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Iron-57	0.00388	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Lead-208	0.0000460	)00100 mg/kg		20	75 - 125	20	80 - 120	20
Magnesium-24	0.000297	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Manganese-55	0.0000220	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Molybdenum-98	0.0000130	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-60	0.0000790	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Nickel-62	0.0000890	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Potassium-39	0.00294	0.0200 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-82	0.000127	)00500 mg/kg		20	75 - 125	20	80 - 120	20
Selenium-78	0.000324	.00200 mg/kg		20	75 - 125	20	80 - 120	20
Silver-107	0.00000800	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Sodium-23	0.00283	0.100 mg/kg		20	75 - 125	20	80 - 120	20
Thallium-205	0.00000400	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51a	0.0000430	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Vanadium-51b	0.0000430	)00200 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-66	0.000497	.00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-67	0.000531	.00400 mg/kg		20	75 - 125	20	80 - 120	20
Zinc-68	0.000524	.00400 mg/kg		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

Metals Analysis
Report and Summary QC Forms

ARI Job ID: ZB06

ZB06 : 060605

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

SDG: ZB06

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
AQ-CONF-CC-2	ZB06A	14-19372	
AQ-CONF-CC-2D	ZB06ADUP	14-19372	
AQ-CONF-CC-2S	ZB06ASPK	14-19372	
AQ-CONF-C3-2	ZB06B	14-19373	
PBS	ZB06MB1	14-19373	
LCSS	ZB06MB1SPK	14-19373	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments:

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 9/23/14 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-CONF-CC-2
SAMPLE

Lab Sample ID: ZB06A
LIMS ID: 14-19372
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14

Date Sampled: 09/19/14
Date Received: 09/19/14

Percent Total Solids: 88.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/kg	Q
3050B	09/22/14	200.8	09/22/14	**7440-38-2**	**Arsenic**	0.092	0.2	**1.5**	

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Method Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-CONF-C3-2
SAMPLE

Lab Sample ID: ZB06B
LIMS ID: 14-19373
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14

Date Sampled: 09/19/14
Date Received: 09/19/14

Percent Total Solids: 92.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/kg	Q
3050B	09/22/14	200.8	09/22/14	**7440-38-2**	**Arsenic**	0.087	0.2	**1.0**	

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Method Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ZB06B . 060512

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: AQ-CONF-CC-2
MATRIX SPIKE

Lab Sample ID: ZB06A
LIMS ID: 14-19372
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14

Date Sampled: 09/19/14
Date Received: 09/19/14

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	1.5	30.6	26.4	110%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: AQ-CONF-CC-2
DUPLICATE

Lab Sample ID: ZB06A
LIMS ID: 14-19372
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14

Date Sampled: 09/19/14
Date Received: 09/19/14

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	1.5	1.5	0.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ZB06A : 090914

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: ZB06LCS
LIMS ID: 14-19373
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	28.3	25.0	113%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: ZB06MB
LIMS ID: 14-19373
Matrix: Soil
Data Release Authorized:
Reported: 09/23/14

QC Report No: ZB06-Anchor QEA
Project: Parcel 14
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	mg/kg	Q
3050B	09/22/14	200.8	09/22/14	7440-38-2	Arsenic	0.087	0.2	0.2	U

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Method Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ZB06 : 000010

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

UNITS: ug/L

SDG: ZB06

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS092211	50.0	52.99	**106.0**	50.0	51.04	**102.1**	51.54	**103.1**	51.03	**102.1**	50.94	**101.9**	51.28	**102.6**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

SDG: ZB06

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	PMS	MS092211	50.0	50.25	**100.5**	51.11	**102.2**	51.58	**103.2**						

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

UNITS:ug/L

SDG: ZB06

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	PMS	MS092211		0.2	0.22	**110.0**										

Control Limits: no control limits have been established by the EPA at this time.

ARI-ZB06 : CRDL1

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

UNITS: ug/L

SDG: ZB06

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS092211	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

CLIENT COPY

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

UNITS:ug/L

SDG: ZB06

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	PMS	MS092211	10.0	0.2	0.2	U	0.2	U	0.2	U						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

ICS SOURCE: I.V.

PROJECT: Parcel 14

RUNID: MS092211

SDG: ZB06

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	18.4	**92.0**						
Cadmium		20	0.1	19.4	**97.0**						
Chromium		20	0.6	19.7	**98.5**						
Copper		20	1.0	20.6	**103.0**						
Manganese		20	0.1	19.0	**95.0**						
Nickel		20	0.2	20.1	**100.5**						
Silver		20	0.0	20.4	**102.0**						
Zinc		20	0.6	19.8	**99.0**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

SDG: ZB06

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14

SDG: ZB06

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 9/22/2014

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
AQ-CONF-CC-2	ZB06A	1.069	0.0	50.0
AQ-CONF-CC-2D	ZB06ADUP	1.067	0.0	50.0
AQ-CONF-CC-2S	ZB06ASPK	1.073	0.0	50.0
AQ-CONF-C3-2	ZB06B	1.087	0.0	50.0
PBS	ZB06MB1	1.000	0.0	50.0
LCSS	ZB06MB1SPK	1.000	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14 | INSTRUMENT ID: NEXION 300D MS | START DATE: 9/22/2014

SDG: ZB06 | RUNID: MS092211 METHOD: PMS | END DATE: 9/22/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09560				X																									
S1	S1	1.00	10000				X																									
S2	S2	1.00	10030				X																									
S3	S3	1.00	10070				X																									
S4	S4	1.00	10110				X																									
S5	S5	1.00	10160																													
ZZZZZZ	Rinse sampl	1.00	10210																													
ICV	MICV	1.00	10270				X																									
ICB	ICB	1.00	10330				X																									
CCV	MCCV1	1.00	10370				X																									
CCB	CCB1	1.00	10430				X																									
CRI	MCRI	1.00	10460				X																									
ICSA	ICSAI	1.00	10500				X																									
ICSAB	ICSABI	1.00	10560				X																									
ZZZZZZ	LR200	1.00	11020																													
ZZZZZZ	LR300	1.00	11090																													
ZZZZZZ	B1	1.00	11150																													
ZZZZZZ	B2	1.00	11200																													
CCV	MCCV2	1.00	11260				X																									
CCB	CCB2	1.00	11320				X																									
ZZZZZZ	DI CHECK	1.00	11360																													
ZZZZZZ	ERA P197	10.00	11400																													
ZZZZZZ	ZA70ADUP	100.00	11430																													
ZZZZZZ	ZA70A	100.00	11470																													
ZZZZZZ	ZA70ASPK	100.00	11500																													
ZZZZZZ	ZZZZZZ	100.00	11540																													
CCV	MCCV3	1.00	11590				X																									
CCB	CCB3	1.00	12050				X																									
ZZZZZZ	ZA70ADUP	100.00	12160																													
ZZZZZZ	ZA70A	100.00	12200																													
ZZZZZZ	ZA70ASPK	100.00	12230																													
ZZZZZZ	ZZZZZZ	100.00	12270																													
CCV	MCCV4	1.00	12320				X																									
CCB	CCB4	1.00	12380				X																									
ZZZZZZ	ZA40MB1	20.00	12420																													

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14 | INSTRUMENT ID: NEXION 300D MS | START DATE: 9/22/2014

SDG: ZB06 | RUNID: MS092211 METHOD: PMS | END DATE: 9/22/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	ZA40ADUP	20.00	12450																													
ZZZZZZ	ZA40A	20.00	12490																													
ZZZZZZ	ZA40ASPK	20.00	12520																													
ZZZZZZ	ZA40APOST	20.00	12560																													
ZZZZZZ	ZA40B	20.00	13000																													
ZZZZZZ	ZA40C	20.00	13030																													
ZZZZZZ	ZA40D	20.00	13070																													
ZZZZZZ	ZA40MB1SPK	20.00	13100																													
CCV	MCCV5	1.00	13150				X																									
CCB	CCB5	1.00	13210				X																									
ZZZZZZ	ZA01MB1	20.00	13250																													
ZZZZZZ	ZA01A-L	100.00	13290																													
ZZZZZZ	ZA01A	20.00	13320																													
ZZZZZZ	ZA01ADUP	20.00	13360																													
ZZZZZZ	ZA01ASPK	20.00	13390																													
ZZZZZZ	ZZZZZZ	20.00	13430																													
ZZZZZZ	ZA01B	20.00	13460																													
ZZZZZZ	ZA01C	20.00	13500																													
ZZZZZZ	ZA01REF1	20.00	13540																													
ZZZZZZ	ZA01MB1SPK	20.00	13570																													
CCV	MCCV6	1.00	14020				X																									
CCB	CCB6	1.00	14080				X																									
ZZZZZZ	ZA19MB1	20.00	14120																													
ZZZZZZ	ZA01D	20.00	14150																													
ZZZZZZ	ZA01E	20.00	14190																													
ZZZZZZ	ZA01F	20.00	14230																													
ZZZZZZ	ZA01G	20.00	14260																													
ZZZZZZ	ZA19A	20.00	14300																													
ZZZZZZ	ZA19B	20.00	14330																													
ZZZZZZ	ZA19C	20.00	14370																													
ZZZZZZ	ZA19D	20.00	14410																													
ZZZZZZ	ZA19MB1SPK	20.00	14440																													
CCV	MCCV7	1.00	14490				X																									
CCB	CCB7	1.00	14550				X																									
PBS	ZB06MB1	20.00	14590				X																									

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Parcel 14 INSTRUMENT ID: NEXION 300D MS START DATE: 9/22/2014

SDG: ZB06 RUNID: MS092211 METHOD: PMS END DATE: 9/22/2014

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
AQ-CONF-CC-2D	ZB06ADUP	20.00	15020				X																										
AQ-CONF-CC-2	ZB06A	20.00	15060				X																										
AQ-CONF-CC-2S	ZB06ASPK	20.00	15090				X																										
ZZZZZZ	ZZZZZZ	20.00	15130																														
AQ-CONF-C3-2	ZB06B	20.00	15170				X																										
LCSS	ZB06MB1SPK	20.00	15200				X																										
CCV	MCCV8	1.00	15250				X																										
CCB	CCB8	1.00	15310				X																										

Appendix C
Port of Tacoma 2021 Lower Wapato Creek Habitat Site Shallow Soil Sampling and Results Memorandum

MEMORANDUM

DATE: May 7, 2021

TO: **Dave Myers, Engineering Project Manager, Port of Tacoma**

FROM: Stanley Sasser, Environmental and Planning, Port of Tacoma

Cc: Mark Rettmann

SUBJECT: **Lower Wapato Creek Habitat Site Shallow Soil Sampling and Results**

BACKGROUND

In support of upcoming construction at the Lower Wapato Creek Habitat Site (LWCHS), the Port identified 9,500 cubic yards (cy) of material that is geotechnically unsuitable for reuse. This material consists of the upper 4" of the surface soil layer containing plant litter and organic material mixed with soil (duff). Per Port policy, all material leaving port-owned property must be tested for contaminants prior to moving off-site to a receiving facility. The Port follows Tacoma Pierce County Health Department (TPCHD) guidance for testing, which satisfies the requirements for disposal of material at the local Subtitle D landfill.

SAMPLING PLAN

The sampling plan follows TPCHD guidance for number of samples per anticipated volume, which in this case, is 25 samples (Attachment A).

The 25 sampling locations were distributed evenly throughout the site using the Point Dispersion tool in ArcMap 10.6.1 (Figure 1). Where sampling locations appeared to be inaccessible, sample points were manually moved to the closest accessible point.

SAMPLING

All samples were collected by me on April 02, 2021. A handheld GPS was used to locate each sampling point, where a small excavation was created using a shovel. The depth of each excavation was approximately 8 inches below the surface. Soil was collected from the side wall of each excavation at a depth of 0-4 inches and then placed in a stainless-steel bowl using a stainless-steel scoop. Stems, roots, and other organic material was removed by hand from the composite sample. This material was then homogenized in the bowl and placed into 2 separate

glass 4-ounce sampling containers. The containers were labeled with the sample number, date, and time and placed in a cooler with ice.

Sampling equipment was cleaned between each sample in a 5-gallon bucket of water and Alconox, and then rinsed with deionized water.

Samples were dropped off at Spectra Labs in Tacoma, WA.

ANALYSIS

Site history was used to choose an appropriate list of analytes of potential concern. For this industrial site, contaminants of potential concern are petroleum, petroleum combustion products (PAHs), and metals.

Samples were analyzed at Spectra Labs for total RCRA 8 metals, and for petroleum using method NWTPH-Dx. Due to equipment availability, Spectra subcontracted the PAH analysis to Fremont Labs in Seattle, WA. Samples were analyzed at Fremont Labs for PAHs using the 8270 PAH/PNA method. Lab results/reports and chain of custody documents are provided in Attachment B.

RESULTS

Four samples returned levels of arsenic that exceeded the state's MTCA A residential level of 20 mg/kg but were below the MTCA C industrial level of 80 mg/kg These sample locations are in the northeast corner (S-24 and S-25) and in the southeast corner (samples S-18 and S-19) of the project site.

- S-24 (52.4 mg/kg)
- S-25 (28.4 mg/kg)
- S-19 (45.4 mg/kg)
- S-18 (34.2 mg/kg)

No other sample exceeded MTCA A residential cleanup level for any analyte tested.

SUMMARY

The Port has completed testing of the duff layer at the project site. Low levels of arsenic above the residential criteria but below MTCA C industrial criteria were found in 4 of the 25 samples in 2 distinct areas. No other exceedances were found.

The Port will obtain a Waste Disposal Authorization from TPCHD to export the 9,500 cy of duff layer to the local Subtitle D landfill.

FIGURE 1


sample 5-10" below and 30-36" below surface. analyze all shallow samples. assume 16 of the deepers. don't analyze shallow if slag is observed at that depth (archive that jar).
add WADOT ROW layer from old figure
dig pit to 3 ft
add a few more location if slag encountered in edge pits.
see what 3-5 day TAT is on analysis. 1 TCLP/SPLP on the hottest sample in each area.
SR 509
S-1
S-2
S-3
S-4
S-5
S-8
S-10
S-11
S-12
S-13
S-14
S-15
S-16
S-17
S-20
S-21
S-22
S-23
S-25
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ATTACHMENT A

Waste Disposal Authorization
Required Analysis

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

You must submit analytical results before disposal of waste in permitted Pierce County solid waste facility.

The volume of waste dictates the number of required samples.

Volume in Cubic Yards	Number of Samples
0 - 25	2
26 – 100	3
101 – 500	5
501 - 1000	7
1001 – 2000	10
One (1) additional sample for every 500 cubic yards of material over 2000 cubic yards.	

The following analyses may apply to your site. **Contact us** if you don't know which analyses will be required for your Waste Disposal Authorization.

Analysis	Method
Total RCRA Metals (8 analytes)	EPA 6010D/7471B
TCLP RCRA Metals (8 analytes)	EPA 1311/6010D/7470A
TPH - Hydrocarbon Identification	NWTPH-HCID
TPH - Gasoline Range Organics	NWTPH-Gx
TPH - Diesel and Heavy Oil Range Organics	NWTPH-Dx
Volatile Organics (VOCs)	EPA 8260C
Halogenated Volatile Organics (HVOCs)	EPA 8260C
BTEX	EPA 8021B
Semivolatile Organics (with low level PAHs)	EPA 8270D/SIM
Semivolatile Organics	EPA 8270D
PAHs - low levels	EPA 8270D/SIM
PCBs (as Aroclors)	EPA 8082A
TCLP Semivolatile Organics	EPA 1311/8270D
TCLP Volatile Organics	EPA 1311/8260C
Paint Filter Test	EPA 9095
pH (soil)	EPA 9045D

Forward analytical results to:

Tacoma-Pierce County Health Department
Waste Management
3629 S. D St. MS 1045
Tacoma, WA 98418

Email: ehsolidwaste@tpchd.org

Questions? Call (253) 649-1820

ATTACHMENT B

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-1
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 1

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	58.1*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	34.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	6.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.027	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-2
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 2

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	50.4*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	81	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-3
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 3

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	30.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	8.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.029	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
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Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-4
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 4

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	14.8	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	113.3*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	4.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	50.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	9.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.047	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Port of Tacoma
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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-5
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 5

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	135.8*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	24.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.044	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
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Port of Tacoma
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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-6
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 6

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	65.7*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	89	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-7
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 7

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	124.5*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	41.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	7.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.037	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	90	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-8
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 8

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	60.6*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	30.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	3.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	78	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-9
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 9

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	73.6*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	6.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	22.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	82	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-10
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 10

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	15.5	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	284.8*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	97	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-11
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 11

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	99.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	9.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.040	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	75	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-12
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 12

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	10.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	87	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-13
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 13

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	59.1*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	72	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-14
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 14

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	75.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	7.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	78	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-15
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 15

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	60.7*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	10.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	10.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	86	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-16
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 16

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	73.6*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	18.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	20.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	1.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	7.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	83	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-17
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 17

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	34.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	13.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	87	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-18
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 18

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	59.8*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	34.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	19.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-19
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 19

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	64.3*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	45.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	19.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	9.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-20
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 20

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	18.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	72	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-21
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 21

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	11.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	13.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	6.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-22
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 22

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	54.9*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	6.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	16.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	88	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

SPECTRA Laboratories ...Where experience matters
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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-23
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 23

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	94.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	3.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	15.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	81	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-24
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 24

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	217.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	52.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	16.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	16.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	18.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.027	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	83	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-25
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 25

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	106.2*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	28.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	10.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	8.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	82	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 1-10

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/5/2021 Date Analyzed: 4/7/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery
Diesel	125	111.1	89%

METHOD BLANK

Date Extracted: 4/5/2021 Date Analyzed: 4/7/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	91%

Surrogate Recovery Limits: 50 -150%

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 11-19

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery
Diesel	125	109.2	87%

METHOD BLANK

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	87%

Surrogate Recovery Limits: 50 -150%

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 20-25

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery	Dup. Spike Amount Found	Percent Recovery	RPD
Diesel	125	105.4	84%	99.50	80%	5.8

METHOD BLANK

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	85%

Surrogate Recovery Limits: 50 -150%

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4/6/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s 1-15
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Blank Result
Arsenic	< 2.5
Barium	< 0.2
Cadmium	< 0.3
Chromium	< 0.7
Lead	< 2.5
Selenium	< 2.5
Silver	< 0.7

Laboratory Control Sample (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Spike Addition	LCS Conc.	LCS %Rec
Arsenic	200.0	202.0	101.0
Barium	200.0	199.8	99.9
Cadmium	200.0	195.7	97.9
Chromium	200.0	204.3	102.2
Lead	200.0	194.1	97.1
Selenium	200.0	194.3	97.2
Silver	200.0	195.7	97.9

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021040037-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	6.0	200.0	202.5	98.3	202.1	98.1	0.2
Barium	68.4	200.0	218.3	75.0	216.0	73.8	1.5
Cadmium	0.0	200.0	194.0	97.0	190.8	95.4	1.7
Chromium	28.2	200.0	226.7	99.3	225.2	98.5	0.8
Lead	12.6	200.0	185.2	86.3	184.3	85.9	0.5
Selenium	0.0	200.0	189.1	94.6	189.0	94.5	0.1
Silver	0.0	200.0	171.8	85.9	171.5	85.8	0.2

Recovery Limits 75-125%
RPD Limit 20
Comments:

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4/6/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s 16-25
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Blank Result
Arsenic	< 2.5
Barium	< 0.2
Cadmium	< 0.3
Chromium	< 0.7
Lead	< 2.5
Selenium	< 2.5
Silver	< 0.7

Laboratory Control Sample (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Spike Addition	LCS Conc.	LCS %Rec
Arsenic	200.0	200.3	100.2
Barium	200.0	196.8	98.4
Cadmium	200.0	189.9	95.0
Chromium	200.0	208.3	104.2
Lead	200.0	191.9	96.0
Selenium	200.0	193.1	96.6
Silver	200.0	191.2	95.6

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021030651-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	0.0	200.0	202.5	101.3	202.1	101.1	0.2
Barium	18.2	200.0	218.3	100.1	216.0	98.9	1.2
Cadmium	0.0	200.0	194.0	97.0	190.8	95.4	1.7
Chromium	27.5	200.0	226.7	99.6	225.2	98.9	0.8
Lead	0.0	200.0	185.2	92.6	184.3	92.2	0.5
Selenium	0.0	200.0	189.1	94.6	189.0	94.5	0.1
Silver	0.0	200.0	171.8	85.9	171.5	85.8	0.2

Recovery Limits 75-125%
RPD Limit 20
Comments:

Spectra Laboratories

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April 6, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s: 1-15
Analyst: SCJ

QUALITY CONTROL RESULTS

Mercury by Cold Vapor - SW846 7471B - Soil/Solid

Method Blank (MBLK)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	CAS #	Result
Mercury	7439-97-6	< 0.025

Laboratory Control Spike (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	Spike Added	LCS Conc.	LCS %Rec
Mercury	2.0	2.05	102.5

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021030651-1

	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Mercury	0.32	2.0	2.08	88.3	2.09	88.4	0.2

Recovery Limits 75-125%
RPD Limit 20

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April 6, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s: 16-25
Analyst: SCJ

QUALITY CONTROL RESULTS

Mercury by Cold Vapor - SW846 7471B - Soil/Solid

Method Blank (MBLK)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	CAS #	Result
Mercury	7439-97-6	< 0.025

Laboratory Control Spike (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	Spike Added	LCS Conc.	LCS %Rec
Mercury	2.0	1.99	99.6

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021040037-16

	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Mercury	0.52	2.0	2.47	97.5	2.45	96.6	0.9

Recovery Limits 75-125%
RPD Limit 20

SPECTRA LABORATORIES

Fremont Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Spectra Laboratories
Marie Holt
2221 Ross Way
Tacoma, WA 98421

RE: 2021040037
Work Order Number: 2104069

April 15, 2021

Attention Marie Holt:

Fremont Analytical, Inc. received 25 sample(s) on 4/6/2021 for the analyses presented in the following report.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Spectra Laboratories
Project: 2021040037
Work Order: 2104069

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2104069-001	040037-1	04/02/2021 1:50 PM	04/06/2021 9:32 AM
2104069-002	040037-2	04/02/2021 1:39 PM	04/06/2021 9:32 AM
2104069-003	040037-3	04/02/2021 1:30 PM	04/06/2021 9:32 AM
2104069-004	040037-4	04/02/2021 1:20 PM	04/06/2021 9:32 AM
2104069-005	040037-5	04/02/2021 1:09 PM	04/06/2021 9:32 AM
2104069-006	040037-6	04/02/2021 12:55 PM	04/06/2021 9:32 AM
2104069-007	040037-7	04/02/2021 12:45 PM	04/06/2021 9:32 AM
2104069-008	040037-8	04/02/2021 12:37 PM	04/06/2021 9:32 AM
2104069-009	040037-9	04/02/2021 12:29 PM	04/06/2021 9:32 AM
2104069-010	040037-10	04/02/2021 12:20 PM	04/06/2021 9:32 AM
2104069-011	040037-11	04/02/2021 12:11 PM	04/06/2021 9:32 AM
2104069-012	040037-12	04/02/2021 12:02 PM	04/06/2021 9:32 AM
2104069-013	040037-13	04/02/2021 11:55 AM	04/06/2021 9:32 AM
2104069-014	040037-14	04/02/2021 11:45 AM	04/06/2021 9:32 AM
2104069-015	040037-15	04/02/2021 11:08 AM	04/06/2021 9:32 AM
2104069-016	040037-16	04/02/2021 10:59 AM	04/06/2021 9:32 AM
2104069-017	040037-17	04/02/2021 10:51 AM	04/06/2021 9:32 AM
2104069-018	040037-18	04/02/2021 10:42 AM	04/06/2021 9:32 AM
2104069-019	040037-19	04/02/2021 10:34 AM	04/06/2021 9:32 AM
2104069-020	040037-20	04/02/2021 10:25 AM	04/06/2021 9:32 AM
2104069-021	040037-21	04/02/2021 10:18 AM	04/06/2021 9:32 AM
2104069-022	040037-22	04/02/2021 10:07 AM	04/06/2021 9:32 AM
2104069-023	040037-23	04/02/2021 9:59 AM	04/06/2021 9:32 AM
2104069-024	040037-24	04/02/2021 9:36 AM	04/06/2021 9:32 AM
2104069-025	040037-25	04/02/2021 9:49 AM	04/06/2021 9:32 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Spectra Laboratories
Project: 2021040037

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-001
Client Sample ID: 040037-1

Collection Date: 4/2/2021 1:50:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
2-Methylnaphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
1-Methylnaphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Acenaphthylene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Acenaphthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Fluorene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Phenanthrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Anthracene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Fluoranthene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Pyrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benz(a)anthracene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Chrysene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(b)fluoranthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(k)fluoranthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(a)pyrene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Indeno(1,2,3-cd)pyrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Dibenz(a,h)anthracene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(g,h,i)perylene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Surr: 2-Fluorobiphenyl	51.9	19 - 135		%Rec	1	4/12/2021 9:46:31 AM
Surr: Terphenyl-d14 (surr)	85.3	42.9 - 156		%Rec	1	4/12/2021 9:46:31 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	29.0	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-002
Client Sample ID: **040037-2**

Collection Date: 4/2/2021 1:39:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
2-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
1-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Acenaphthylene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Acenaphthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Fluorene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Phenanthrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Anthracene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Fluoranthene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Pyrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benz(a)anthracene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Chrysene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(b)fluoranthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(k)fluoranthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(a)pyrene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Indeno(1,2,3-cd)pyrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Dibenz(a,h)anthracene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(g,h,i)perylene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Surr: 2-Fluorobiphenyl	50.7	19 - 135		%Rec	1	4/12/2021 10:07:40 AM
Surr: Terphenyl-d14 (surr)	72.5	42.9 - 156		%Rec	1	4/12/2021 10:07:40 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	18.8	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-003
Client Sample ID: 040037-3

Collection Date: 4/2/2021 1:30:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
2-Methylnaphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
1-Methylnaphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Acenaphthylene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Acenaphthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Fluorene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Phenanthrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Anthracene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Fluoranthene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Pyrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benz(a)anthracene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Chrysene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(b)fluoranthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(k)fluoranthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(a)pyrene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Indeno(1,2,3-cd)pyrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Dibenz(a,h)anthracene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(g,h,i)perylene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Surr: 2-Fluorobiphenyl	50.0	19 - 135		%Rec	1	4/12/2021 11:11:02 AM
Surr: Terphenyl-d14 (surr)	71.3	42.9 - 156		%Rec	1	4/12/2021 11:11:02 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	31.2	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-004
Client Sample ID: 040037-4

Collection Date: 4/2/2021 1:20:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
2-Methylnaphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
1-Methylnaphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Acenaphthylene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Acenaphthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Fluorene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Phenanthrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Anthracene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Fluoranthene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Pyrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benz(a)anthracene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Chrysene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(b)fluoranthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(k)fluoranthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(a)pyrene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Indeno(1,2,3-cd)pyrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Dibenz(a,h)anthracene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(g,h,i)perylene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Surr: 2-Fluorobiphenyl	61.2	19 - 135		%Rec	1	4/12/2021 11:32:11 AM
Surr: Terphenyl-d14 (surr)	84.1	42.9 - 156		%Rec	1	4/12/2021 11:32:11 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	31.0	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 1:09:00 PM
Project: 2021040037
Lab ID: 2104069-005
Matrix: Soil
Client Sample ID: 040037-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
2-Methylnaphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
1-Methylnaphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Acenaphthylene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Acenaphthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Fluorene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Phenanthrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Anthracene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Fluoranthene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Pyrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benz(a)anthracene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Chrysene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(b)fluoranthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(k)fluoranthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(a)pyrene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Indeno(1,2,3-cd)pyrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Dibenz(a,h)anthracene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(g,h,i)perylene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Surr: 2-Fluorobiphenyl	49.8	19 - 135		%Rec	1	4/12/2021 11:53:18 AM
Surr: Terphenyl-d14 (surr)	86.7	42.9 - 156		%Rec	1	4/12/2021 11:53:18 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	30.1	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:55:00 PM
Project: 2021040037
Lab ID: 2104069-006
Matrix: Soil
Client Sample ID: 040037-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
2-Methylnaphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
1-Methylnaphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Acenaphthylene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Acenaphthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Fluorene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Phenanthrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Fluoranthene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benz(a)anthracene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Chrysene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(b)fluoranthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(k)fluoranthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(a)pyrene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Indeno(1,2,3-cd)pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Dibenz(a,h)anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(g,h,i)perylene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Surr: 2-Fluorobiphenyl	55.4	19 - 135		%Rec	1	4/12/2021 12:14:32 PM
Surr: Terphenyl-d14 (surr)	80.2	42.9 - 156		%Rec	1	4/12/2021 12:14:32 PM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	22.9	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:45:00 PM
Project: 2021040037
Lab ID: 2104069-007
Matrix: Soil
Client Sample ID: 040037-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
2-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
1-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Acenaphthylene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Acenaphthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Fluorene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Phenanthrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Anthracene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Fluoranthene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Pyrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benz(a)anthracene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Chrysene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(b)fluoranthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(k)fluoranthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(a)pyrene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Indeno(1,2,3-cd)pyrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Dibenz(a,h)anthracene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(g,h,i)perylene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Surr: 2-Fluorobiphenyl	52.0	19 - 135		%Rec	1	4/12/2021 12:35:42 PM
Surr: Terphenyl-d14 (surr)	77.7	42.9 - 156		%Rec	1	4/12/2021 12:35:42 PM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	26.9	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:37:00 PM
Project: 2021040037
Lab ID: 2104069-008
Matrix: Soil
Client Sample ID: 040037-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
2-Methylnaphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
1-Methylnaphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Acenaphthylene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Acenaphthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Fluorene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Phenanthrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Fluoranthene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benz(a)anthracene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Chrysene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(b)fluoranthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(k)fluoranthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(a)pyrene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Indeno(1,2,3-cd)pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Dibenz(a,h)anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(g,h,i)perylene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Surr: 2-Fluorobiphenyl	49.4	19 - 135		%Rec	1	4/12/2021 12:56:55 PM
Surr: Terphenyl-d14 (surr)	58.9	42.9 - 156		%Rec	1	4/12/2021 12:56:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.7	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-009
Client Sample ID: 040037-9

Collection Date: 4/2/2021 12:29:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
2-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
1-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Acenaphthylene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Acenaphthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Fluorene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Phenanthrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Anthracene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Fluoranthene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Pyrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benz(a)anthracene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Chrysene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(b)fluoranthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(k)fluoranthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(a)pyrene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Indeno(1,2,3-cd)pyrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Dibenz(a,h)anthracene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(g,h,i)perylene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Surr: 2-Fluorobiphenyl	48.2	19 - 135		%Rec	1	4/14/2021 10:39:25 AM
Surr: Terphenyl-d14 (surr)	68.1	42.9 - 156		%Rec	1	4/14/2021 10:39:25 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-010
Client Sample ID: 040037-10

Collection Date: 4/2/2021 12:20:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
2-Methylnaphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
1-Methylnaphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Acenaphthylene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Acenaphthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Fluorene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Phenanthrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Anthracene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Fluoranthene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Pyrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benz(a)anthracene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Chrysene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(b)fluoranthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(k)fluoranthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(a)pyrene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Indeno(1,2,3-cd)pyrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Dibenz(a,h)anthracene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(g,h,i)perylene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Surr: 2-Fluorobiphenyl	65.8	19 - 135		%Rec	1	4/14/2021 11:00:51 AM
Surr: Terphenyl-d14 (surr)	86.7	42.9 - 156		%Rec	1	4/14/2021 11:00:51 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-011
Client Sample ID: 040037-11

Collection Date: 4/2/2021 12:11:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
2-Methylnaphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
1-Methylnaphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Acenaphthylene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Acenaphthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Fluorene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Phenanthrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Anthracene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Fluoranthene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Pyrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benz(a)anthracene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Chrysene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(b)fluoranthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(k)fluoranthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(a)pyrene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Indeno(1,2,3-cd)pyrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Dibenz(a,h)anthracene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(g,h,i)perylene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Surr: 2-Fluorobiphenyl	70.0	19 - 135		%Rec	1	4/14/2021 11:22:11 AM
Surr: Terphenyl-d14 (surr)	91.6	42.9 - 156		%Rec	1	4/14/2021 11:22:11 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	20.5	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-012
Client Sample ID: 040037-12

Collection Date: 4/2/2021 12:02:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
2-Methylnaphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
1-Methylnaphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Acenaphthylene	127	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Acenaphthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Fluorene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Phenanthrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Anthracene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Fluoranthene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Pyrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benz(a)anthracene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Chrysene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(b)fluoranthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(k)fluoranthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(a)pyrene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Indeno(1,2,3-cd)pyrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Dibenz(a,h)anthracene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(g,h,i)perylene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Surr: 2-Fluorobiphenyl	63.8	19 - 135		%Rec	1	4/14/2021 11:43:36 AM
Surr: Terphenyl-d14 (surr)	84.0	42.9 - 156		%Rec	1	4/14/2021 11:43:36 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	15.2	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-013
Client Sample ID: 040037-13

Collection Date: 4/2/2021 11:55:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
2-Methylnaphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
1-Methylnaphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Acenaphthylene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Acenaphthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Fluorene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Phenanthrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Anthracene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Fluoranthene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Pyrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benz(a)anthracene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Chrysene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(b)fluoranthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(k)fluoranthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(a)pyrene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Indeno(1,2,3-cd)pyrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Dibenz(a,h)anthracene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(g,h,i)perylene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Surr: 2-Fluorobiphenyl	66.8	19 - 135		%Rec	1	4/14/2021 12:05:00 PM
Surr: Terphenyl-d14 (surr)	94.1	42.9 - 156		%Rec	1	4/14/2021 12:05:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-014
Client Sample ID: **040037-14**

Collection Date: 4/2/2021 11:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
2-Methylnaphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
1-Methylnaphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Acenaphthylene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Acenaphthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Fluorene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Phenanthrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Anthracene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Fluoranthene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Pyrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benz(a)anthracene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Chrysene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(b)fluoranthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(k)fluoranthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(a)pyrene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Indeno(1,2,3-cd)pyrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Dibenz(a,h)anthracene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(g,h,i)perylene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Surr: 2-Fluorobiphenyl	69.0	19 - 135		%Rec	1	4/14/2021 12:26:22 PM
Surr: Terphenyl-d14 (surr)	89.0	42.9 - 156		%Rec	1	4/14/2021 12:26:22 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-015
Client Sample ID: 040037-15

Collection Date: 4/2/2021 11:08:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
2-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
1-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Acenaphthylene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Acenaphthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Fluorene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Phenanthrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Anthracene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Fluoranthene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Pyrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benz(a)anthracene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Chrysene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(b)fluoranthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(k)fluoranthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(a)pyrene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Indeno(1,2,3-cd)pyrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Dibenz(a,h)anthracene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(g,h,i)perylene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Surr: 2-Fluorobiphenyl	63.2	19 - 135		%Rec	1	4/14/2021 3:18:49 PM
Surr: Terphenyl-d14 (surr)	77.1	42.9 - 156		%Rec	1	4/14/2021 3:18:49 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	17.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-016
Client Sample ID: 040037-16

Collection Date: 4/2/2021 10:59:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
2-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
1-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Acenaphthylene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Acenaphthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Fluorene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Phenanthrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Anthracene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Fluoranthene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Pyrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benz(a)anthracene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Chrysene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(b)fluoranthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(k)fluoranthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(a)pyrene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Indeno(1,2,3-cd)pyrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Dibenz(a,h)anthracene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(g,h,i)perylene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Surr: 2-Fluorobiphenyl	67.9	19 - 135		%Rec	1	4/14/2021 3:40:24 PM
Surr: Terphenyl-d14 (surr)	78.3	42.9 - 156		%Rec	1	4/14/2021 3:40:24 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.6	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-017
Client Sample ID: 040037-17

Collection Date: 4/2/2021 10:51:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
2-Methylnaphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
1-Methylnaphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Acenaphthylene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Acenaphthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Fluorene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Phenanthrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Anthracene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Fluoranthene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Pyrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benz(a)anthracene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Chrysene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(b)fluoranthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(k)fluoranthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(a)pyrene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Indeno(1,2,3-cd)pyrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Dibenz(a,h)anthracene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(g,h,i)perylene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Surr: 2-Fluorobiphenyl	61.4	19 - 135		%Rec	1	4/14/2021 4:02:03 PM
Surr: Terphenyl-d14 (surr)	76.0	42.9 - 156		%Rec	1	4/14/2021 4:02:03 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.7	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-018
Client Sample ID: 040037-18

Collection Date: 4/2/2021 10:42:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
2-Methylnaphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
1-Methylnaphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Acenaphthylene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Acenaphthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Fluorene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Phenanthrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Anthracene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Fluoranthene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Pyrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benz(a)anthracene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Chrysene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(b)fluoranthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(k)fluoranthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(a)pyrene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Indeno(1,2,3-cd)pyrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Dibenz(a,h)anthracene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(g,h,i)perylene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Surr: 2-Fluorobiphenyl	66.3	19 - 135		%Rec	1	4/14/2021 4:23:43 PM
Surr: Terphenyl-d14 (surr)	86.1	42.9 - 156		%Rec	1	4/14/2021 4:23:43 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	23.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-019
Client Sample ID: **040037-19**

Collection Date: 4/2/2021 10:34:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
2-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
1-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Acenaphthylene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Acenaphthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Fluorene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Phenanthrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Anthracene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Fluoranthene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Pyrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benz(a)anthracene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Chrysene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(b)fluoranthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(k)fluoranthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(a)pyrene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(g,h,i)perylene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Surr: 2-Fluorobiphenyl	60.7	19 - 135		%Rec	1	4/14/2021 4:45:25 PM
Surr: Terphenyl-d14 (surr)	78.3	42.9 - 156		%Rec	1	4/14/2021 4:45:25 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	24.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-020
Client Sample ID: 040037-20

Collection Date: 4/2/2021 10:25:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
2-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
1-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Acenaphthylene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Acenaphthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Fluorene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Phenanthrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Anthracene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Fluoranthene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Pyrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benz(a)anthracene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Chrysene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(b)fluoranthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(k)fluoranthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(a)pyrene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Indeno(1,2,3-cd)pyrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Dibenz(a,h)anthracene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(g,h,i)perylene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Surr: 2-Fluorobiphenyl	49.2	19 - 135		%Rec	1	4/14/2021 5:07:08 PM
Surr: Terphenyl-d14 (surr)	58.5	42.9 - 156		%Rec	1	4/14/2021 5:07:08 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.1	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-021
Client Sample ID: **040037-21**

Collection Date: 4/2/2021 10:18:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
2-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
1-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Acenaphthylene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Acenaphthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Fluorene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Phenanthrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Anthracene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Fluoranthene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Pyrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benz(a)anthracene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Chrysene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(b)fluoranthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(k)fluoranthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(a)pyrene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Indeno(1,2,3-cd)pyrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Dibenz(a,h)anthracene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(g,h,i)perylene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Surr: 2-Fluorobiphenyl	81.9	19 - 135		%Rec	1	4/9/2021 2:02:00 PM
Surr: Terphenyl-d14 (surr)	91.5	42.9 - 156		%Rec	1	4/9/2021 2:02:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	21.1	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-022
Client Sample ID: **040037-22**

Collection Date: 4/2/2021 10:07:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
2-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
1-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Acenaphthylene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Acenaphthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Fluorene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Phenanthrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Anthracene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Fluoranthene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Pyrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benz(a)anthracene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Chrysene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(b)fluoranthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(k)fluoranthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(a)pyrene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Indeno(1,2,3-cd)pyrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Dibenz(a,h)anthracene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(g,h,i)perylene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Surr: 2-Fluorobiphenyl	79.5	19 - 135		%Rec	1	4/9/2021 2:23:17 PM
Surr: Terphenyl-d14 (surr)	88.6	42.9 - 156		%Rec	1	4/9/2021 2:23:17 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	21.5	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-023
Client Sample ID: 040037-23

Collection Date: 4/2/2021 9:59:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
2-Methylnaphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
1-Methylnaphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Acenaphthylene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Acenaphthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Fluorene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Phenanthrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Anthracene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Fluoranthene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Pyrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benz(a)anthracene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Chrysene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(b)fluoranthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(k)fluoranthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(a)pyrene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Indeno(1,2,3-cd)pyrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Dibenz(a,h)anthracene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(g,h,i)perylene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Surr: 2-Fluorobiphenyl	79.5	19 - 135		%Rec	1	4/9/2021 3:27:13 PM
Surr: Terphenyl-d14 (surr)	89.3	42.9 - 156		%Rec	1	4/9/2021 3:27:13 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	15.2	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-024
Client Sample ID: 040037-24

Collection Date: 4/2/2021 9:36:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
2-Methylnaphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
1-Methylnaphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Acenaphthylene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Acenaphthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Fluorene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Phenanthrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Anthracene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Fluoranthene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Pyrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benz(a)anthracene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Chrysene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(b)fluoranthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(k)fluoranthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(a)pyrene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Indeno(1,2,3-cd)pyrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Dibenz(a,h)anthracene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(g,h,i)perylene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Surr: 2-Fluorobiphenyl	65.0	19 - 135		%Rec	1	4/9/2021 3:48:31 PM
Surr: Terphenyl-d14 (surr)	73.5	42.9 - 156		%Rec	1	4/9/2021 3:48:31 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	29.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-025
Client Sample ID: 040037-25

Collection Date: 4/2/2021 9:49:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
2-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
1-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Acenaphthylene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Acenaphthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Fluorene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Phenanthrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Anthracene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Fluoranthene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Pyrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benz(a)anthracene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Chrysene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(b)fluoranthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(k)fluoranthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(a)pyrene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Indeno(1,2,3-cd)pyrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Dibenz(a,h)anthracene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(g,h,i)perylene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Surr: 2-Fluorobiphenyl	77.6	19 - 135		%Rec	1	4/9/2021 4:09:55 PM
Surr: Terphenyl-d14 (surr)	90.2	42.9 - 156		%Rec	1	4/9/2021 4:09:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-31923**	SampType: **MBLK**			Units: **µg/Kg**		Prep Date: **4/8/2021**		RunNo: **66487**	
Client ID: **MBLKS**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337765**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									
Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	965		1,000		96.5	19	135				
Surr: Terphenyl-d14 (surr)	1,080		1,000		108	42.9	156				

Sample ID: **LCS-31923**	SampType: **LCS**			Units: **µg/Kg**		Prep Date: **4/8/2021**		RunNo: **66487**	
Client ID: **LCSS**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337766**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,840	20.0	2,000	0	91.8	62.7	127				
2-Methylnaphthalene	1,860	20.0	2,000	0	93.1	62.7	132				
1-Methylnaphthalene	1,870	20.0	2,000	0	93.4	61.4	131				
Acenaphthylene	1,850	20.0	2,000	0	92.6	62	132				
Acenaphthene	1,810	20.0	2,000	0	90.7	59.2	132				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-31923** SampType: **LCS** Units: **µg/Kg** Prep Date: **4/8/2021** RunNo: **66487**
Client ID: **LCSS** Batch ID: **31923** Analysis Date: **4/9/2021** SeqNo: **1337766**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,890	20.0	2,000	0	94.6	59.1	136				
Phenanthrene	1,950	40.0	2,000	0	97.4	54.1	139				
Anthracene	1,920	40.0	2,000	0	96.1	55.5	136				
Fluoranthene	1,930	40.0	2,000	0	96.4	52.8	149				
Pyrene	1,870	40.0	2,000	0	93.6	53.6	146				
Benz(a)anthracene	1,920	20.0	2,000	0	96.1	49.7	153				
Chrysene	1,980	40.0	2,000	0	99.1	52.6	147				
Benzo(b)fluoranthene	2,110	20.0	2,000	0	106	50.6	151				
Benzo(k)fluoranthene	1,990	20.0	2,000	0	99.7	47.1	155				
Benzo(a)pyrene	2,250	20.0	2,000	0	113	48.3	169				
Indeno(1,2,3-cd)pyrene	1,960	40.0	2,000	0	98.0	52.3	145				
Dibenz(a,h)anthracene	1,990	40.0	2,000	0	99.7	53	144				
Benzo(g,h,i)perylene	1,790	20.0	2,000	0	89.7	49.7	144				
Surr: 2-Fluorobiphenyl	954		1,000		95.4	19	135				
Surr: Terphenyl-d14 (surr)	1,020		1,000		102	42.9	156				

Sample ID: **2104069-022AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **4/8/2021** RunNo: **66487**
Client ID: **040037-22** Batch ID: **31923** Analysis Date: **4/9/2021** SeqNo: **1337769**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,700	22.1	2,210	0	76.7	28.7	139				
2-Methylnaphthalene	1,740	22.1	2,210	0	78.8	43.5	130				
1-Methylnaphthalene	1,750	22.1	2,210	0	79.2	42.6	127				
Acenaphthylene	1,720	22.1	2,210	0	77.7	45.3	129				
Acenaphthene	1,680	22.1	2,210	0	76.0	45.1	123				
Fluorene	1,770	22.1	2,210	0	80.0	41.6	128				
Phenanthrene	1,810	44.2	2,210	0	81.8	24.2	142				
Anthracene	1,780	44.2	2,210	0	80.6	33.1	143				
Fluoranthene	1,800	44.2	2,210	0	81.4	35.5	147				
Pyrene	1,730	44.2	2,210	0	78.3	38.3	141				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-022AMS**	SampType: **MS**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**			
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337769**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,820	22.1	2,210	0	82.3	42.5	145				
Chrysene	1,810	44.2	2,210	0	81.9	39.7	134				
Benzo(b)fluoranthene	1,870	22.1	2,210	0	84.6	29.9	152				
Benzo(k)fluoranthene	1,900	22.1	2,210	0	86.2	33.2	143.5				
Benzo(a)pyrene	2,060	22.1	2,210	0	93.1	38.2	156				
Indeno(1,2,3-cd)pyrene	1,800	44.2	2,210	0	81.4	41.4	128				
Dibenz(a,h)anthracene	1,840	44.2	2,210	0	83.3	40.4	129				
Benzo(g,h,i)perylene	1,640	22.1	2,210	0	74.1	34.2	131				
Surr: 2-Fluorobiphenyl	880		1,105		79.6	19	135				
Surr: Terphenyl-d14 (surr)	959		1,105		86.7	42.9	156				

Sample ID: **2104069-022AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**			
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337770**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,900	24.5	2,453	0	77.5	28.7	139	1,695	11.4	30	
2-Methylnaphthalene	1,930	24.5	2,453	0	78.6	43.5	130	1,743	10.1	30	
1-Methylnaphthalene	1,950	24.5	2,453	0	79.5	42.6	127	1,751	10.7	30	
Acenaphthylene	1,940	24.5	2,453	0	79.0	45.3	129	1,718	12.1	30	
Acenaphthene	1,870	24.5	2,453	0	76.2	45.1	123	1,679	10.7	30	
Fluorene	1,950	24.5	2,453	0	79.4	41.6	128	1,768	9.69	30	
Phenanthrene	2,040	49.1	2,453	0	83.2	24.2	142	1,808	12.1	30	
Anthracene	1,980	49.1	2,453	0	80.7	33.1	143	1,781	10.5	30	
Fluoranthene	1,990	49.1	2,453	0	80.9	35.5	147	1,799	9.83	30	
Pyrene	1,920	49.1	2,453	0	78.1	38.3	141	1,730	10.2	30	
Benz(a)anthracene	2,000	24.5	2,453	0	81.4	42.5	145	1,818	9.31	30	
Chrysene	2,020	49.1	2,453	0	82.3	39.7	134	1,810	11.0	30	
Benzo(b)fluoranthene	1,940	24.5	2,453	0	78.9	29.9	152	1,871	3.40	30	
Benzo(k)fluoranthene	2,330	24.5	2,453	0	94.8	33.2	143.5	1,904	19.9	30	
Benzo(a)pyrene	2,330	24.5	2,453	0	95.0	38.2	156	2,058	12.4	30	

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-022AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**		
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337770**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	2,030	49.1	2,453	0	82.8	41.4	128	1,800	12.1	30	
Dibenz(a,h)anthracene	2,070	49.1	2,453	0	84.5	40.4	129	1,842	11.8	30	
Benzo(g,h,i)perylene	1,850	24.5	2,453	0	75.3	34.2	131	1,637	12.0	30	
Surr: 2-Fluorobiphenyl	971		1,227		79.1	19	135		0		
Surr: Terphenyl-d14 (surr)	1,040		1,227		84.4	42.9	156		0		

Sample ID: **MB-31907**	SampType: **MBLK**			Units: **µg/Kg**		Prep Date: **4/7/2021**		RunNo: **66567**		
Client ID: **MBLKS**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339951**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									
Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	446		1,000		44.6	19	135				
Surr: Terphenyl-d14 (surr)	955		1,000		95.5	42.9	156				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-31907**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **MBLKS**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339951**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **LCS-31907**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **LCSS**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339952**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,630	20.0	2,000	0	81.6	62.7	127				
2-Methylnaphthalene	1,710	20.0	2,000	0	85.4	62.7	132				
1-Methylnaphthalene	1,710	20.0	2,000	0	85.6	61.4	131				
Acenaphthylene	1,720	20.0	2,000	0	86.2	62	132				
Acenaphthene	1,650	20.0	2,000	0	82.7	59.2	132				
Fluorene	1,750	20.0	2,000	0	87.5	59.1	136				
Phenanthrene	1,760	40.0	2,000	0	88.0	54.1	139				
Anthracene	1,760	40.0	2,000	0	87.8	55.5	136				
Fluoranthene	1,800	40.0	2,000	0	90.1	52.8	149				
Pyrene	1,740	40.0	2,000	0	86.9	53.6	146				
Benz(a)anthracene	1,820	20.0	2,000	0	91.0	49.7	153				
Chrysene	1,690	40.0	2,000	0	84.4	52.6	147				
Benzo(b)fluoranthene	1,900	20.0	2,000	0	95.1	50.6	151				
Benzo(k)fluoranthene	1,840	20.0	2,000	0	91.9	47.1	155				
Benzo(a)pyrene	2,070	20.0	2,000	0	103	48.3	169				
Indeno(1,2,3-cd)pyrene	1,860	40.0	2,000	0	93.1	52.3	145				
Dibenz(a,h)anthracene	1,900	40.0	2,000	0	94.9	53	144				
Benzo(g,h,i)perylene	1,730	20.0	2,000	0	86.7	49.7	144				
Surr: 2-Fluorobiphenyl	705		1,000		70.5	19	135				
Surr: Terphenyl-d14 (surr)	997		1,000		99.7	42.9	156				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-002AMS**	SampType: **MS**			Units: **µg/Kg-dry**		Prep Date: **4/7/2021**		RunNo: **66567**			
Client ID: **040037-2**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339955**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,380	22.1	2,205	0	62.7	28.7	139				
2-Methylnaphthalene	1,440	22.1	2,205	0	65.5	43.5	130				
1-Methylnaphthalene	1,460	22.1	2,205	0	66.1	42.6	127				
Acenaphthylene	1,460	22.1	2,205	0	66.4	45.3	129				
Acenaphthene	1,390	22.1	2,205	0	63.1	45.1	123				
Fluorene	1,470	22.1	2,205	0	66.6	41.6	128				
Phenanthrene	1,500	44.1	2,205	0	68.0	24.2	142				
Anthracene	1,460	44.1	2,205	0	66.3	33.1	143				
Fluoranthene	1,500	44.1	2,205	0	68.0	35.5	147				
Pyrene	1,440	44.1	2,205	0	65.5	38.3	141				
Benz(a)anthracene	1,500	22.1	2,205	8.569	67.4	42.5	145				
Chrysene	1,470	44.1	2,205	0	66.7	39.7	134				
Benzo(b)fluoranthene	1,460	22.1	2,205	7.051	66.0	29.9	152				
Benzo(k)fluoranthene	1,650	22.1	2,205	3.454	74.8	33.2	143.5				
Benzo(a)pyrene	1,710	22.1	2,205	2.791	77.5	38.2	156				
Indeno(1,2,3-cd)pyrene	1,510	44.1	2,205	0	68.3	41.4	128				
Dibenz(a,h)anthracene	1,550	44.1	2,205	0	70.1	40.4	129				
Benzo(g,h,i)perylene	1,390	22.1	2,205	3.520	62.8	34.2	131				
Surr: 2-Fluorobiphenyl	642		1,103		58.2	19	135				
Surr: Terphenyl-d14 (surr)	812		1,103		73.7	42.9	156				

Sample ID: **2104069-002AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/7/2021**		RunNo: **66567**			
Client ID: **040037-2**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339956**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,360	23.5	2,346	0	58.0	28.7	139	1,384	1.65	30	
2-Methylnaphthalene	1,430	23.5	2,346	0	61.1	43.5	130	1,445	0.768	30	
1-Methylnaphthalene	1,450	23.5	2,346	0	61.9	42.6	127	1,459	0.364	30	
Acenaphthylene	1,460	23.5	2,346	0	62.3	45.3	129	1,464	0.150	30	
Acenaphthene	1,430	23.5	2,346	0	60.8	45.1	123	1,391	2.54	30	

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-002AMSD**	SampType: **MSD**	Units: **µg/Kg-dry**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **040037-2**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339956**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,490	23.5	2,346	0	63.6	41.6	128	1,469	1.63	30	
Phenanthrene	1,480	46.9	2,346	0	63.1	24.2	142	1,499	1.27	30	
Anthracene	1,450	46.9	2,346	0	61.9	33.1	143	1,461	0.661	30	
Fluoranthene	1,520	46.9	2,346	0	64.7	35.5	147	1,499	1.31	30	
Pyrene	1,460	46.9	2,346	0	62.3	38.3	141	1,444	1.32	30	
Benz(a)anthracene	1,540	23.5	2,346	8.569	65.3	42.5	145	1,496	2.91	30	
Chrysene	1,480	46.9	2,346	0	63.2	39.7	134	1,471	0.784	30	
Benzo(b)fluoranthene	1,680	23.5	2,346	7.051	71.3	29.9	152	1,463	13.7	30	
Benzo(k)fluoranthene	1,500	23.5	2,346	3.454	63.7	33.2	143.5	1,652	9.72	30	
Benzo(a)pyrene	1,770	23.5	2,346	2.791	75.2	38.2	156	1,712	3.19	30	
Indeno(1,2,3-cd)pyrene	1,560	46.9	2,346	0	66.5	41.4	128	1,507	3.52	30	
Dibenz(a,h)anthracene	1,590	46.9	2,346	0	67.9	40.4	129	1,545	3.13	30	
Benzo(g,h,i)perylene	1,430	23.5	2,346	3.520	61.0	34.2	131	1,388	3.30	30	
Surr: 2-Fluorobiphenyl	562		1,173		47.9	19	135		0		
Surr: Terphenyl-d14 (surr)	758		1,173		64.6	42.9	156		0		

Fremont Analytical

Sample Log-In Check List

Client Name:	**SPECTR**	Work Order Number:	**2104069**
Logged by:	**Gabrielle Coeuille**	Date Received:	**4/6/2021 9:32:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	UPS		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☑	No ☐	NA ☐

Person Notified:	Marie Holt	Date:	4/6/2021
By Whom:	Gabrielle Coeuille	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirmation of method.		
Client Instructions:	8270-SIM.		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SPECTRA Laboratories

Turnaround Time Requested

STANDARD [X] RUSH [ ] SPECIAL * Lab Approval Required

Return Samples Yes ___ No X

CHAIN of CUSTODY

2104009 Page 1 of 3

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT 2021040037

CONTACT Marie Holt

SUBBED TO Fremont Analytical

PHONE 253-272-4850

e-MAIL: marieh@spectra-lab.com

PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9078	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-1	04/02/21	1350	soil	1											x													
2	040037-2	04/02/21	1339	soil	1											x													
3	040037-3	04/02/21	1330	soil	1											x													
4	040037-4	04/02/21	1320	soil	1											x													
5	040037-5	04/02/21	1309	soil	1											x													
6	040037-6	04/02/21	1255	soil	1											x													
7	040037-7	04/02/21	1245	soil	1											x													
8	040037-8	04/02/21	1237	soil	1											x													
9	040037-9	04/02/21	1229	soil	1											x													
0	040037-10	04/02/21	1220	soil	1											x													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers ___	RELINQUISHED BY	SB	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? ___ Intact? ___	RECEIVED BY	Claire Anderson	Claire Anderson	FAI	4/6/21	0932
Temp at receipt ___ deg C.	RELINQUISHED BY					
Received within hold time? ___	RECEIVED BY					
Proper sample containers? ___	RELINQUISHED BY					
Received via ___ Cooler? ___	RECEIVED BY					

Payment Terms Net 30 days Past due accounts subject to 1% per month interest Client agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection. Any disputes shall be governed by the laws of Pierce Co. WA

SPECTRA Laboratories

Turnaround Time Requested
STANDARD [X] RUSH [ ] SPECIAL ____ *
Lab Approval Required

Return Samples Yes ____ No X

CHAIN of CUSTODY

2104069

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT 2021040037

CONTACT Marie Holt

SUBBED TO. Fremont Analytical

PHONE 253-272-4850

e-MAIL. marieh@spectra-lab.com

PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SG1 HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9076	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-11	04/02/21	1211	soil	1											x													
2	040037-12	04/02/21	1202	soil	1											x													
3	040037-13	04/02/21	1155	soil	1											x													
4	040037-14	04/02/21	1145	soil	1											x													
5	040037-15	04/02/21	1108	soil	1											x													
6	040037-16	04/02/21	1059	soil	1											x													
7	040037-17	04/02/21	1051	soil	1											x													
8	040037-18	04/02/21	1042	soil	1											x													
9	040037-19	04/02/21	1034	soil	1											x													
0	040037-20	04/02/21	1025	soil	1											x													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers _____	RELINQUISHED BY	[signature]	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? _____ Intact?_____	RECEIVED BY	[signature]	[illegible]	[illegible]	4/6/21	1032
Temp at receipt _____ deg. C.	RELINQUISHED BY					
Received within hold time? _____	RECEIVED BY					
Proper sample containers? _____	RELINQUISHED BY					
Received via _____ Cooler? ____	RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1% per month interest. Client or agrees to pay all collection costs including reasonable attorney's fees and all costs of collection regardless of whether suit is filed in Pierce or Kitsap County.

SPECTRA Laboratories

Turnaround Time Requested
STANDARD [X] RUSH [ ] SPECIAL ____ *
Lab Approval Required

Return Samples Yes ____ No X

CHAIN of CUSTODY

1040019
Page 3 of 3

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT: 2021040037
CONTACT: Marie Holt
SUBBED TO. Fremont Analytical
PHONE 253-272-4850
e-MAIL: marieh@spectra-lab com
PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9076	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-21	04/02/21	1018	soil	1											x													
2	040037-22	04/02/21	1007	soil	1											x													
3	040037-23	04/02/21	0959	soil	1											x													
4	040037-24	04/02/21	0936	soil	1											x													
5	040037-25	04/02/21	0949	soil	1											x													
6																													
7																													
8																													
9																													
0																													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers ____	RELINQUISHED BY	SB	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? ____ Intact? ____	RECEIVED BY	Claire Anderson	Claire Anderson	FAT	4/6/21	0933
Temp at receipt ____ deg. C	RELINQUISHED BY					
Received within hold time? ____	RECEIVED BY					
Proper sample containers? ____	RELINQUISHED BY					
Received via ____ Cooler? ____	RECEIVED BY					

Payment terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other legal collection expenses. Jurisdiction for disputes shall be in Pierce County, WA unless

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421
(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 2021040037

Return Samples: Y (N) Page 1 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT: LWCITS

CONTACT: Sasser

SAMPLED BY: Sasser

PHONE: 253-383-9439 FAX:

e-MAIL: ssasser@portoftacoma.com Prefer FAX or e-MAIL ☐

PURCHASE ORDER # 071389

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)		TCLP METALS RCRA 8	TCLP METALS (SPECIFY)		OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)							
1	S-1	04/02/21	1350	soil	2					X						X		X																		
2	S-2		1339																																	
3	S-3		1330																																	
4	S-4		1320																																	
5	S-5		1309																																	
6	S-6		1255																																	
7	S-7		1245																																	
8	S-8		1237																																	
9	S-9		1229																																	
10	S-10		1220																																	

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanleight Sasser	Stanleight Sasser	PORT	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	1457
RELINQUISHED BY					
RECEIVED BY					

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www.spectra-lab.com info@spectra-lab.com

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CHAIN OF CUSTODY

SPECTRA PROJECT # 202104003 7

Return Samples: Y (N) Page 2 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT:

CONTACT:

SAMPLED BY:

PHONE: FAX:

e-MAIL: Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-11	04/02	1211	soil	2					X						X		X										
2	S-12		1202																									
3	S-13		1155																									
4	S-14		1145																									
5	S-15		1108																									
6	S-16		1059																									
7	S-17		1051																									
8	S-18		1042																									
9	S-19		1034																									
10	S-20		1025																									

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanley H. Sessa	Stanley H. Sessa	Port	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	14:57
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

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SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 2021040037

Return Samples: Y (N) Page 3 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT:

CONTACT:

SAMPLED BY:

PHONE: FAX:

e-MAIL: Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-21	04/02/21	1018	Soil	2					X						X		X										
2	S-22	↓	1007	↓	↓					↓						↓		↓										
3	S-23		0959																								
4	S-24		0936																								
5	S-25	↓	0949	↓	↓					↓						↓		↓										
6																												
7																												
8																												
9																												
10																												

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanley H. Sessen	Stanley H. Sessen	Port	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	14:57
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

Appendix D
Anchor QEA 2021 Data Report and Cleanup Plan



June 2021
Parcel 14

ANCHOR QEA

Data Report and Cleanup Plan
Parcel 14 Slag Removal

Prepared for Port of Tacoma

June 2021
Parcel 14

Data Report and Cleanup Plan
Parcel 14 Slag Removal

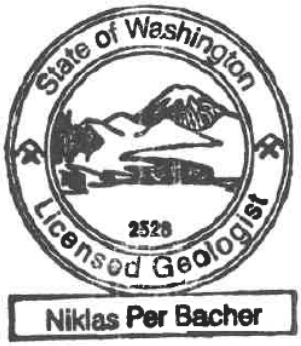
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1119 Pacific Avenue, Suite 1600
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Project Number: 200092-01.15
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CERTIFICATION

This report was prepared by the staff of Anchor QEA, LLC, under the supervision of the Geologist whose seal and signature appears hereon, as required by Chapter 308-15-075 of the Washington Administrative Code (WAC).



Niklas P. Bacher, LG
Senior Managing Geologist
Anchor QEA, LLC

TABLE OF CONTENTS

1 Introduction 1

2 Background 2

2.1 2010 Site Investigation 2

2.2 2014 Soil Testing 2

2.3 2014 Soil Removal 3

2.4 2021 Discovery of Additional Slag Materials 3

3 Nature and Extent of Contamination 4

3.1 Extent of Impacted Duff Material 4

3.2 Extent of Impacted Soils 4

3.3 Results of TCLP Testing 6

3.4 Results of SPLP Testing 6

4 Cleanup Plan 7

4.1 Contaminated Duff and Soil Removal 7

4.2 Stormwater Protection Measures 7

4.3 Performance Monitoring 8

4.4 Completion of Work 8

4.5 Reporting 8

5 References 9

TABLES

Table 1 Arsenic Distribution in Duff Material

Table 2 Results of Follow-up Soil Arsenic Testing Performed by the Port

Table 3 Results of Soil Testing in Areas Free of Slag or Arsenic Impacts

Table 4 Lateral and Vertical Delineation of Arsenic-Contaminated Soils

Table 5 TCLP and SPLP Testing Results

FIGURES

Figure 1 Site Overview

Figure 2 Extent of Arsenic Contamination in Duff Material

Figure 3 Extent of Slag and Arsenic Concentration in Soil

Figure 4 Proposed Cleanup Plan

APPENDICES

Appendix A Analytical Testing Data from Port Duff and Soil Sampling Effort

Appendix B Observations from Anchor QEA Test Pit and Hand Auger Investigations

Appendix C Analytical Testing Data from Anchor QEA Soil Sampling Efforts

ABBREVIATIONS

ASARCO	American Smelting and Refining Company
Cleanup Plan	Data Report and Cleanup Plan
cy	cubic yards
Ecology	Washington State Department of Ecology
GPS	Global Positioning System
Habitat Project	Lower Wapato Creek Habitat Project
LRI	Land Resources, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
Port	Port of Tacoma
Property	Parcel 14 property
Site	Parcel 14 contaminated site areas
SPLP	synthetic precipitation leaching procedure
TCLP	toxicity characteristic leaching procedure
UCL	upper-confidence limit
WAC	Washington Administrative Code

1 Introduction

This Data Report and Cleanup Plan (Cleanup Plan) summarizes the cleanup plan to be implemented to remove localized deposits of American Smelting and Refining Company, LLC (ASARCO) slag from the Parcel 14 property (Property) contaminated site areas (Site) of the Port of Tacoma (Port).

Parcel 14 is located at 1131 Alexander Avenue in Tacoma, east of Wapato Creek and south of Highway 509 (Figure 1). The Property is currently vacant and is owned by the Port. Parcel 14 is being developed as a habitat enhancement area known as the Lower Wapato Creek Habitat Project (Habitat Project). The development of the Habitat Project is scheduled for completion during summer and fall of 2021.

As described in Section 3, limited areas of ASARCO slag and associated arsenic-contaminated soils have been identified in soils located in the eastern portion of Parcel 14. ASARCO slag is known to contain concentrations of arsenic that exceed applicable Model Toxics Control Act (MTCA) cleanup levels. It has a characteristic appearance and composition. Once the Port discovered the presence of slag at the Site, the Port retained Anchor QEA, LLC (Anchor QEA) to delineate the extent of the slag and associated contaminated soils and to develop this Cleanup Plan.

The extent of soils impacted by slag and associated arsenic contamination areas have been delineated laterally and vertically. Soils that contain slag or that contain arsenic at concentrations exceeding MTCA Method A cleanup levels for unrestricted uses (20 milligrams per kilogram [mg/kg]) are to be removed and disposed of at a commercial landfill.

This Cleanup Plan is proposed for implementation during summer of 2021 prior to implementation of Habitat Project construction activities within the Site. The methods to be used for implementation of the Cleanup Plan are described in Section 4.

2 Background

This section describes previous environmental testing and cleanup work implemented at Parcel 14 prior to discovery of the slag materials that are the subject of this Cleanup Plan.

2.1 2010 Site Investigation

In 2010, GeoEngineers, Inc., completed a hydrogeologic and environmental investigation of subsurface conditions at Parcel 14. The subsurface investigation at Parcel 14 was completed in cooperation with Grette Associates and the Port. That study supported design and permitting for the Habitat Project (GeoEngineers 2010).

The investigation included excavation of test pits, the drilling of nine borings, the installation of four piezometers, soil analytical testing, and the installation of water level monitoring equipment.

GeoEngineers excavated 27 test pits throughout Parcel 14, evaluated soil types, and conducted analytical testing of selected soil samples. Soil samples were tested for heavy metals, semivolatile organic compounds, polychlorinated biphenyls, pesticides, herbicides, and petroleum.

All soil testing data complied with applicable MTCA Method A or B cleanup levels except for arsenic. Out of 24 soil samples tested for arsenic, two samples exceeded the MTCA Method A soil cleanup level (20 mg/kg) for unrestricted land use.

Based on this sampling effort, GeoEngineers concluded that arsenic-contaminated soil within the fill unit appeared to be isolated to the northeast portion of the site and that the source of the arsenic-contaminated soil appears to be related to slag in that area of the fill soil.

2.2 2014 Soil Testing

In 2014, Anchor QEA, LLC, conducted an additional sampling effort (Anchor QEA 2014) to expand on the GeoEngineers study. This testing was focused on delineating areas of arsenic-impacted soil in the northeastern portion of Parcel 14, specifically in the areas previously identified by GeoEngineers.

Arsenic testing was performed on 30 individual soil samples and two duplicate samples. Measured arsenic concentrations in the soil samples ranged from 6 to 95 mg/kg. Leaching tests (using the synthetic precipitation leaching procedure [SPLP]) demonstrated that the arsenic in the impacted soils was not leachable.

Data from this study were pooled with data previously collected by GeoEngineers (2010) to evaluate compliance with the soil cleanup level for unrestricted land uses. In the combined dataset, soil arsenic concentrations in 4 of 54 soil samples exceeded compliance with the MTCA Method A cleanup level applicable to unrestricted land uses (20 mg/kg). This included two samples collected by GeoEngineers and two samples collected by Anchor QEA.

2.3 2014 Soil Removal

During 2014, the Port implemented the removal of the arsenic-impacted soils. SPLP testing was also conducted to evaluate the potential for arsenic in soil to leach into stormwater or groundwater (Anchor QEA 2014). None of the eight soil samples tested contained detectable arsenic in the SPLP leachate, demonstrating that arsenic in soil is not a potential source of stormwater or groundwater contamination.

All impacted soils exceeding the MTCA Method A cleanup level (totaling 943 tons) were removed and managed by disposal in an off-site commercial landfill. Following soil removal, data analysis to evaluate compliance with MTCA requirements demonstrated that soil quality at the Site complied with MTCA Method A soil cleanup levels for arsenic applicable to unrestricted uses (20 mg/kg).

During April of 2015, the Washington State Department of Ecology (Ecology) issued a No Further Action Letter for Parcel 14.

2.4 2021 Discovery of Additional Slag Materials

In advance of the Habitat Project work, the Port conducted extensive shallow soil sampling throughout Parcel 14 to characterize materials planned for off-site reuse (Port, 2021). The testing was focused on the upper 4 inches of the surface soil layer containing plant litter and organic material mixed with soil (duff). Testing was performed at 25 uniformly distributed locations selected throughout Parcel 14. Sampling locations were selected using the Point Dispersion tool in ArcMap 10.6.1.

Collected duff samples were analyzed for heavy metals, petroleum, and polycyclic aromatic hydrocarbons (PAH). Duff testing results are provided in Table 1 and Figure 2. None of the testing parameters exceeded MTCA Method A cleanup levels for unrestricted land uses, except for arsenic, which was detected at elevated levels in samples from the eastern portion of Parcel 14.

The Port geologist observed slag in soils directly beneath duff material at some of the locations that also contained elevated arsenic concentrations. Follow-up testing documented the presence of arsenic in subsurface soils underlying the duff material at two of these locations (Table 2).

In response to the detected slag materials and associated arsenic contamination, the Port retained Anchor QEA to conduct supplemental soil testing, delineate the areas and depths of slag and associated arsenic contamination in soils, and define a cleanup plan to be implemented in advance of Habitat Project construction activities. The results of the soil testing program are described in Section 3, and the cleanup plan is described in Section 4.

3 Nature and Extent of Contamination

This section describes the nature and extent of soil contamination at the Site. The testing program used test pits and hand auger borings to first assess the vertical and horizontal distribution of slag at the Site. Chemical testing was then used to confirm the horizontal and vertical boundaries of arsenic-contaminated soil surrounding the slag.

Soil testing results described in this section were developed as part of four different sampling events:

- Initial Port soils survey as reported May 7, 2021 (25 testing locations; 25 duff material and 8 underlying soil samples analyzed)
- Test pit investigation performed May 14 and 17, 2021 (42 test pit locations; 45 samples analyzed)
- Test pit investigation performed June 1, 2021 (33 test pit locations; 42 samples analyzed)
- Hand auger testing performed June 11, 2021 (1 additional location tested and analyzed)

3.1 Extent of Impacted Duff Material

As described in Section 2.3, the Port sampled duff material 0 to 4 inches at 25 locations throughout the site. Figure 2 shows the areas of duff that exceeded the MTCA Method A cleanup levels based on this testing.

Data analysis procedures were performed as required under Washington Administrative Code (WAC) 173-340-740(7)(d). Contaminated areas that exceeded Method A cleanup level (20 mg/kg) are those represented by samples S-18, 19, and 24 (Figure 2). The MTCA Method A cleanup level is based on natural background soil concentrations (WAC 173-340-900, Table 740-1).

The 95-percent upper-confidence limit (UCL; calculated using MTCAStat-97) of the remaining 22 sample areas was 9.9 mg/kg arsenic, well below the MTCA Method A cleanup level for unrestricted land use (20 mg/kg). As required by WAC 173-340-740(7)(d), none of these remaining duff samples exceeded the cleanup level by two times, and no more than 10% of individual samples exceeded the cleanup levels.

The average concentration of the remaining duff materials (represented by the 22 samples of remaining duff materials outside of areas S-18, S-19, and S-24) was 6.1 mg/kg, which is less than Ecology's estimate (7.3 mg/kg) of the natural background concentration of arsenic in Puget Sound soils (Ecology, 1994).

3.2 Extent of Impacted Soils

The extent of impacted soils beneath the duff layer was determined during three follow-up investigations. The first two investigations were performed using backhoe-excavated test pits. The third investigation was performed using a hand auger at one follow-up testing location. Results of

this round of testing provided an initial delineation of the lateral and vertical limits of slag and also of arsenic-contaminated soil associated with the slag.

The first test round of test pit sampling was performed on May 14 and May 17 and included testing locations determined using a uniform sampling grid. Two rounds of follow-up testing were then used to delineate the extent and depth of visible slag materials and to collect soil bounding samples for analytical testing. The testing program was tiered using the following procedures:

- If visible slag was present, the soils containing slag were assumed to be contaminated. Analytical testing was then performed on underlying soils to define the clean soil horizon, and additional test pits were sampled in adjacent areas as necessary to define the lateral limits of the contaminated soil.
- If no visible slag was present, then samples were collected and analyzed for arsenic. Samples were collected at multiple intervals and archived. If arsenic contamination was detected, then the underlying archived samples were analyzed as necessary to define the clean soil horizon.
- On June 11, hand auger sampling was used to collect soil samples from one additional area to refine the lateral limits of contamination.

The results of soil testing are summarized in Figure 3 and Tables 3 and 4. Field sampling observations, including locations, presence of slag and slag observed depth, and sample IDs are provided in Appendix B. Laboratory data packages from Analytical Resources, Inc. (located in Tukwila, Washington) are provided in Appendix C.

Table 3 summarizes the testing results for those test pits in uncontaminated areas. These soils did not contain any visible slag, and the results of testing documented compliance with MTCA Method A cleanup levels. The 95-percent UCL (calculated using MTCAStat-97) of the 27 samples collected from these uncontaminated areas was 7.1 mg/kg arsenic, which is well below the MTCA Method A cleanup level for unrestricted land use (20 mg/kg). As required by WAC 173-340-740(7)(d) and (e), none of these samples exceeded the cleanup level by two times, and no more than 10% of individual samples exceeded the cleanup levels.

The average arsenic concentration of the Table 3 soils was 5.5 mg/kg. This is less than Ecology's estimate (7.3 mg/kg) of the natural background concentration of arsenic in Puget Sound soils (Ecology, 1994).

The soils containing slag or elevated arsenic concentrations were then fully delineated laterally and vertically. Results of that delineation sampling are shown in Table 4. In all there were 57 samples used to delineate the area of contamination. The 95-percent UCL (calculated using MTCAStat-97) for the 57 side and bottom samples was 6.4 mg/kg.

The average arsenic concentration at the limits of the planned excavation is 5.3 mg/kg. This is less than Ecology's estimate (7.3 mg/kg) of the natural background concentration of arsenic in Puget Sound soils (Ecology, 1994).

3.3 Results of TCLP Testing

Toxicity characteristic leaching procedure (TCLP) testing was performed on two samples using Method 6010D to verify that the arsenic concentrations do not exceed criteria for landfill disposal (limit of 5 milligrams per liter in TCLP leachate). Concentrations of all TCLP metals were below method reporting limits in both samples (Table 5).

3.4 Results of SPLP Testing

Leachability testing was performed on two soil samples using the SPLP test method applicable to the western United States. The test method assesses the potential for rainwater to leach arsenic from the soil.

SPLP testing results are summarized in Table 5. Arsenic concentrations in the leachate from both soil samples were below method detection limits, indicating that the arsenic is tightly bound to soil.

4 Cleanup Plan

This section summarizes the proposed cleanup to be performed for the soils containing ASARCO slag and elevated arsenic concentrations. The work is planned for completion during summer of 2021, with the work phased prior to initiation of Habitat Project activities within the Site.

4.1 Contaminated Duff and Soil Removal

Contaminated duff and soil will be removed from the Site at the locations and depths shown in Figure 4. The lateral and vertical limits of soil removal have been verified by prior soil testing as summarized in Table 4.

A total of 8,000 cubic yards; estimated weight of 12,000 tons) of soils are planned for removal from the areas shown in Figure 4. The soils will be excavated, placed directly into trucks, and hauled to the Land Resources, Inc. (LRI) landfill in Graham, Washington, for disposal as non-hazardous material. The soils will be disposed under a Waste Disposal Authorization issued by the Pierce County Health Department.

Contaminated soil removal activities will be completed in summer 2021 by the Port's selected contractor. Soil excavations will be visually monitored to verify that there are no slag materials present beyond the planned limits of the excavations as described in Section 4.3.

4.2 Stormwater Protection Measures

As noted in Section 3.4, leachability testing confirms that the arsenic in the contaminated soil is not leachable and does not pose a threat to groundwater or stormwater if soil particulates are not entrained in runoff.

The Port's contractor will comply with applicable requirements of the construction stormwater general permit during the soil cleanup. Additional stormwater management practices will be followed to ensure that arsenic contamination is released to stormwater during the soil cleanup, including the following:

- All cleanup work will be performed during dry weather months.
- Each soil cleanup area will be isolated from other Habitat Project activities until removal of the arsenic-contaminated soil from that area has been completed.
- Contaminated soils will be direct loaded into trucks for off-site disposal at LRI.
- No on-site stockpiling of contaminated soils will be performed.
- Any precipitation contacting contaminated soils will be retained on site within the work area (i.e., within the excavation areas) and managed by infiltration; no runoff from these areas to other Site areas will be permitted until the contaminated soil removal has been completed.

4.3 Performance Monitoring

Soil removal will be overseen by the Port's construction management team. The lateral and vertical limits of the planned excavation have been pre-defined by intensive soil sampling as summarized in Table 4 and Figure 4. No additional analytical testing is required, provided that no slag materials are observed beyond the planned limits of the excavation.

If slag is encountered beyond the planned horizontal or vertical limits of the excavation, then a supplemental soil removal will be performed in this area, and additional sidewall and bottom samples will be collected at the limits of the supplemental excavation.

The lateral limits of excavation and the locations of any supplemental soil testing will be field verified by Global Positioning System (GPS), and the vertical limits will be measured by a measuring tape.

4.4 Completion of Work

Contaminated soil removal will be considered complete when the following has been accomplished:

- Soil removal has extended to the planned lateral and vertical limits of excavation as shown in Figure 4.
- If additional slag materials are encountered beyond the planned limits of excavation, these materials have been removed and clean sidewall and bottom samples have been collected and analyzed to verify that all contaminated material was removed.

Once removal of the contaminated soil has been completed in a given work area, that area will be released for performance of other Habit Project construction activities.

4.5 Reporting

Following completion of soil removal activities, the Port will prepare a Completion Report documenting all work performed. The report will be submitted to Ecology's Toxics Cleanup Program as an Independent Cleanup Action.

Following submittal of the Completion Report to Ecology, the Port anticipates submitting a request for review of the work under Ecology's Voluntary Cleanup Program.

5 References

Anchor QEA, 2014. Re: Completion Report – Removal of Arsenic Impacted Soil Habitat Enhancement Project – 1131 East Alexander Avenue, Tacoma, 98424 Environmental Incident Reporting System ID (ERTS) #649884. October 20, 2014.

Ecology, 1994. Natural Background Soil Metals Concentrations in Washington State. Ecology Publication No. 94-115. Prepared October, 1994.

GeoEngineers (GeoEngineers, Inc.), 2010. *Site Investigation, Port of Tacoma Parcel 14, Tacoma, Washington.* File No. 0454-094-15. December 6, 2010.

Port (Port of Tacoma), 2021. *Lower Wapato Creek Habitat Site Shallow Soil Sampling and Results.* Port of Tacoma – Facilities Development. May 7, 2021.

TPCHD (Tacoma Pierce County Health Department), 2020. *Waste Disposal Authorization Application.* Available online at: https://www.tpchd.org/home/showpublisheddocument/946/637436342126170000

Tables

Table 1
Arsenic Distribution in Duff Material

Impacted Area Samples	Port Sample ID	Analytical Results for Total Arsenic (mg/kg)
Duff Samples from Impacted Areas (To Be Removed for Landfill Disposal)	S-18	34.2
	S-19	45.4
	S-24	52.4

Non-Impacted Area Samples	Port Sample ID	Analytical Results for Total Arsenic (mg/kg)
Duff Samples from Non-Impacted Areas [1]	S-1	3.0
	S-2	<2.5
	S-3	3.4
	S-4	4.6
	S-5	3.1
	S-6	<2.5
	S-7	2.8
	S-8	2.8
	S-9	6.1
	S-10	3.2
	S-11	<2.5
	S-12	<2.5
	S-13	<2.5
	S-14	7.6
	S-15	<2.5
	S-16	18.6
	S-17	2.8
	S-20	18.4
	S-21	11.0
	S-22	6.5
	S-23	3.5
	S-25	28.4
	No. of Samples	**22**
	Mean	**6.1 mg/kg [2]**
	95% UCL [1,3]	**9.9 mg/kg**

Notes:

mg/kg: milligram per kilogram

MTCA: Model Toxics Control Act

UCL: upper confidence limit

Refer to Figure 1 for sample locations.

All samples were collected April 2, 2021, from depths of 0 to 4 inches below ground surface (within the duff layer).

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level for arsenic is 20 mg/kg. These duff materials are to be reused on Port property.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic in the Puget Sound Basin, which is 7.3 mg/kg (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Table 2
Results of Follow-up Soil Arsenic Testing Performed by the Port

Port Station ID	Sample Depth (inches bgs)	Analytical Results for Total Arsenic (mg/kg)
S-18	5-10	10.8
	11-22	15.4
S-19	5-10	21.5 [1]
	11-22	40.0 [1]
S-24	5-10	23.8 [1]
	11-22	16.8
S-25	5-10	5.8
	11-22	2.8

Notes:

bgs: below ground surface

mg/kg: milligram per kilogram

MTCA: Model Toxics Control Act

All samples were collected May 10, 2021. Refer to Figure 1 for sample locations.

1. Value exceeds the MTCA Method A cleanup level of 20 mg/kg. Soil removal is to be conducted in this area.

Table 3
Results of Soil Testing in Areas Free of Slag or Arsenic Impacts

Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
S-26	5/14/2021	5-10	2.2
S-27	5/14/2021	5-10	18
S-28	5/14/2021	5-10	2.1
S-29	5/14/2021	5-10	6.0
S-30	5/14/2021	5-10	1.7
S-32	5/14/2021	5-10	3.9
S-33	5/14/2021	5-10	6.7
S-34	5/14/2021	5-10	8.4
S-35	5/14/2021	5-10	4.2
S-39	5/14/2021	5-10	4.2
S-40	5/14/2021	5-10	7.7
S-43	5/14/2021	5-10	8.5
S-44	5/14/2021	5-10	16
S-45	5/14/2021	5-10	1.7
S-50	5/14/2021	5-10	5.3
S-51	5/14/2021	5-10	4.7
S-52	5/14/2021	5-10	1.5
S-55	5/17/2021	5-10	2.8
S-56	5/17/2021	5-10	4.4
S-57	5/17/2021	5-10	3.8
S-61	5/17/2021	5-10	2.9
S-62	5/17/2021	5-10	2.2
S-63	5/17/2021	5-10	5.6
S-64	5/17/2021	5-10	6.1
S-65	5/17/2021	5-10	2.9
S-78	6/1/2021	5-10	5.8
	6/1/2021	18-24	8.6
Summary Statistics		**No. of Samples**	**27**
		Average	**5.5 mg/kg [2]**
		95% UCL [1,3]	**7.1 mg/kg**

Notes:

bgs: below ground surface

mg/kg: milligram per kilogram

MTCA: Model Toxics Control Act

UCL: upper confidence limit

Refer to Figure 3 for sample locations.

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level is 20 mg/kg for arsenic.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic in the Puget Sound Basin, which is 7.3 mg/kg (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Table 4
Lateral and Vertical Delineation of Arsenic Contaminated Soils

Sample Type	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Soils to be Removed Along With Slag	S-41	5/14/2021	5-10	29
	S-66	5/17/2021	5-10	57
	S-67	5/17/2021	5-10	38
	S-83	6/1/2021	21	85

Sample Type	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Samples Defining Clean Soil at Lateral Limits of Contaminated Area	S-68	6/1/2021	27	3.1
	S-69	6/1/2021	27	7.2
	S-70	6/1/2021	21	6.8
	S-71	6/1/2021	21	3.0
	S-72	6/1/2021	21	1.6
	S-73	6/1/2021	21	3.2
	S-74	6/1/2021	21	1.8
	S-75	6/1/2021	21	7.5
	S-80	6/1/2021	5-10	15
		6/1/2021	18-24	15
	S-82	6/1/2021	21	11
	S-84	6/1/2021	12	7.1
	S-86	6/1/2021	12	12
	S-87	6/1/2021	12	3.9
	S-88	6/1/2021	15	4.6
	S-89	6/1/2021	15	8.0
	S-91	6/1/2021	15	1.4
	S-93	6/1/2021	15	1.8
	S-94	6/1/2021	15	1.8
	S-95	6/1/2021	15	1.5
	S-96	6/1/2021	18	2.3
	S-97	6/1/2021	5-10	3.6
		6/1/2021	18-24	10
	S-98	6/1/2021	5-10	8.3
		6/1/2021	18-24	4.6
	S-99	6/1/2021	5-10	7.4
		6/1/2021	18-24	14
	S-100	6/1/2021	5-10	4.0
		6/1/2021	18-24	2.5
	S-101	6/1/2021	15	7.8
	S-102	6/1/2021	15	3.2
	S-103	6/1/2021	21	1.7
	S-104	6/1/2021	12	2.6

Table 4
Lateral and Vertical Delineation of Arsenic Contaminated Soils

Sample Type	Sample Station	Sample Date	Sample Depth (inches bgs)	Arsenic Concentration (mg/kg)
Samples Defining Clean Soil Horizon Beneath Contaminated Soil	S-31	5/14/2021	48-54	6.6
	S-36	5/14/2021	36-42	3.4
	S-37	5/14/2021	36-42	16
	S-38	5/14/2021	28-34	5.2
	S-41	6/1/2021	18-24	1.9
		5/14/2021	30-36	3.0
	S-42	5/14/2021	18-24	2.0
	S-46	5/14/2021	24-30	1.4
	S-47	5/14/2021	26-32	3.6
	S-48	5/14/2021	28-34	8.2
	S-49	5/14/2021	24-30	1.8
	S-53	5/14/2021	19-25	4.32
	S-54	5/17/2021	41-47	17
	S-58	5/17/2021	24-30	2.3
	S-59	5/17/2021	41-47	6.3
	S-60	5/17/2021	40-46	7.2
	S-66	5/17/2021	30-36	2.0
	S-66	6/1/2021	18-24	2.1
	S-67	5/17/2021	30-36	4.9
	S-67	6/1/2021	18-24	1.9
	S-76	6/1/2021	21	2.8
	S-77	6/1/2021	18	2.4
	S-79	6/1/2021	36-40	3.1
Summary Statistics for Delineation Samples	**Summary Statistics**		**No. of Samples**	**57**
			Average	**5.3 mg/kg [2]**
			95% UCL [1,3]	**6.4 mg/kg**

Notes:

bgs: below ground surface

mg/kg: milligram per kilogram

MTCA: Model Toxics Control Act

UCL: Upper confidence limit

Analytical Method: 6020B

* Sample represents soil to be removed and was not included in summary statistics.

1. Under MTCA, compliance with the cleanup standard is met when the 95% UCL is less than the cleanup level, provided that no more than 10% of the individual samples exceed the cleanup level and no single sample exceeds the cleanup level by more than two times [WAC 173-340-740(7)(d) and (e)]. The MTCA Method A cleanup level for arsenic is 20 mg/kg.

2. Calculated value is less than Ecology's estimate of natural background soil concentrations for arsenic in the Puget Sound Basin, which is 7.3 mg/kg (Ecology Publication No. 94-115).

3. The 95% UCL was determined using MTCA Stat 97.

Table 5
TCLP and SPLP Testing Results

Sample Station	Sample Date	Sample Depth (inches bgs)	TCLP Arsenic Concentration (mg/L)	SPLP Arsenic Concentration (mg/L)
			TCLP and Method 6010D	SPLP West and Method 6010D
S-41 [1]	5/14/2021	5-10	< 0.060	< 0.060
S-66 [1]	5/17/2021	5-10	< 0.060	< 0.060

Notes:

bgs: below ground surface

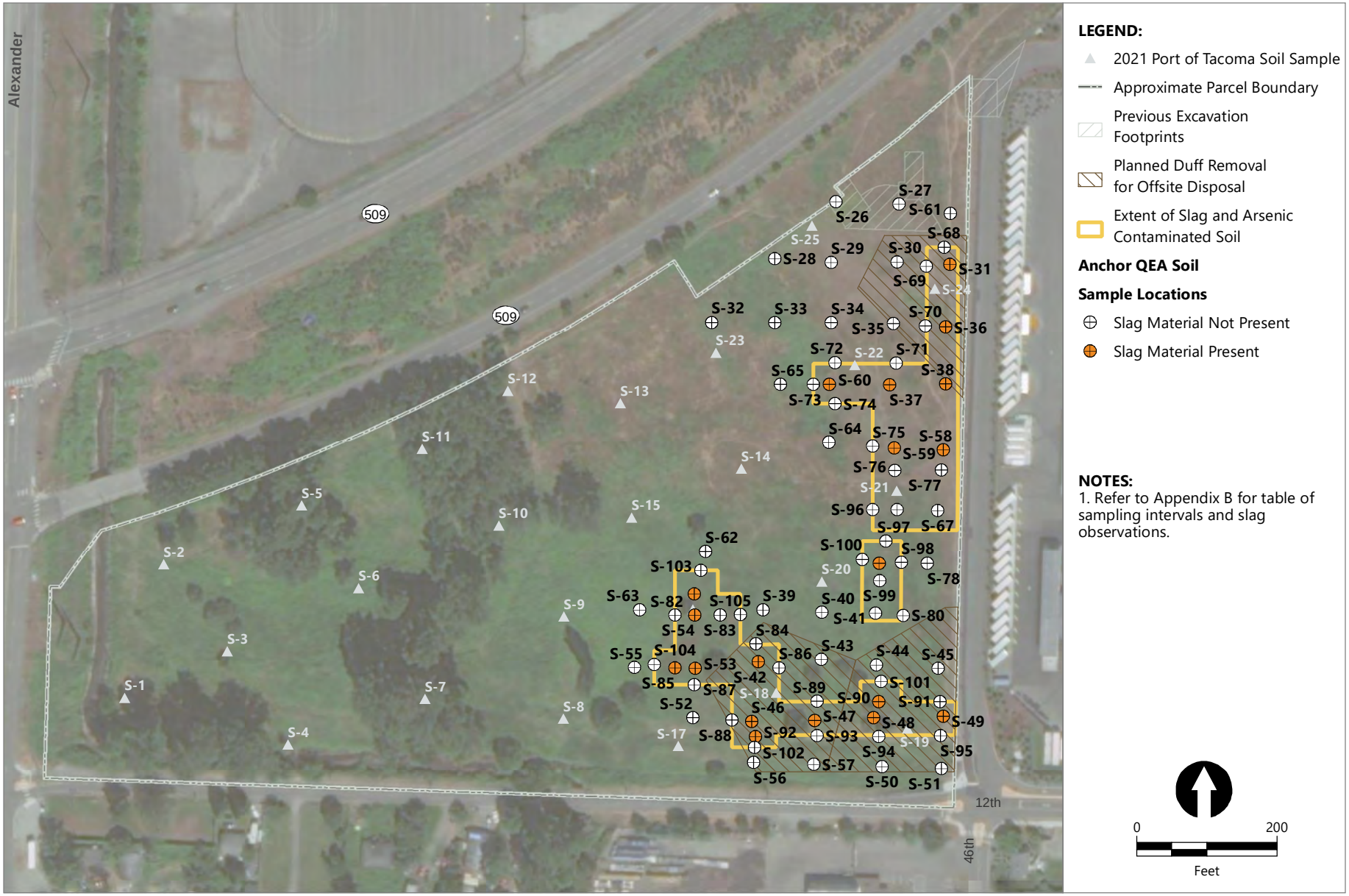
mg/L: milligram per liter

SPLP: synthetic precipitation leaching procedure (simulates exposure to rain water)

TCLP: toxicity characteristic leaching procedure (simulates exposure to municipal landfill leachate)

1. Soils represented by these samples will be removed for off-site landfill disposal.

Figures



Publish Date: 2021/06/17, 10:16 AM | User: jsfox
Filepath: \\orcas\GIS\Jobs\Port_of_Tacoma_0092\Parcel_14_Sampling\Maps\Parcel14_SoilInvestigation\DataReport\Figure1_PoT_Parcel14Soil_Investigation.mxd

ANCHOR QEA

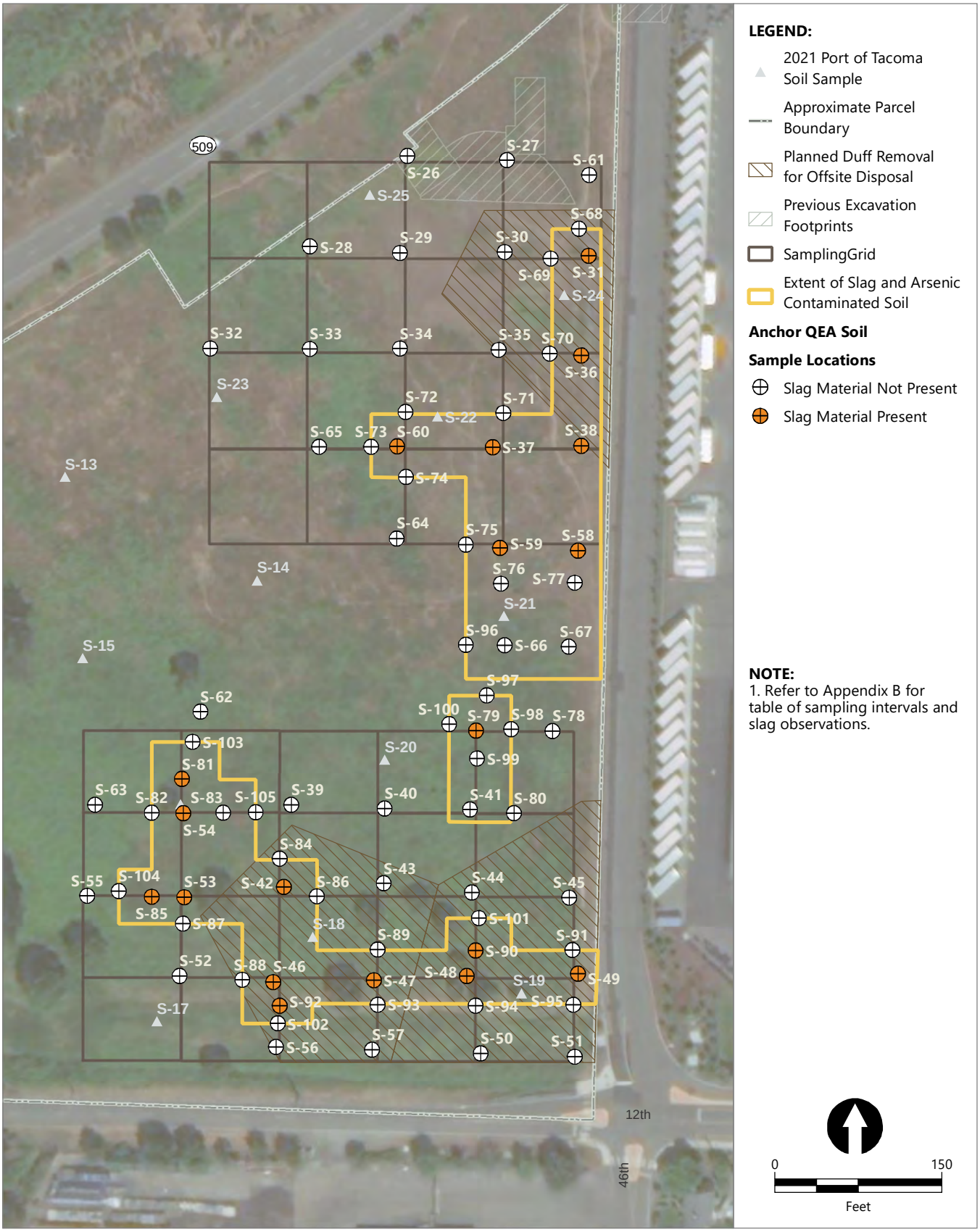
Figure 1
Site Overview
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma



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ANCHOR QEA

Figure 2
Extent of Arsenic Contamination in Duff Material
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma



LEGEND:

- 2021 Port of Tacoma Soil Sample
- Approximate Parcel Boundary
- Planned Duff Removal for Offsite Disposal
- Previous Excavation Footprints
- SamplingGrid
- Extent of Slag and Arsenic Contaminated Soil

Anchor QEA Soil

Sample Locations

- Slag Material Not Present
- Slag Material Present

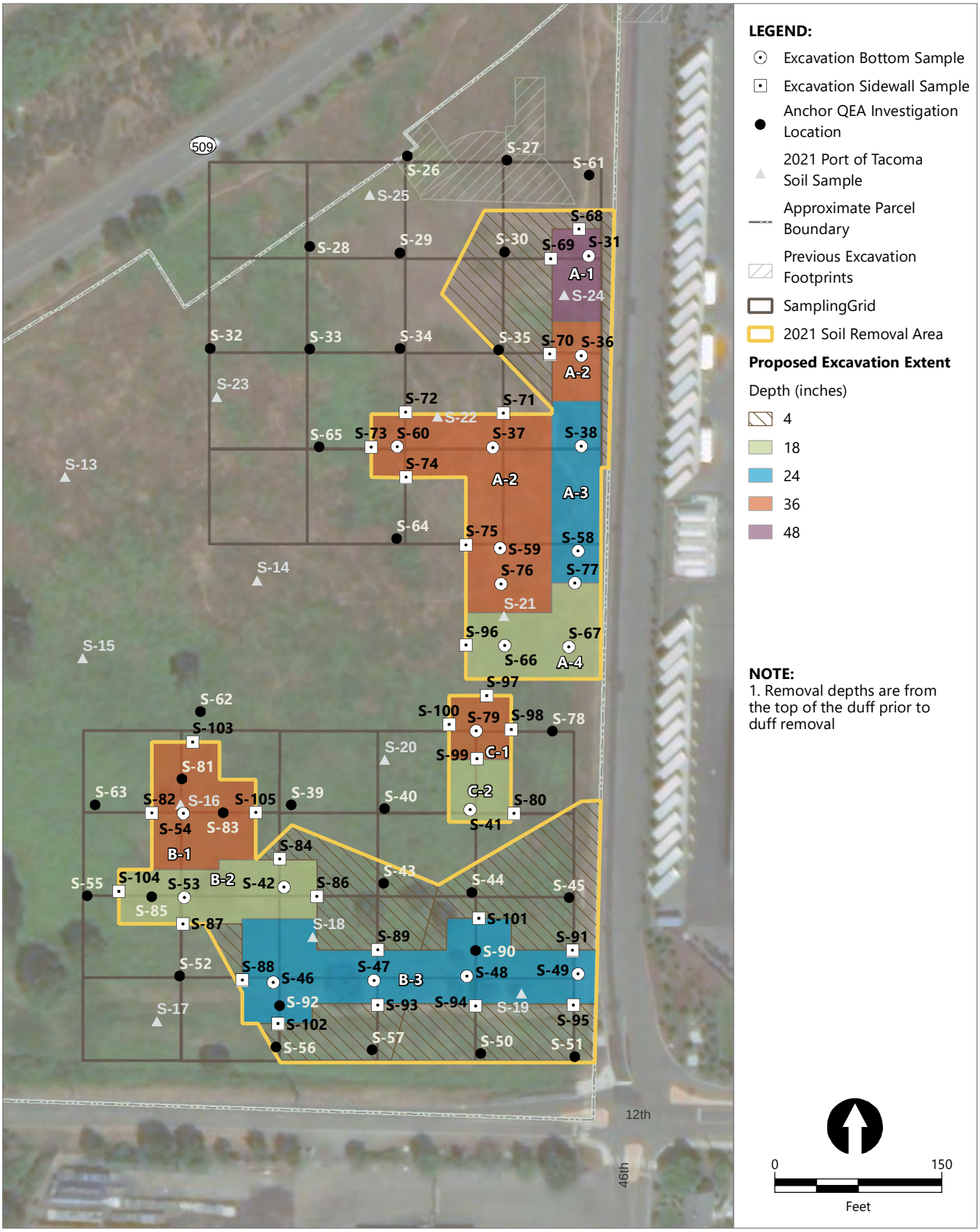
NOTE:
1. Refer to Appendix B for table of sampling intervals and slag observations.

0 150
Feet

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Figure 3
Extent of Slag and Arsenic Contamination in Soil
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma



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Filepath: \\orcas\GIS\Jobs\Port_of_Tacoma_0092\Parcel_14_Sampling\Maps\Parcel14_SoilInvestigation\DataReport\Figure4_PoT_Parcel14Soil_ExcavationDetails.mxd

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Figure 4
Proposed Cleanup Plan
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma

Appendix A
Analytical Testing Data from Port Duff and Soil Sampling Effort

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-1
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 1

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	58.1*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	34.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	6.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.027	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

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Marie Holt

Marie Holt, Customer Support & Proj. Manager
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Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-2
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 2

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	50.4*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	81	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-3
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 3

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	30.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	8.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.029	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-4
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 4

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	14.8	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	113.3*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	4.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	50.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	9.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.047	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-5
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 5

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	135.8*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	24.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.044	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-6
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 6

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	65.7*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	89	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-7
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 7

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	124.5*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	41.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	7.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.037	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	90	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-8
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 8

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	60.6*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	30.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	3.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	78	NWTPH-Dx

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Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-9
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 9

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	73.6*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	6.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	22.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	82	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-10
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 10

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	15.5	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Oil	284.8*	mg/Kg	NWTPH-Dx	DCW	04/07/2021
Total Arsenic	3.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	97	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-11
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 11

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	99.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	9.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.040	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	75	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-12
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 12

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	10.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	87	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-13
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 13

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	59.1*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	72	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-14
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 14

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	75.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	7.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	2.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	78	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-15
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 15

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	60.7*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	10.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	10.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	86	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-16
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 16

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	73.6*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	18.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	20.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	1.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	7.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	83	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-17
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 17

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	2.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	34.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	13.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.026	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	87	NWTPH-Dx

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P.O.#: 071389
Project: LWCHS
Client ID: S-18
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 18

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	59.8*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	34.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	19.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-19
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 19

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	64.3*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	45.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	19.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	9.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	80	NWTPH-Dx

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Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-20
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 20

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	18.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	12.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	11.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	5.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	72	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-21
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 21

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	<50.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	11.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	13.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	12.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	6.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

**Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	79	NWTPH-Dx

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-22
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 22

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	54.9*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	6.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	16.1	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	15.0	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	88	NWTPH-Dx

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Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-23
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 23

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	94.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	3.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	15.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	14.6	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	81	NWTPH-Dx

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Marie Holt

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04/15/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-24
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 24

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	217.0*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	52.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	16.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	0.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	16.8	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	18.2	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	0.027	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	83	NWTPH-Dx

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Marie Holt

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Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 071389
Project: LWCHS
Client ID: S-25
Sample Matrix: Soil
Date Sampled: 04/02/2021
Date Received: 04/02/2021
Spectra Project: 2021040037
Spectra Number: 25

Analyte	Result	Units	Method	Analyst	Date Analyzed
EPA 8270 PAH/PNA	**			SUB	04/12/2021
Diesel	<10.0	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Oil	106.2*	mg/Kg	NWTPH-Dx	DCW	04/08/2021
Total Arsenic	28.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Barium	14.4	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Cadmium	< 0.3	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Chromium	10.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Lead	8.9	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Selenium	< 2.5	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Silver	< 0.7	mg/Kg	SW846 6010D	SCJ	04/06/2021
Total Mercury	< 0.025	mg/Kg	SW846 7471B	SCJ	04/06/2021

* Sample contains heavy oil range organics that do not resemble heavy oil reference pattern. Sample was quantified using heavy oil range response. **Analyzed by Fremont Analytical. See complete report attached.

Surrogate	% Recovery	Method
p-Terphenyl	82	NWTPH-Dx

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a5/stb

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 1-10

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/5/2021 Date Analyzed: 4/7/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery
Diesel	125	111.1	89%

METHOD BLANK

Date Extracted: 4/5/2021 Date Analyzed: 4/7/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	91%

Surrogate Recovery Limits: 50 -150%

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 11-19

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery
Diesel	125	109.2	87%

METHOD BLANK

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	87%

Surrogate Recovery Limits: 50 -150%

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April 15, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra # 20-25

NWTPH-Dx ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Compound	Spike Amount Added	Spike Amount Found	Percent Recovery	Dup. Spike Amount Found	Percent Recovery	RPD
Diesel	125	105.4	84%	99.50	80%	5.8

METHOD BLANK

Date Extracted: 4/7/2021 Date Analyzed: 4/8/2021

Diesel	<10.0
Heavy Oil	<50.0
Surrogate Recovery:	
p-Terphenyl	85%

Surrogate Recovery Limits: 50 -150%

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4/6/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s 1-15
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Blank Result
Arsenic	< 2.5
Barium	< 0.2
Cadmium	< 0.3
Chromium	< 0.7
Lead	< 2.5
Selenium	< 2.5
Silver	< 0.7

Laboratory Control Sample (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Spike Addition	LCS Conc.	LCS %Rec
Arsenic	200.0	202.0	101.0
Barium	200.0	199.8	99.9
Cadmium	200.0	195.7	97.9
Chromium	200.0	204.3	102.2
Lead	200.0	194.1	97.1
Selenium	200.0	194.3	97.2
Silver	200.0	195.7	97.9

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021040037-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	6.0	200.0	202.5	98.3	202.1	98.1	0.2
Barium	68.4	200.0	218.3	75.0	216.0	73.8	1.5
Cadmium	0.0	200.0	194.0	97.0	190.8	95.4	1.7
Chromium	28.2	200.0	226.7	99.3	225.2	98.5	0.8
Lead	12.6	200.0	185.2	86.3	184.3	85.9	0.5
Selenium	0.0	200.0	189.1	94.6	189.0	94.5	0.1
Silver	0.0	200.0	171.8	85.9	171.5	85.8	0.2

Recovery Limits 75-125%
RPD Limit 20
Comments:

Spectra Laboratories

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4/6/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s 16-25
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Blank Result
Arsenic	< 2.5
Barium	< 0.2
Cadmium	< 0.3
Chromium	< 0.7
Lead	< 2.5
Selenium	< 2.5
Silver	< 0.7

Laboratory Control Sample (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

Element	Spike Addition	LCS Conc.	LCS %Rec
Arsenic	200.0	200.3	100.2
Barium	200.0	196.8	98.4
Cadmium	200.0	189.9	95.0
Chromium	200.0	208.3	104.2
Lead	200.0	191.9	96.0
Selenium	200.0	193.1	96.6
Silver	200.0	191.2	95.6

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021030651-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	0.0	200.0	202.5	101.3	202.1	101.1	0.2
Barium	18.2	200.0	218.3	100.1	216.0	98.9	1.2
Cadmium	0.0	200.0	194.0	97.0	190.8	95.4	1.7
Chromium	27.5	200.0	226.7	99.6	225.2	98.9	0.8
Lead	0.0	200.0	185.2	92.6	184.3	92.2	0.5
Selenium	0.0	200.0	189.1	94.6	189.0	94.5	0.1
Silver	0.0	200.0	171.8	85.9	171.5	85.8	0.2

Recovery Limits 75-125%
RPD Limit 20
Comments:

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April 6, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s: 1-15
Analyst: SCJ

QUALITY CONTROL RESULTS

Mercury by Cold Vapor - SW846 7471B - Soil/Solid

Method Blank (MBLK)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	CAS #	Result
Mercury	7439-97-6	< 0.025

Laboratory Control Spike (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	Spike Added	LCS Conc.	LCS %Rec
Mercury	2.0	2.05	102.5

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021030651-1

	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Mercury	0.32	2.0	2.08	88.3	2.09	88.4	0.2

Recovery Limits 75-125%
RPD Limit 20

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April 6, 2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021040037
Applies to Spectra #'s: 16-25
Analyst: SCJ

QUALITY CONTROL RESULTS

Mercury by Cold Vapor - SW846 7471B - Soil/Solid

Method Blank (MBLK)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	CAS #	Result
Mercury	7439-97-6	< 0.025

Laboratory Control Spike (LCS)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021

	Spike Added	LCS Conc.	LCS %Rec
Mercury	2.0	1.99	99.6

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 4/6/2021 Date Analyzed: 4/6/2021
Sample Spiked: 2021040037-16

	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Mercury	0.52	2.0	2.47	97.5	2.45	96.6	0.9

Recovery Limits 75-125%
RPD Limit 20

SPECTRA LABORATORIES

Fremont Analytical

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Seattle, WA 98103
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info@fremontanalytical.com

Spectra Laboratories
Marie Holt
2221 Ross Way
Tacoma, WA 98421

RE: 2021040037
Work Order Number: 2104069

April 15, 2021

Attention Marie Holt:

Fremont Analytical, Inc. received 25 sample(s) on 4/6/2021 for the analyses presented in the following report.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Spectra Laboratories
Project: 2021040037
Work Order: 2104069

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2104069-001	040037-1	04/02/2021 1:50 PM	04/06/2021 9:32 AM
2104069-002	040037-2	04/02/2021 1:39 PM	04/06/2021 9:32 AM
2104069-003	040037-3	04/02/2021 1:30 PM	04/06/2021 9:32 AM
2104069-004	040037-4	04/02/2021 1:20 PM	04/06/2021 9:32 AM
2104069-005	040037-5	04/02/2021 1:09 PM	04/06/2021 9:32 AM
2104069-006	040037-6	04/02/2021 12:55 PM	04/06/2021 9:32 AM
2104069-007	040037-7	04/02/2021 12:45 PM	04/06/2021 9:32 AM
2104069-008	040037-8	04/02/2021 12:37 PM	04/06/2021 9:32 AM
2104069-009	040037-9	04/02/2021 12:29 PM	04/06/2021 9:32 AM
2104069-010	040037-10	04/02/2021 12:20 PM	04/06/2021 9:32 AM
2104069-011	040037-11	04/02/2021 12:11 PM	04/06/2021 9:32 AM
2104069-012	040037-12	04/02/2021 12:02 PM	04/06/2021 9:32 AM
2104069-013	040037-13	04/02/2021 11:55 AM	04/06/2021 9:32 AM
2104069-014	040037-14	04/02/2021 11:45 AM	04/06/2021 9:32 AM
2104069-015	040037-15	04/02/2021 11:08 AM	04/06/2021 9:32 AM
2104069-016	040037-16	04/02/2021 10:59 AM	04/06/2021 9:32 AM
2104069-017	040037-17	04/02/2021 10:51 AM	04/06/2021 9:32 AM
2104069-018	040037-18	04/02/2021 10:42 AM	04/06/2021 9:32 AM
2104069-019	040037-19	04/02/2021 10:34 AM	04/06/2021 9:32 AM
2104069-020	040037-20	04/02/2021 10:25 AM	04/06/2021 9:32 AM
2104069-021	040037-21	04/02/2021 10:18 AM	04/06/2021 9:32 AM
2104069-022	040037-22	04/02/2021 10:07 AM	04/06/2021 9:32 AM
2104069-023	040037-23	04/02/2021 9:59 AM	04/06/2021 9:32 AM
2104069-024	040037-24	04/02/2021 9:36 AM	04/06/2021 9:32 AM
2104069-025	040037-25	04/02/2021 9:49 AM	04/06/2021 9:32 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Spectra Laboratories
Project: 2021040037

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-001
Client Sample ID: 040037-1

Collection Date: 4/2/2021 1:50:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
2-Methylnaphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
1-Methylnaphthalene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Acenaphthylene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Acenaphthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Fluorene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Phenanthrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Anthracene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Fluoranthene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Pyrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benz(a)anthracene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Chrysene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(b)fluoranthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(k)fluoranthene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(a)pyrene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Indeno(1,2,3-cd)pyrene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Dibenz(a,h)anthracene	ND	52.3		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Benzo(g,h,i)perylene	ND	26.1		µg/Kg-dry	1	4/12/2021 9:46:31 AM
Surr: 2-Fluorobiphenyl	51.9	19 - 135		%Rec	1	4/12/2021 9:46:31 AM
Surr: Terphenyl-d14 (surr)	85.3	42.9 - 156		%Rec	1	4/12/2021 9:46:31 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	29.0	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-002
Client Sample ID: **040037-2**

Collection Date: 4/2/2021 1:39:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
2-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
1-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Acenaphthylene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Acenaphthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Fluorene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Phenanthrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Anthracene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Fluoranthene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Pyrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benz(a)anthracene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Chrysene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(b)fluoranthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(k)fluoranthene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(a)pyrene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Indeno(1,2,3-cd)pyrene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Dibenz(a,h)anthracene	ND	46.6		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Benzo(g,h,i)perylene	ND	23.3		µg/Kg-dry	1	4/12/2021 10:07:40 AM
Surr: 2-Fluorobiphenyl	50.7	19 - 135		%Rec	1	4/12/2021 10:07:40 AM
Surr: Terphenyl-d14 (surr)	72.5	42.9 - 156		%Rec	1	4/12/2021 10:07:40 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	18.8	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-003
Client Sample ID: 040037-3

Collection Date: 4/2/2021 1:30:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
2-Methylnaphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
1-Methylnaphthalene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Acenaphthylene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Acenaphthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Fluorene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Phenanthrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Anthracene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Fluoranthene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Pyrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benz(a)anthracene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Chrysene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(b)fluoranthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(k)fluoranthene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(a)pyrene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Indeno(1,2,3-cd)pyrene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Dibenz(a,h)anthracene	ND	54.4		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Benzo(g,h,i)perylene	ND	27.2		µg/Kg-dry	1	4/12/2021 11:11:02 AM
Surr: 2-Fluorobiphenyl	50.0	19 - 135		%Rec	1	4/12/2021 11:11:02 AM
Surr: Terphenyl-d14 (surr)	71.3	42.9 - 156		%Rec	1	4/12/2021 11:11:02 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	31.2	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-004
Client Sample ID: 040037-4

Collection Date: 4/2/2021 1:20:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
2-Methylnaphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
1-Methylnaphthalene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Acenaphthylene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Acenaphthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Fluorene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Phenanthrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Anthracene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Fluoranthene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Pyrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benz(a)anthracene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Chrysene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(b)fluoranthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(k)fluoranthene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(a)pyrene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Indeno(1,2,3-cd)pyrene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Dibenz(a,h)anthracene	ND	48.8		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Benzo(g,h,i)perylene	ND	24.4		µg/Kg-dry	1	4/12/2021 11:32:11 AM
Surr: 2-Fluorobiphenyl	61.2	19 - 135		%Rec	1	4/12/2021 11:32:11 AM
Surr: Terphenyl-d14 (surr)	84.1	42.9 - 156		%Rec	1	4/12/2021 11:32:11 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	31.0	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 1:09:00 PM
Project: 2021040037
Lab ID: 2104069-005
Matrix: Soil
Client Sample ID: 040037-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
2-Methylnaphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
1-Methylnaphthalene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Acenaphthylene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Acenaphthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Fluorene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Phenanthrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Anthracene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Fluoranthene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Pyrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benz(a)anthracene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Chrysene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(b)fluoranthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(k)fluoranthene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(a)pyrene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Indeno(1,2,3-cd)pyrene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Dibenz(a,h)anthracene	ND	57.1		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Benzo(g,h,i)perylene	ND	28.5		µg/Kg-dry	1	4/12/2021 11:53:18 AM
Surr: 2-Fluorobiphenyl	49.8	19 - 135		%Rec	1	4/12/2021 11:53:18 AM
Surr: Terphenyl-d14 (surr)	86.7	42.9 - 156		%Rec	1	4/12/2021 11:53:18 AM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	30.1	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:55:00 PM
Project: 2021040037
Lab ID: 2104069-006
Matrix: Soil
Client Sample ID: 040037-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
2-Methylnaphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
1-Methylnaphthalene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Acenaphthylene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Acenaphthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Fluorene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Phenanthrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Fluoranthene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benz(a)anthracene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Chrysene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(b)fluoranthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(k)fluoranthene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(a)pyrene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Indeno(1,2,3-cd)pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Dibenz(a,h)anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Benzo(g,h,i)perylene	ND	21.7		µg/Kg-dry	1	4/12/2021 12:14:32 PM
Surr: 2-Fluorobiphenyl	55.4	19 - 135		%Rec	1	4/12/2021 12:14:32 PM
Surr: Terphenyl-d14 (surr)	80.2	42.9 - 156		%Rec	1	4/12/2021 12:14:32 PM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	22.9	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:45:00 PM
Project: 2021040037
Lab ID: 2104069-007
Matrix: Soil
Client Sample ID: 040037-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
2-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
1-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Acenaphthylene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Acenaphthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Fluorene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Phenanthrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Anthracene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Fluoranthene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Pyrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benz(a)anthracene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Chrysene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(b)fluoranthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(k)fluoranthene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(a)pyrene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Indeno(1,2,3-cd)pyrene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Dibenz(a,h)anthracene	ND	49.6		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Benzo(g,h,i)perylene	ND	24.8		µg/Kg-dry	1	4/12/2021 12:35:42 PM
Surr: 2-Fluorobiphenyl	52.0	19 - 135		%Rec	1	4/12/2021 12:35:42 PM
Surr: Terphenyl-d14 (surr)	77.7	42.9 - 156		%Rec	1	4/12/2021 12:35:42 PM
Sample Moisture (Percent Moisture)				Batch ID: R66438		Analyst: OK
Percent Moisture	26.9	0.500		wt%	1	4/8/2021 4:17:18 PM

Client: Spectra Laboratories
Collection Date: 4/2/2021 12:37:00 PM
Project: 2021040037
Lab ID: 2104069-008
Matrix: Soil
Client Sample ID: 040037-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
2-Methylnaphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
1-Methylnaphthalene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Acenaphthylene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Acenaphthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Fluorene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Phenanthrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Fluoranthene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benz(a)anthracene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Chrysene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(b)fluoranthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(k)fluoranthene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(a)pyrene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Indeno(1,2,3-cd)pyrene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Dibenz(a,h)anthracene	ND	43.3		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Benzo(g,h,i)perylene	ND	21.6		µg/Kg-dry	1	4/12/2021 12:56:55 PM
Surr: 2-Fluorobiphenyl	49.4	19 - 135		%Rec	1	4/12/2021 12:56:55 PM
Surr: Terphenyl-d14 (surr)	58.9	42.9 - 156		%Rec	1	4/12/2021 12:56:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.7	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-009
Client Sample ID: 040037-9

Collection Date: 4/2/2021 12:29:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
2-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
1-Methylnaphthalene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Acenaphthylene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Acenaphthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Fluorene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Phenanthrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Anthracene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Fluoranthene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Pyrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benz(a)anthracene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Chrysene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(b)fluoranthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(k)fluoranthene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(a)pyrene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Indeno(1,2,3-cd)pyrene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Dibenz(a,h)anthracene	ND	46.6		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Benzo(g,h,i)perylene	ND	23.3		µg/Kg-dry	1	4/14/2021 10:39:25 AM
Surr: 2-Fluorobiphenyl	48.2	19 - 135		%Rec	1	4/14/2021 10:39:25 AM
Surr: Terphenyl-d14 (surr)	68.1	42.9 - 156		%Rec	1	4/14/2021 10:39:25 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-010
Client Sample ID: 040037-10

Collection Date: 4/2/2021 12:20:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
2-Methylnaphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
1-Methylnaphthalene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Acenaphthylene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Acenaphthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Fluorene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Phenanthrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Anthracene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Fluoranthene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Pyrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benz(a)anthracene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Chrysene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(b)fluoranthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(k)fluoranthene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(a)pyrene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Indeno(1,2,3-cd)pyrene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Dibenz(a,h)anthracene	ND	47.5		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Benzo(g,h,i)perylene	ND	23.8		µg/Kg-dry	1	4/14/2021 11:00:51 AM
Surr: 2-Fluorobiphenyl	65.8	19 - 135		%Rec	1	4/14/2021 11:00:51 AM
Surr: Terphenyl-d14 (surr)	86.7	42.9 - 156		%Rec	1	4/14/2021 11:00:51 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-011
Client Sample ID: 040037-11

Collection Date: 4/2/2021 12:11:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
2-Methylnaphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
1-Methylnaphthalene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Acenaphthylene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Acenaphthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Fluorene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Phenanthrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Anthracene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Fluoranthene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Pyrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benz(a)anthracene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Chrysene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(b)fluoranthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(k)fluoranthene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(a)pyrene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Indeno(1,2,3-cd)pyrene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Dibenz(a,h)anthracene	ND	43.7		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Benzo(g,h,i)perylene	ND	21.8		µg/Kg-dry	1	4/14/2021 11:22:11 AM
Surr: 2-Fluorobiphenyl	70.0	19 - 135		%Rec	1	4/14/2021 11:22:11 AM
Surr: Terphenyl-d14 (surr)	91.6	42.9 - 156		%Rec	1	4/14/2021 11:22:11 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	20.5	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-012
Client Sample ID: 040037-12

Collection Date: 4/2/2021 12:02:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
2-Methylnaphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
1-Methylnaphthalene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Acenaphthylene	127	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Acenaphthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Fluorene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Phenanthrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Anthracene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Fluoranthene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Pyrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benz(a)anthracene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Chrysene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(b)fluoranthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(k)fluoranthene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(a)pyrene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Indeno(1,2,3-cd)pyrene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Dibenz(a,h)anthracene	ND	39.7		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Benzo(g,h,i)perylene	ND	19.9		µg/Kg-dry	1	4/14/2021 11:43:36 AM
Surr: 2-Fluorobiphenyl	63.8	19 - 135		%Rec	1	4/14/2021 11:43:36 AM
Surr: Terphenyl-d14 (surr)	84.0	42.9 - 156		%Rec	1	4/14/2021 11:43:36 AM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	15.2	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-013
Client Sample ID: 040037-13

Collection Date: 4/2/2021 11:55:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
2-Methylnaphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
1-Methylnaphthalene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Acenaphthylene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Acenaphthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Fluorene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Phenanthrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Anthracene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Fluoranthene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Pyrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benz(a)anthracene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Chrysene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(b)fluoranthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(k)fluoranthene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(a)pyrene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Indeno(1,2,3-cd)pyrene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Dibenz(a,h)anthracene	ND	48.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Benzo(g,h,i)perylene	ND	24.0		µg/Kg-dry	1	4/14/2021 12:05:00 PM
Surr: 2-Fluorobiphenyl	66.8	19 - 135		%Rec	1	4/14/2021 12:05:00 PM
Surr: Terphenyl-d14 (surr)	94.1	42.9 - 156		%Rec	1	4/14/2021 12:05:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-014
Client Sample ID: **040037-14**

Collection Date: 4/2/2021 11:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
2-Methylnaphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
1-Methylnaphthalene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Acenaphthylene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Acenaphthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Fluorene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Phenanthrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Anthracene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Fluoranthene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Pyrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benz(a)anthracene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Chrysene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(b)fluoranthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(k)fluoranthene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(a)pyrene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Indeno(1,2,3-cd)pyrene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Dibenz(a,h)anthracene	ND	52.5		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Benzo(g,h,i)perylene	ND	26.3		µg/Kg-dry	1	4/14/2021 12:26:22 PM
Surr: 2-Fluorobiphenyl	69.0	19 - 135		%Rec	1	4/14/2021 12:26:22 PM
Surr: Terphenyl-d14 (surr)	89.0	42.9 - 156		%Rec	1	4/14/2021 12:26:22 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-015
Client Sample ID: 040037-15

Collection Date: 4/2/2021 11:08:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
2-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
1-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Acenaphthylene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Acenaphthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Fluorene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Phenanthrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Anthracene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Fluoranthene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Pyrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benz(a)anthracene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Chrysene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(b)fluoranthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(k)fluoranthene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(a)pyrene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Indeno(1,2,3-cd)pyrene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Dibenz(a,h)anthracene	ND	44.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Benzo(g,h,i)perylene	ND	22.0		µg/Kg-dry	1	4/14/2021 3:18:49 PM
Surr: 2-Fluorobiphenyl	63.2	19 - 135		%Rec	1	4/14/2021 3:18:49 PM
Surr: Terphenyl-d14 (surr)	77.1	42.9 - 156		%Rec	1	4/14/2021 3:18:49 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	17.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-016
Client Sample ID: 040037-16

Collection Date: 4/2/2021 10:59:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
2-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
1-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Acenaphthylene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Acenaphthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Fluorene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Phenanthrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Anthracene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Fluoranthene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Pyrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benz(a)anthracene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Chrysene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(b)fluoranthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(k)fluoranthene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(a)pyrene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Indeno(1,2,3-cd)pyrene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Dibenz(a,h)anthracene	ND	51.2		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Benzo(g,h,i)perylene	ND	25.6		µg/Kg-dry	1	4/14/2021 3:40:24 PM
Surr: 2-Fluorobiphenyl	67.9	19 - 135		%Rec	1	4/14/2021 3:40:24 PM
Surr: Terphenyl-d14 (surr)	78.3	42.9 - 156		%Rec	1	4/14/2021 3:40:24 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.6	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-017
Client Sample ID: 040037-17

Collection Date: 4/2/2021 10:51:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
2-Methylnaphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
1-Methylnaphthalene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Acenaphthylene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Acenaphthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Fluorene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Phenanthrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Anthracene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Fluoranthene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Pyrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benz(a)anthracene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Chrysene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(b)fluoranthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(k)fluoranthene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(a)pyrene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Indeno(1,2,3-cd)pyrene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Dibenz(a,h)anthracene	ND	51.7		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Benzo(g,h,i)perylene	ND	25.8		µg/Kg-dry	1	4/14/2021 4:02:03 PM
Surr: 2-Fluorobiphenyl	61.4	19 - 135		%Rec	1	4/14/2021 4:02:03 PM
Surr: Terphenyl-d14 (surr)	76.0	42.9 - 156		%Rec	1	4/14/2021 4:02:03 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.7	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-018
Client Sample ID: 040037-18

Collection Date: 4/2/2021 10:42:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
2-Methylnaphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
1-Methylnaphthalene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Acenaphthylene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Acenaphthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Fluorene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Phenanthrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Anthracene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Fluoranthene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Pyrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benz(a)anthracene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Chrysene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(b)fluoranthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(k)fluoranthene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(a)pyrene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Indeno(1,2,3-cd)pyrene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Dibenz(a,h)anthracene	ND	49.2		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Benzo(g,h,i)perylene	ND	24.6		µg/Kg-dry	1	4/14/2021 4:23:43 PM
Surr: 2-Fluorobiphenyl	66.3	19 - 135		%Rec	1	4/14/2021 4:23:43 PM
Surr: Terphenyl-d14 (surr)	86.1	42.9 - 156		%Rec	1	4/14/2021 4:23:43 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	23.8	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-019
Client Sample ID: **040037-19**

Collection Date: 4/2/2021 10:34:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
2-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
1-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Acenaphthylene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Acenaphthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Fluorene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Phenanthrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Anthracene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Fluoranthene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Pyrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benz(a)anthracene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Chrysene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(b)fluoranthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(k)fluoranthene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(a)pyrene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Benzo(g,h,i)perylene	ND	22.3		µg/Kg-dry	1	4/14/2021 4:45:25 PM
Surr: 2-Fluorobiphenyl	60.7	19 - 135		%Rec	1	4/14/2021 4:45:25 PM
Surr: Terphenyl-d14 (surr)	78.3	42.9 - 156		%Rec	1	4/14/2021 4:45:25 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	24.4	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-020
Client Sample ID: 040037-20

Collection Date: 4/2/2021 10:25:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31907		Analyst: SB
Naphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
2-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
1-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Acenaphthylene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Acenaphthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Fluorene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Phenanthrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Anthracene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Fluoranthene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Pyrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benz(a)anthracene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Chrysene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(b)fluoranthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(k)fluoranthene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(a)pyrene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Indeno(1,2,3-cd)pyrene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Dibenz(a,h)anthracene	ND	45.2		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Benzo(g,h,i)perylene	ND	22.6		µg/Kg-dry	1	4/14/2021 5:07:08 PM
Surr: 2-Fluorobiphenyl	49.2	19 - 135		%Rec	1	4/14/2021 5:07:08 PM
Surr: Terphenyl-d14 (surr)	58.5	42.9 - 156		%Rec	1	4/14/2021 5:07:08 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	22.1	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-021
Client Sample ID: **040037-21**

Collection Date: 4/2/2021 10:18:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
2-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
1-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Acenaphthylene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Acenaphthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Fluorene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Phenanthrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Anthracene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Fluoranthene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Pyrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benz(a)anthracene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Chrysene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(b)fluoranthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(k)fluoranthene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(a)pyrene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Indeno(1,2,3-cd)pyrene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Dibenz(a,h)anthracene	ND	49.7		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Benzo(g,h,i)perylene	ND	24.8		µg/Kg-dry	1	4/9/2021 2:02:00 PM
Surr: 2-Fluorobiphenyl	81.9	19 - 135		%Rec	1	4/9/2021 2:02:00 PM
Surr: Terphenyl-d14 (surr)	91.5	42.9 - 156		%Rec	1	4/9/2021 2:02:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	21.1	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-022
Client Sample ID: **040037-22**

Collection Date: 4/2/2021 10:07:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
2-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
1-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Acenaphthylene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Acenaphthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Fluorene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Phenanthrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Anthracene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Fluoranthene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Pyrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benz(a)anthracene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Chrysene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(b)fluoranthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(k)fluoranthene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(a)pyrene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Indeno(1,2,3-cd)pyrene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Dibenz(a,h)anthracene	ND	45.8		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Benzo(g,h,i)perylene	ND	22.9		µg/Kg-dry	1	4/9/2021 2:23:17 PM
Surr: 2-Fluorobiphenyl	79.5	19 - 135		%Rec	1	4/9/2021 2:23:17 PM
Surr: Terphenyl-d14 (surr)	88.6	42.9 - 156		%Rec	1	4/9/2021 2:23:17 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	21.5	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-023
Client Sample ID: 040037-23

Collection Date: 4/2/2021 9:59:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
2-Methylnaphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
1-Methylnaphthalene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Acenaphthylene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Acenaphthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Fluorene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Phenanthrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Anthracene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Fluoranthene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Pyrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benz(a)anthracene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Chrysene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(b)fluoranthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(k)fluoranthene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(a)pyrene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Indeno(1,2,3-cd)pyrene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Dibenz(a,h)anthracene	ND	40.7		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Benzo(g,h,i)perylene	ND	20.4		µg/Kg-dry	1	4/9/2021 3:27:13 PM
Surr: 2-Fluorobiphenyl	79.5	19 - 135		%Rec	1	4/9/2021 3:27:13 PM
Surr: Terphenyl-d14 (surr)	89.3	42.9 - 156		%Rec	1	4/9/2021 3:27:13 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	15.2	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-024
Client Sample ID: 040037-24

Collection Date: 4/2/2021 9:36:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
2-Methylnaphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
1-Methylnaphthalene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Acenaphthylene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Acenaphthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Fluorene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Phenanthrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Anthracene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Fluoranthene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Pyrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benz(a)anthracene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Chrysene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(b)fluoranthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(k)fluoranthene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(a)pyrene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Indeno(1,2,3-cd)pyrene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Dibenz(a,h)anthracene	ND	54.8		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Benzo(g,h,i)perylene	ND	27.4		µg/Kg-dry	1	4/9/2021 3:48:31 PM
Surr: 2-Fluorobiphenyl	65.0	19 - 135		%Rec	1	4/9/2021 3:48:31 PM
Surr: Terphenyl-d14 (surr)	73.5	42.9 - 156		%Rec	1	4/9/2021 3:48:31 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	29.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Client: Spectra Laboratories
Project: 2021040037
Lab ID: 2104069-025
Client Sample ID: 040037-25

Collection Date: 4/2/2021 9:49:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 31923		Analyst: SB
Naphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
2-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
1-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Acenaphthylene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Acenaphthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Fluorene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Phenanthrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Anthracene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Fluoranthene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Pyrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benz(a)anthracene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Chrysene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(b)fluoranthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(k)fluoranthene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(a)pyrene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Indeno(1,2,3-cd)pyrene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Dibenz(a,h)anthracene	ND	46.9		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Benzo(g,h,i)perylene	ND	23.4		µg/Kg-dry	1	4/9/2021 4:09:55 PM
Surr: 2-Fluorobiphenyl	77.6	19 - 135		%Rec	1	4/9/2021 4:09:55 PM
Surr: Terphenyl-d14 (surr)	90.2	42.9 - 156		%Rec	1	4/9/2021 4:09:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R66439		Analyst: OK
Percent Moisture	25.0	0.500		wt%	1	4/8/2021 4:27:38 PM

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-31923**	SampType: **MBLK**			Units: **µg/Kg**		Prep Date: **4/8/2021**		RunNo: **66487**	
Client ID: **MBLKS**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337765**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									
Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	965		1,000		96.5	19	135				
Surr: Terphenyl-d14 (surr)	1,080		1,000		108	42.9	156				

Sample ID: **LCS-31923**	SampType: **LCS**			Units: **µg/Kg**		Prep Date: **4/8/2021**		RunNo: **66487**	
Client ID: **LCSS**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337766**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,840	20.0	2,000	0	91.8	62.7	127				
2-Methylnaphthalene	1,860	20.0	2,000	0	93.1	62.7	132				
1-Methylnaphthalene	1,870	20.0	2,000	0	93.4	61.4	131				
Acenaphthylene	1,850	20.0	2,000	0	92.6	62	132				
Acenaphthene	1,810	20.0	2,000	0	90.7	59.2	132				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-31923** SampType: **LCS** Units: **µg/Kg** Prep Date: **4/8/2021** RunNo: **66487**
Client ID: **LCSS** Batch ID: **31923** Analysis Date: **4/9/2021** SeqNo: **1337766**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,890	20.0	2,000	0	94.6	59.1	136				
Phenanthrene	1,950	40.0	2,000	0	97.4	54.1	139				
Anthracene	1,920	40.0	2,000	0	96.1	55.5	136				
Fluoranthene	1,930	40.0	2,000	0	96.4	52.8	149				
Pyrene	1,870	40.0	2,000	0	93.6	53.6	146				
Benz(a)anthracene	1,920	20.0	2,000	0	96.1	49.7	153				
Chrysene	1,980	40.0	2,000	0	99.1	52.6	147				
Benzo(b)fluoranthene	2,110	20.0	2,000	0	106	50.6	151				
Benzo(k)fluoranthene	1,990	20.0	2,000	0	99.7	47.1	155				
Benzo(a)pyrene	2,250	20.0	2,000	0	113	48.3	169				
Indeno(1,2,3-cd)pyrene	1,960	40.0	2,000	0	98.0	52.3	145				
Dibenz(a,h)anthracene	1,990	40.0	2,000	0	99.7	53	144				
Benzo(g,h,i)perylene	1,790	20.0	2,000	0	89.7	49.7	144				
Surr: 2-Fluorobiphenyl	954		1,000		95.4	19	135				
Surr: Terphenyl-d14 (surr)	1,020		1,000		102	42.9	156				

Sample ID: **2104069-022AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **4/8/2021** RunNo: **66487**
Client ID: **040037-22** Batch ID: **31923** Analysis Date: **4/9/2021** SeqNo: **1337769**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,700	22.1	2,210	0	76.7	28.7	139				
2-Methylnaphthalene	1,740	22.1	2,210	0	78.8	43.5	130				
1-Methylnaphthalene	1,750	22.1	2,210	0	79.2	42.6	127				
Acenaphthylene	1,720	22.1	2,210	0	77.7	45.3	129				
Acenaphthene	1,680	22.1	2,210	0	76.0	45.1	123				
Fluorene	1,770	22.1	2,210	0	80.0	41.6	128				
Phenanthrene	1,810	44.2	2,210	0	81.8	24.2	142				
Anthracene	1,780	44.2	2,210	0	80.6	33.1	143				
Fluoranthene	1,800	44.2	2,210	0	81.4	35.5	147				
Pyrene	1,730	44.2	2,210	0	78.3	38.3	141				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-022AMS**	SampType: **MS**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**			
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337769**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,820	22.1	2,210	0	82.3	42.5	145				
Chrysene	1,810	44.2	2,210	0	81.9	39.7	134				
Benzo(b)fluoranthene	1,870	22.1	2,210	0	84.6	29.9	152				
Benzo(k)fluoranthene	1,900	22.1	2,210	0	86.2	33.2	143.5				
Benzo(a)pyrene	2,060	22.1	2,210	0	93.1	38.2	156				
Indeno(1,2,3-cd)pyrene	1,800	44.2	2,210	0	81.4	41.4	128				
Dibenz(a,h)anthracene	1,840	44.2	2,210	0	83.3	40.4	129				
Benzo(g,h,i)perylene	1,640	22.1	2,210	0	74.1	34.2	131				
Surr: 2-Fluorobiphenyl	880		1,105		79.6	19	135				
Surr: Terphenyl-d14 (surr)	959		1,105		86.7	42.9	156				

Sample ID: **2104069-022AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**			
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337770**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,900	24.5	2,453	0	77.5	28.7	139	1,695	11.4	30	
2-Methylnaphthalene	1,930	24.5	2,453	0	78.6	43.5	130	1,743	10.1	30	
1-Methylnaphthalene	1,950	24.5	2,453	0	79.5	42.6	127	1,751	10.7	30	
Acenaphthylene	1,940	24.5	2,453	0	79.0	45.3	129	1,718	12.1	30	
Acenaphthene	1,870	24.5	2,453	0	76.2	45.1	123	1,679	10.7	30	
Fluorene	1,950	24.5	2,453	0	79.4	41.6	128	1,768	9.69	30	
Phenanthrene	2,040	49.1	2,453	0	83.2	24.2	142	1,808	12.1	30	
Anthracene	1,980	49.1	2,453	0	80.7	33.1	143	1,781	10.5	30	
Fluoranthene	1,990	49.1	2,453	0	80.9	35.5	147	1,799	9.83	30	
Pyrene	1,920	49.1	2,453	0	78.1	38.3	141	1,730	10.2	30	
Benz(a)anthracene	2,000	24.5	2,453	0	81.4	42.5	145	1,818	9.31	30	
Chrysene	2,020	49.1	2,453	0	82.3	39.7	134	1,810	11.0	30	
Benzo(b)fluoranthene	1,940	24.5	2,453	0	78.9	29.9	152	1,871	3.40	30	
Benzo(k)fluoranthene	2,330	24.5	2,453	0	94.8	33.2	143.5	1,904	19.9	30	
Benzo(a)pyrene	2,330	24.5	2,453	0	95.0	38.2	156	2,058	12.4	30	

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-022AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/8/2021**		RunNo: **66487**		
Client ID: **040037-22**	Batch ID: **31923**					Analysis Date: **4/9/2021**		SeqNo: **1337770**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	2,030	49.1	2,453	0	82.8	41.4	128	1,800	12.1	30	
Dibenz(a,h)anthracene	2,070	49.1	2,453	0	84.5	40.4	129	1,842	11.8	30	
Benzo(g,h,i)perylene	1,850	24.5	2,453	0	75.3	34.2	131	1,637	12.0	30	
Surr: 2-Fluorobiphenyl	971		1,227		79.1	19	135		0		
Surr: Terphenyl-d14 (surr)	1,040		1,227		84.4	42.9	156		0		

Sample ID: **MB-31907**	SampType: **MBLK**			Units: **µg/Kg**		Prep Date: **4/7/2021**		RunNo: **66567**		
Client ID: **MBLKS**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339951**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									
Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	446		1,000		44.6	19	135				
Surr: Terphenyl-d14 (surr)	955		1,000		95.5	42.9	156				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-31907**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **MBLKS**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339951**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **LCS-31907**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **LCSS**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339952**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,630	20.0	2,000	0	81.6	62.7	127				
2-Methylnaphthalene	1,710	20.0	2,000	0	85.4	62.7	132				
1-Methylnaphthalene	1,710	20.0	2,000	0	85.6	61.4	131				
Acenaphthylene	1,720	20.0	2,000	0	86.2	62	132				
Acenaphthene	1,650	20.0	2,000	0	82.7	59.2	132				
Fluorene	1,750	20.0	2,000	0	87.5	59.1	136				
Phenanthrene	1,760	40.0	2,000	0	88.0	54.1	139				
Anthracene	1,760	40.0	2,000	0	87.8	55.5	136				
Fluoranthene	1,800	40.0	2,000	0	90.1	52.8	149				
Pyrene	1,740	40.0	2,000	0	86.9	53.6	146				
Benz(a)anthracene	1,820	20.0	2,000	0	91.0	49.7	153				
Chrysene	1,690	40.0	2,000	0	84.4	52.6	147				
Benzo(b)fluoranthene	1,900	20.0	2,000	0	95.1	50.6	151				
Benzo(k)fluoranthene	1,840	20.0	2,000	0	91.9	47.1	155				
Benzo(a)pyrene	2,070	20.0	2,000	0	103	48.3	169				
Indeno(1,2,3-cd)pyrene	1,860	40.0	2,000	0	93.1	52.3	145				
Dibenz(a,h)anthracene	1,900	40.0	2,000	0	94.9	53	144				
Benzo(g,h,i)perylene	1,730	20.0	2,000	0	86.7	49.7	144				
Surr: 2-Fluorobiphenyl	705		1,000		70.5	19	135				
Surr: Terphenyl-d14 (surr)	997		1,000		99.7	42.9	156				

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-002AMS**	SampType: **MS**			Units: **µg/Kg-dry**		Prep Date: **4/7/2021**		RunNo: **66567**			
Client ID: **040037-2**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339955**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,380	22.1	2,205	0	62.7	28.7	139				
2-Methylnaphthalene	1,440	22.1	2,205	0	65.5	43.5	130				
1-Methylnaphthalene	1,460	22.1	2,205	0	66.1	42.6	127				
Acenaphthylene	1,460	22.1	2,205	0	66.4	45.3	129				
Acenaphthene	1,390	22.1	2,205	0	63.1	45.1	123				
Fluorene	1,470	22.1	2,205	0	66.6	41.6	128				
Phenanthrene	1,500	44.1	2,205	0	68.0	24.2	142				
Anthracene	1,460	44.1	2,205	0	66.3	33.1	143				
Fluoranthene	1,500	44.1	2,205	0	68.0	35.5	147				
Pyrene	1,440	44.1	2,205	0	65.5	38.3	141				
Benz(a)anthracene	1,500	22.1	2,205	8.569	67.4	42.5	145				
Chrysene	1,470	44.1	2,205	0	66.7	39.7	134				
Benzo(b)fluoranthene	1,460	22.1	2,205	7.051	66.0	29.9	152				
Benzo(k)fluoranthene	1,650	22.1	2,205	3.454	74.8	33.2	143.5				
Benzo(a)pyrene	1,710	22.1	2,205	2.791	77.5	38.2	156				
Indeno(1,2,3-cd)pyrene	1,510	44.1	2,205	0	68.3	41.4	128				
Dibenz(a,h)anthracene	1,550	44.1	2,205	0	70.1	40.4	129				
Benzo(g,h,i)perylene	1,390	22.1	2,205	3.520	62.8	34.2	131				
Surr: 2-Fluorobiphenyl	642		1,103		58.2	19	135				
Surr: Terphenyl-d14 (surr)	812		1,103		73.7	42.9	156				

Sample ID: **2104069-002AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **4/7/2021**		RunNo: **66567**			
Client ID: **040037-2**	Batch ID: **31907**					Analysis Date: **4/12/2021**		SeqNo: **1339956**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,360	23.5	2,346	0	58.0	28.7	139	1,384	1.65	30	
2-Methylnaphthalene	1,430	23.5	2,346	0	61.1	43.5	130	1,445	0.768	30	
1-Methylnaphthalene	1,450	23.5	2,346	0	61.9	42.6	127	1,459	0.364	30	
Acenaphthylene	1,460	23.5	2,346	0	62.3	45.3	129	1,464	0.150	30	
Acenaphthene	1,430	23.5	2,346	0	60.8	45.1	123	1,391	2.54	30	

Work Order: 2104069
CLIENT: Spectra Laboratories
Project: 2021040037

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2104069-002AMSD**	SampType: **MSD**	Units: **µg/Kg-dry**	Prep Date: **4/7/2021**	RunNo: **66567**
Client ID: **040037-2**	Batch ID: **31907**		Analysis Date: **4/12/2021**	SeqNo: **1339956**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,490	23.5	2,346	0	63.6	41.6	128	1,469	1.63	30	
Phenanthrene	1,480	46.9	2,346	0	63.1	24.2	142	1,499	1.27	30	
Anthracene	1,450	46.9	2,346	0	61.9	33.1	143	1,461	0.661	30	
Fluoranthene	1,520	46.9	2,346	0	64.7	35.5	147	1,499	1.31	30	
Pyrene	1,460	46.9	2,346	0	62.3	38.3	141	1,444	1.32	30	
Benz(a)anthracene	1,540	23.5	2,346	8.569	65.3	42.5	145	1,496	2.91	30	
Chrysene	1,480	46.9	2,346	0	63.2	39.7	134	1,471	0.784	30	
Benzo(b)fluoranthene	1,680	23.5	2,346	7.051	71.3	29.9	152	1,463	13.7	30	
Benzo(k)fluoranthene	1,500	23.5	2,346	3.454	63.7	33.2	143.5	1,652	9.72	30	
Benzo(a)pyrene	1,770	23.5	2,346	2.791	75.2	38.2	156	1,712	3.19	30	
Indeno(1,2,3-cd)pyrene	1,560	46.9	2,346	0	66.5	41.4	128	1,507	3.52	30	
Dibenz(a,h)anthracene	1,590	46.9	2,346	0	67.9	40.4	129	1,545	3.13	30	
Benzo(g,h,i)perylene	1,430	23.5	2,346	3.520	61.0	34.2	131	1,388	3.30	30	
Surr: 2-Fluorobiphenyl	562		1,173		47.9	19	135		0		
Surr: Terphenyl-d14 (surr)	758		1,173		64.6	42.9	156		0		

Fremont Analytical

Sample Log-In Check List

Client Name:	**SPECTR**	Work Order Number:	**2104069**
Logged by:	**Gabrielle Coeuille**	Date Received:	**4/6/2021 9:32:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	UPS		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☑	No ☐	NA ☐

Person Notified:	Marie Holt	Date:	4/6/2021
By Whom:	Gabrielle Coeuille	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirmation of method.		
Client Instructions:	8270-SIM.		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SPECTRA Laboratories

Turnaround Time Requested

STANDARD [X] RUSH [ ] SPECIAL * Lab Approval Required

Return Samples Yes ___ No X

CHAIN of CUSTODY

2104009 Page 1 of 3

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT 2021040037

CONTACT Marie Holt

SUBBED TO Fremont Analytical

PHONE 253-272-4850

e-MAIL: marieh@spectra-lab.com

PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9078	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-1	04/02/21	1350	soil	1											x													
2	040037-2	04/02/21	1339	soil	1											x													
3	040037-3	04/02/21	1330	soil	1											x													
4	040037-4	04/02/21	1320	soil	1											x													
5	040037-5	04/02/21	1309	soil	1											x													
6	040037-6	04/02/21	1255	soil	1											x													
7	040037-7	04/02/21	1245	soil	1											x													
8	040037-8	04/02/21	1237	soil	1											x													
9	040037-9	04/02/21	1229	soil	1											x													
0	040037-10	04/02/21	1220	soil	1											x													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers ___	RELINQUISHED BY	SB	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? ___ Intact? ___	RECEIVED BY	Claire Anderson	Claire Anderson	FAI	4/6/21	0932
Temp at receipt ___ deg C.	RELINQUISHED BY					
Received within hold time? ___	RECEIVED BY					
Proper sample containers? ___	RELINQUISHED BY					
Received via ___ Cooler? ___	RECEIVED BY					

Payment Terms Net 30 days Past due accounts subject to 1% per month interest Client agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection. Any disputes shall be governed by the laws of Pierce Co. WA

SPECTRA Laboratories

Turnaround Time Requested
STANDARD [X] RUSH [ ] SPECIAL ____ *
Lab Approval Required

Return Samples Yes ____ No X

CHAIN of CUSTODY

2104069

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT 2021040037

CONTACT Marie Holt

SUBBED TO. Fremont Analytical

PHONE 253-272-4850

e-MAIL. marieh@spectra-lab.com

PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SG1 HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9076	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-11	04/02/21	1211	soil	1											x													
2	040037-12	04/02/21	1202	soil	1											x													
3	040037-13	04/02/21	1155	soil	1											x													
4	040037-14	04/02/21	1145	soil	1											x													
5	040037-15	04/02/21	1108	soil	1											x													
6	040037-16	04/02/21	1059	soil	1											x													
7	040037-17	04/02/21	1051	soil	1											x													
8	040037-18	04/02/21	1042	soil	1											x													
9	040037-19	04/02/21	1034	soil	1											x													
0	040037-20	04/02/21	1025	soil	1											x													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers _____	RELINQUISHED BY	[signature]	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? _____ Intact?_____	RECEIVED BY	[signature]	[illegible]	[illegible]	4/6/21	1032
Temp at receipt _____ deg. C.	RELINQUISHED BY					
Received within hold time? _____	RECEIVED BY					
Proper sample containers? _____	RELINQUISHED BY					
Received via _____ Cooler? ____	RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1% per month interest. Client or agrees to pay all collection costs including reasonable attorney's fees and all costs of collection regardless of whether suit is filed in Pierce or Kitsap County.

SPECTRA Laboratories

Turnaround Time Requested
STANDARD [X] RUSH [ ] SPECIAL ____ *
Lab Approval Required

Return Samples Yes ____ No X

CHAIN of CUSTODY

1040019
Page 3 of 3

CLIENT Spectra Laboratories ADDRESS 2221 Ross Way Tacoma, WA ZIP 98421 ADDRESS CHANGE [ ]

PROJECT: 2021040037
CONTACT: Marie Holt
SUBBED TO. Fremont Analytical
PHONE 253-272-4850
e-MAIL: marieh@spectra-lab com
PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX 9076	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)	Fecal Coliform - MPN or MF	Hg by 1631E
1	040037-21	04/02/21	1018	soil	1											x													
2	040037-22	04/02/21	1007	soil	1											x													
3	040037-23	04/02/21	0959	soil	1											x													
4	040037-24	04/02/21	0936	soil	1											x													
5	040037-25	04/02/21	0949	soil	1											x													
6																													
7																													
8																													
9																													
0																													

SPECIAL INSTRUCTIONS/COMMENTS * see attached quote and TAT

Sample Receipt (lab use only)		SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Total # of containers ____	RELINQUISHED BY	SB	S.Beck	Spectra-Tacoma	4/5/2021	1500
COC seals present? ____ Intact? ____	RECEIVED BY	Claire Anderson	Claire Anderson	FAT	4/6/21	0933
Temp at receipt ____ deg. C	RELINQUISHED BY					
Received within hold time? ____	RECEIVED BY					
Proper sample containers? ____	RELINQUISHED BY					
Received via ____ Cooler? ____	RECEIVED BY					

Payment terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other legal collection expenses. Jurisdiction for disputes shall be in Pierce County, WA unless

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421
(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 2021040037

Return Samples: Y (N) Page 1 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT: LWCITS

CONTACT: Sasser

SAMPLED BY: Sasser

PHONE: 253-383-9439 FAX:

e-MAIL: ssasser@portoftacoma.com Prefer FAX or e-MAIL ☐

PURCHASE ORDER # 071389

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)		TCLP METALS RCRA 8	TCLP METALS (SPECIFY)		OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)							
1	S-1	04/02/21	1350	soil	2					X						X		X																		
2	S-2		1339																																	
3	S-3		1330																																	
4	S-4		1320																																	
5	S-5		1309																																	
6	S-6		1255																																	
7	S-7		1245																																	
8	S-8		1237																																	
9	S-9		1229																																	
10	S-10		1220																																	

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanleight Sasser	Stanleight Sasser	PORT	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	1457
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

SPECTRA Laboratories

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www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 202104003 7

Return Samples: Y (N) Page 2 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT:

CONTACT:

SAMPLED BY:

PHONE: FAX:

e-MAIL: Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-11	04/02	1211	soil	2					X						X		X										
2	S-12		1202																									
3	S-13		1155																									
4	S-14		1145																									
5	S-15		1108																									
6	S-16		1059																									
7	S-17		1051																									
8	S-18		1042																									
9	S-19		1034																									
10	S-20		1025																									

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanley H. Sessa	Stanley H. Sessa	Port	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	14:57
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

SPECTRA Laboratories

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(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 2021040037

Return Samples: Y (N) Page 3 of 3 STANDARD ✓ RUSH ☐

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT:

CONTACT:

SAMPLED BY:

PHONE: FAX:

e-MAIL: Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-21	04/02/21	1018	Soil	2					X						X		X										
2	S-22	↓	1007	↓	↓					↓						↓		↓										
3	S-23		0959																								
4	S-24		0936																								
5	S-25	↓	0949	↓	↓					↓						↓		↓										
6																												
7																												
8																												
9																												
10																												

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanley H. Sessen	Stanley H. Sessen	Port	04/02	1457
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-2-21	14:57
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

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05/12/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401
Attn: Stanley Sasser

P.O.#: 71389
Project: LWCHS
Sample Matrix: Soil
Date Sampled: 05/10/2021
Date Received: 05/10/2021
Spectra Project: 2021050231
Rush

Client ID	Spectra #	Analyte	Result	Units	Method	Analyzed
S-18 5-10"	1	Total Arsenic	10.8	mg/Kg	SW846 6010D	05/12/2021
S-18 11-22"	2	Total Arsenic	15.4	mg/Kg	SW846 6010D	05/12/2021
S-19 5-10"	3	Total Arsenic	21.5	mg/Kg	SW846 6010D	05/12/2021
S-19 11-22"	4	Total Arsenic	40.0	mg/Kg	SW846 6010D	05/12/2021
S-24 5-10"	5	Total Arsenic	23.8	mg/Kg	SW846 6010D	05/12/2021
S-24 11-22"	6	Total Arsenic	28.0	mg/Kg	SW846 6010D	05/12/2021
S-25 5-10"	7	Total Arsenic	16.8	mg/Kg	SW846 6010D	05/12/2021
S-25 11-22"	8	Total Arsenic	5.8	mg/Kg	SW846 6010D	05/12/2021

SPECTRA LABORATORIES

Marie Holt

Marie Holt, Customer Support & Proj. Manager
a7/scj

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5/12/2021

Port of Tacoma
PO Box 1837
Tacoma, WA 98401

Units: mg/Kg
Spectra Project: 2021050231
Applies to Spectra #'s 1-8
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 5/12/2021 Date Analyzed: 5/12/2021

Element	Blank Result
Arsenic	< 2.5

Laboratory Control Sample (LCS)

Date Digested: 5/12/2021 Date Analyzed: 5/12/2021

Element	Spike Added	LCS Conc.	LCS %Rec
Arsenic	200.0	189.4	94.7

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 5/12/2021 Date Analyzed: 5/12/2021
Sample Spiked: 2021050231-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	21.7	200.0	205.9	92.1	205.4	91.9	0.3

Comment:
Recovery Limits 75-125%
RPD Limit 20

SPECTRA LABORATORIES

Communications Record

Internal Document

Client:	Port of Tacoma
Client Contact:	Stanley Sasser
Date:	5-11-21
Time:	11:08
Spectra Contact:	Marie Holt
Project:	LWCHS
Spectra Project:	2021050231

Stanley called and asked us to change the ID's

Change sample ID's containing 10-22" to 11-22"

He didn't sample the 10" layer twice.

SPECTRA Laboratories

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(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:
-Need this as quick as possible
-Arsenic only 3 days

CHAIN OF CUSTODY

SPECTRA PROJECT #: 2021050231

Return Samples: Y (N) Page 1 of 1 STANDARD ☐ RUSH ☑

CLIENT: Port of Tacoma ADDRESS: ADDRESS CHANGE ☐

PROJECT: LWCITS

CONTACT: Stanley Sesser

SAMPLED BY: Sesser

PHONE: 253-393-9439 FAX:

e-MAIL: ssesser@portoftacoma.com Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER # 71389

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	Arsenic	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-18 5-10"	May 10/21	1140	Soil																								
2	S-18 10-22"		1130																									
3	S-19 5-10"		1215																									
4	S-19 10-22"		1220																									
5	S-24 5-10"		1015																									
6	S-24 10-22"		1010																									
7	S-25 5-10"		1045																									
8	S-25 10-22"		1040																									
9																												
10																												

LAB USE ONLY

T = 12.6

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Stanley Sesser	Stanley Sesser	Port	5/10/21	1356
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	5-10-21	1358
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Laboratories, LLC*

Appendix B
Observations from Anchor QEA Test Pit and Hand Auger Investigations

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-26	5/14/2021	1176440.6	703977.8	N	--	0-5	P14-S-26-0-5-2021		X	
						5-10	P14-S-26-5-10-2021	X		
						30-36	P14-S-26-30-36-2021		X	
P-14-S-27	5/14/2021	1176530.4	703974.0	N	--	0-5	P14-S-27-0-5-2021		X	
						5-10	P14-S-27-5-10-2021	X		
						30-36	P14-S-27-30-36-2021		X	
P-14-S-28	5/14/2021	1176353.1	703896.5	N	--	0-5	P14-S-28-0-5-2021		X	
						5-10	P14-S-28-5-10-2021	X		
						30-36	P14-S-28-30-36-2021		X	
P-14-S-29	5/14/2021	1176434.0	703891.0	N	--	0-5	P14-S-29-0-5-2021		X	
						5-10	P14-S-29-5-10-2021	X		
						30-36	P14-S-29-30-36-2021		X	
P-14-S-30	5/14/2021	1176528.0	703891.8	N	--	0-5	P14-S-30-0-5-2021		X	
						5-10	P14-S-30-5-10-2021	X		
						30-36	P14-S-30-30-36-2021		X	
P-14-S-31	5/14/2021	1176603.5	703888.5	Y	5 - 36	0-5	P14-S-31-0-5-2021		X	
						48-54	P14-S-31-48-54-2021	X		
P-14-S-32	5/14/2021	1176263.5	703805.2	N	--	0-5	P14-S-32-0-5-2021		X	
						5-10	P14-S-32-5-10-2021	X		
						30-36	P14-S-32-30-36-2021		X	

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-33	5/14/2021	1176353.2	703804.6	N	--	0-5	P14-S-33-0-5-2021		X	
						5-10	P14-S-33-5-10-2021	X		
						30-36	P14-S-33-30-36-2021		X	
P-14-S-34	5/14/2021	1176433.9	703804.9	N	--	0-5	P14-S-34-0-5-2021		X	
						5-10	P14-S-34-5-10-2021	X		
						30-36	P14-S-34-30-36-2021		X	
P-14-S-35	5/14/2021	1176522.8	703803.8	N	--	0-5	P14-S-35-0-5-2021		X	
						5-10	P14-S-35-5-10-2021	X		
						30-36	P14-S-35-30-36-2021		X	
P-14-S-36	5/14/2021	1176597.1	703799.0	Y	12 - 24	0-5	P14-S-36-0-5-2021		X	
						36-42	P14-S-36-36-42-2021	X		
						42-48	P14-S-36-42-48-2021		X	
P-14-S-37	5/14/2021	1176517.2	703716.5	Y	12 - 24	0-5	P14-S-37-0-5-2021		X	
						36-42	P14-S-37-36-42-2021	X		
						42-45	P14-S-37-42-45-2021		X	
P-14-S-38	5/14/2021	1176597.1	703717.5	Y	5 - 16	0-5	P14-S-38-0-5-2021		X	
						28-34	P14-S-38-28-34-2021	X		
						34-40	P14-S-38-34-40-2021		X	
P-14-S-39	5/14/2021	1176336.7	703395.0	N	--	0-5	P14-S-39-0-5-2021		X	
						5-10	P14-S-39-5-10-2021	X		
						30-36	P14-S-39-30-36-2021		X	
P-14-S-40	5/14/2021	1176420.3	703391.8	N	--	0-5	P14-S-40-0-5-2021		X	
						5-10	P14-S-40-5-10-2021	X		
						30-36	P14-S-40-30-36-2021		X	

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-41	5/14/2021	1176496.9	703390.7	N	--	0-5	P14-S-41-0-5-2021		X	
						5-10	P14-S-41-5-10-2021	X		
						18-24	P14-S-41-18-24-2021	X		
						30-36	P14-S-41-30-36-2021		X	X
	6/1/2021	1176496.9	703390.7	N	--	18-24	P14-S-41-18-24-2021	X		
P-14-S-42	5/14/2021	1176329.7	703321.2	Y	6	0-5	P14-S-42-0-5-2021		X	
						18-24	P14-S-42-18-24-2021	X		
						30-36	P14-S-42-30-36-2021		X	
P-14-S-43	5/14/2021	1176419.6	703324.5	N	--	0-5	P14-S-43-0-5-2021		X	
						5-10	P14-S-43-5-10-2021	X		
						30-36	P14-S-43-30-36-2021		X	
P-14-S-44	5/14/2021	1176498.7	703316.5	N	--	0-5	P14-S-44-0-5-2021		X	
						5-10	P14-S-44-5-10-2021	X		
						30-36	P14-S-44-30-36-2021		X	
P-14-S-45	5/14/2021	1176586.2	703311.6	N	--	0-5	P14-S-45-0-5-2021		X	
						5-10	P14-S-45-5-10-2021	X		
						30-36	P14-S-45-30-36-2021		X	
P-14-S-46	5/14/2021	1176320.4	703236.0	Y	7 - 12	0-5	P14-S-46-0-5-2021		X	
						24-30	P14-S-46-24-30-2021	X		
						30-36	P14-S-46-30-36-2021		X	
P-14-S-47	5/14/2021	1176410.6	703237.6	Y	5 - 14	0-5	P14-S-47-0-5-2021		X	
						26-32	P14-S-47-26-32-2021	X		
						32-38	P14-S-47-32-38-2021		X	

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-48	5/14/2021	1176494.2	703241.2	Y	5 - 16	0-5	P14-S-48-0-5-2021		X	
						28-34	P14-S-48-28-34-2021	X		
						34-40	P14-S-48-34-40-2021		X	
P-14-S-49	5/14/2021	1176593.9	703243.3	Y	5 - 12	0-5	P14-S-49-0-5-2021		X	
						24-30	P14-S-49-24-30-2021	X		
						30-36	P14-S-49-30-36-2021		X	
P-14-S-50	5/14/2021	1176506.6	703171.6	N	--	0-5	P14-S-50-0-5-2021		X	
						5-10	P14-S-50-5-10-2021	X		
						30-36	P14-S-50-30-36-2021		X	
P-14-S-51	5/14/2021	1176591.2	703169.0	N	--	0-5	P14-S-51-0-5-2021		X	
						5-10	P14-S-51-5-10-2021	X		
						30-36	P14-S-51-30-36-2021		X	
P-14-S-52	5/14/2021	1176236.2	703241.3	N	--	0-5	P14-S-52-0-5-2021		X	
						5-10	P14-S-52-5-10-2021	X		
						30-36	P14-S-52-30-36-2021		X	
P-14-S-53	5/14/2021	1176240.1	703312.1	Y	3 - 7	0-5	P14-S-53-0-5-2021		X	
						19-25	P14-S-53-19-25-2021	X		
						30-36	P14-S-53-30-36-2021		X	
P-14-S-54	5/17/2021	1176239.4	703387.6	Y	17-29	0-5	P14-S-54-0-5-2021		X	
						29-41	P14-S-54-29-41-2021		X	
						41-47	P14-S-54-41-47-2021	X		
P-14-S-55	5/17/2021	1176153.0	703313.2	N	--	0-5	P14-S-55-0-5-2021		X	
						5-10	P14-S-55-5-10-2021	X		
						30-36	P14-S-55-30-36-2021		X	

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-56	5/17/2021	1176322.8	703177.5	N	--	0-5	P14-S-56-0-5-2021		X	
						5-10	P14-S-56-5-10-2021	X		
						30-36	P14-S-56-30-36-2021		X	
P-14-S-57	5/17/2021	1176409.1	703174.8	N	--	0-5	P14-S-57-0-5-2021		X	
						5-10	P14-S-57-5-10-2021	X		
						30-36	P14-S-57-30-36-2021		X	
P-14-S-58	5/17/2021	1176594.1	703623.5	Y	10-12	0-5	P14-S-58-0-5-2021		X	
						24-30	P14-S-58-24-30-2021	X		
						30-36	P14-S-58-30-36-2021		X	
P-14-S-59	5/17/2021	1176524.1	703626.0	Y	27-29	0-5	P14-S-59-0-5-2021		X	
						35-41	P14-S-59-35-41-2021		X	
						41-47	P14-S-59-41-47-2021	X		
P-14-S-60	5/17/2021	1176431.5	703716.9	Y	20-30	0-5	P14-S-60-0-5-2021		X	
						32-40	P14-S-60-32-40-2021		X	
						40-46	P14-S-60-40-46-2021	X		
P-14-S-61	5/17/2021	1176604.2	703960.9	N	--	0-5	P14-S-61-0-5-2021		X	
						5-10	P14-S-61-5-10-2021	X		
						30-36	P14-S-61-30-36-2021		X	
P-14-S-62	5/17/2021	1176254.8	703478.7	N	--	0-5	P14-S-62-0-5-2021		X	
						5-10	P14-S-62-5-10-2021	X		
						30-36	P14-S-62-30-36-2021		X	
P-14-S-63	5/17/2021	1176160.4	703395.2	N	--	0-5	P14-S-63-0-5-2021		X	
						5-10	P14-S-63-5-10-2021	X		
						30-36	P14-S-63-30-36-2021		X	

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-64	5/17/2021	1176430.9	703634.3	N	--	0-5	P14-S-64-0-5-2021		X	
						5-10	P14-S-64-5-10-2021	X		
						30-36	P14-S-64-30-36-2021		X	
P-14-S-65	5/17/2021	1176361.3	703716.7	N	--	0-5	P14-S-65-0-5-2021		X	
						5-10	P14-S-65-5-10-2021	X		
						30-36	P14-S-65-30-36-2021		X	
P-14-S-66	5/17/2021	1176528.3	703538.5	N	--	0-5	P14-S-66-0-5-2021		X	
						5-10	P14-S-66-5-10-2021	X		
						30-36	P14-S-66-30-36-2021		X	X
	6/1/2021	1176528.3	703538.5	N	--	18-24	P14-S-66-18-24-2021	X		
P-14-S-67	5/17/2021	1176585.5	703537.0	N	--	0-5	P14-S-67-0-5-2021		X	
						5-10	P14-S-67-5-10-2021	X		
						30-36	P14-S-67-30-36-2021		X	X
	6/1/2021	1176585.5	703537.0	N	--	18-24	P14-S-67-18-24-2021	X		
P-14-S-68	6/1/2021	1176594.953	703912.6445	N	--	27	P14-S-68-27-2021	X		
P-14-S-69	6/1/2021	1176569.408	703885.8082	N	--	27	P14-S-69-27-2021	X		
P-14-S-70	6/1/2021	1176568.583	703800.539	N	--	21	P14-S-70-21-2021	X		
P-14-S-71	6/1/2021	1176526.928	703746.9299	N	--	21	P14-S-71-21-2021	X		
P-14-S-72	6/1/2021	1176439.038	703747.7537	N	--	21	P14-S-72-21-2021	X		
P-14-S-73	6/1/2021	1176408.125	703716.8233	N	--	21	P14-S-73-21-2021	X		
P-14-S-74	6/1/2021	1176439.24	703689.3883	N	--	21	P14-S-74-21-2021	X		
P-14-S-75	6/1/2021	1176493.015	703628.7415	N	--	21	P14-S-75-21-2021	X		
P-14-S-76	6/1/2021	1176524.92	703593.6963	N	--	21	P14-S-76-21-2021	X		
P-14-S-77	6/1/2021	1176591.256	703594.6421	N	--	18	P14-S-77-18-2021	X		

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-78	6/1/2021	1176571.057	703461.4157	N	--	5-10	P14-S-78-5-10-2021	X		
						18-24	P14-S-78-18-24-2021	X		
						30-36	P14-S-78-30-36-2021		X	
P-14-S-79	6/1/2021	1176502.391	703461.5624	Y	12-24	5-10	P14-S-79-5-10-2021		X	
						18-24	P14-S-79-18-24-2021		X	
						30-36	P14-S-79-30-36-2021		X	
						36-40	P14-S-79-36-40-2021	X		
P-14-S-80	6/1/2021	1176536.452	703387.326	N	--	5-10	P14-S-80-5-10-2021	X		
						18-24	P14-S-80-18-24-2021	X		
						30-36	P14-S-80-30-36-2021		X	
P-14-S-81	6/1/2021	1176238.235	703418.2193	Y	5-34	---	No Sample (Stepped out)	---		
P-14-S-82	6/1/2021	1176211.035	703387.737	N	--	21	P14-S-82-21-2021	X		
P-14-S-83	6/1/2021	1176275.299	703387.841	N	--	21	P14-S-83-21-2021	X		
P-14-S-84	6/1/2021	1176326.199	703346.5459	N	--	12	P14-S-84-12-2021	X		
P-14-S-85	6/1/2021	1176211.071	703312.4747	Y	18	---	No Sample (Stepped out)	---		
P-14-S-86	6/1/2021	1176359.605	703312.7697	N	--	12	P14-S-86-12-2021	X		
P-14-S-87	6/1/2021	1176238.813	703288.4777	N	--	12	P14-S-87-12-2021	X		
P-14-S-88	6/1/2021	1176292.311	703237.7764	N	--	15	P14-S-88-15-2021	X		
P-14-S-89	6/1/2021	1176414.059	703264.9866	N	--	15	P14-S-89-15-2021	X		
P-14-S-90	6/1/2021	1176502.079	703264.1612	Y	5	---	No Sample (Stepped out)	---		
P-14-S-91	6/1/2021	1176589.179	703264.503	N	--	15	P14-S-91-15-2021	X		
P-14-S-92	6/1/2021	1176325.939	703214.7341	Y	8-20	---	No Sample (Stepped out)	---		
P-14-S-93	6/1/2021	1176413.962	703215.5566	N	--	15	P14-S-93-15-2021	X		
P-14-S-94	6/1/2021	1176501.981	703214.7328	N	--	15	P14-S-94-15-2021	X		

Table B-1
Anchor QEA Field Observations and Testing Summary Table

Station	Date	X	Y	Slag (Y/N)	Slag Depth (inches bgs)	Sample Depth (inches bgs)	Sample ID	Test	Archive	Archive Triggered
P-14-S-95	6/1/2021	1176590.004	703215.5553	N	--	15	P14-S-95-15-2021	X		
P-14-S-96	6/1/2021	1176493.039	703538.5707	N	--	18	P14-S-96-18-2021	X		
P-14-S-97	6/1/2021	1176511.991	703493.3313	N	--	5-10	P14-S-97-5-10-2021	X		
						18-24	P14-S-97-18-24-2021	X		
						30-36	P14-S-97-30-36-2021		X	
P-14-S-98	6/1/2021	1176534.081	703463.1274	N	--	5-10	P14-S-98-5-10-2021	X		
						18-24	P14-S-98-18-24-2021	X		
						30-36	P14-S-98-30-36-2021		X	
P-14-S-99	6/1/2021	1176503.334	703436.5867	N	--	5-10	P14-S-99-5-10-2021	X		
						18-24	P14-S-99-18-24-2021	X		
						30-36	P14-S-99-30-36-2021		X	
P-14-S-100	6/1/2021	1176477.989	703467.3237	N	--	5-10	P14-S-100-5-10-2021	X		
						18-24	P14-S-100-18-24-2021	X		
						30-36	P14-S-100-30-36-2021		X	
P-14-S-101	6/1/2021	1176504.887	703293.2137	N	--	15	P14-S-101-15-2021	X		
P-14-S-102	6/1/2021	1176324.274	703198.775	N	--	15	P14-S-102-15-2021	X		
P-14-S-103	6/1/2021	1176247.81	703451.6933	N	--	21	P14-S-103-21-2021	X		
P-14-S-104	6/1/2021	1176181.638	703317.5047	N	--	12	P14-S-104-12-2021	X		
P-14-S-105	6/11/2021	1176304.421	703388.279	N	--	21	P14-S-105-21-2021	X		

Notes:

Coordinates are in NAD 83 Washington State Plane South U.S. Survey feet

bgs: below ground surface

Sample exceeds MTCA Method A for arsenic (20 mg/kg)

Appendix C
Analytical Testing Data from Anchor QEA Soil Sampling Efforts

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103094-1
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

M. Elaine Walker

Authorized for release by:
5/19/2021 2:41:57 PM
Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

Designee for

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 61
Chronicle 63
Certification Summary 73
Sample Summary 74
Chain of Custody 75
Receipt Checklists 84

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Job ID: 580-103094-1

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103094-1

Receipt
The samples were received on 5/15/2021 11:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.7º C, 5.6º C, 5.7º C and 12.4º C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: 580-103094-13, -14, -15, -49, -50, -53, -54, -55, -56, -57, -58, -59, -60, -61, -62, -63, -64, -65, -66, & -67. Cooler #2 was out of temp. at 12.4C. Temperature was taken of all samples and they were all out of temp. Some of these samples were archived and not analyzed per the COC.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Qualifiers

Metals

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-27-5-10-2021
Date Collected: 05/14/21 16:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.1		0.1		%			05/17/21 17:02	1
Percent Moisture	9.9		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-27-5-10-2021
Date Collected: 05/14/21 16:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-1
Matrix: Solid
Percent Solids: 90.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	18		0.46		mg/Kg	☼	05/17/21 13:45	05/18/21 20:31	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-26-5-10-2021
Date Collected: 05/14/21 16:21
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-5
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.4		0.1		%			05/17/21 17:02	1
Percent Moisture	16.6		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-26-5-10-2021
Date Collected: 05/14/21 16:21
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-5
Matrix: Solid
Percent Solids: 83.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.53		mg/Kg	☼	05/17/21 13:45	05/18/21 21:13	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-29-5-10-2021
Date Collected: 05/14/21 16:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-9
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.7		0.1		%			05/17/21 17:02	1
Percent Moisture	6.3		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-29-5-10-2021
Date Collected: 05/14/21 16:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-9
Matrix: Solid
Percent Solids: 93.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.0		0.37		mg/Kg	☼	05/17/21 13:45	05/18/21 21:16	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-30-5-10-2021
Date Collected: 05/14/21 15:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-13
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.2		0.1		%			05/17/21 17:02	1
Percent Moisture	6.8		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-30-5-10-2021
Date Collected: 05/14/21 15:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-13
Matrix: Solid
Percent Solids: 93.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.34		mg/Kg	☼	05/17/21 13:45	05/18/21 21:20	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-35-5-10-2021
Date Collected: 05/14/21 16:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-14
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.8		0.1		%			05/17/21 17:02	1
Percent Moisture	10.2		0.1		%			05/17/21 17:02	1

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-35-5-10-2021
Date Collected: 05/14/21 16:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-14
Matrix: Solid
Percent Solids: 89.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		0.33		mg/Kg	☼	05/17/21 13:45	05/18/21 21:24	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-31-48-54-2021
Date Collected: 05/14/21 15:41
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-15
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72.4		0.1		%			05/17/21 17:02	1
Percent Moisture	27.6		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-31-48-54-2021
Lab Sample ID: 580-103094-15
Date Collected: 05/14/21 15:41
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 72.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.6		0.52		mg/Kg	☼	05/17/21 13:45	05/18/21 21:28	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-42-18-26-2021
Date Collected: 05/14/21 11:51
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-22
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.5		0.1		%			05/17/21 17:02	1
Percent Moisture	16.5		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-42-18-26-2021
Date Collected: 05/14/21 11:51
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-22
Matrix: Solid
Percent Solids: 83.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.35		mg/Kg	☼	05/17/21 13:45	05/18/21 21:32	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-39-5-10-2021
Date Collected: 05/14/21 11:41
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-23
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.4		0.1		%			05/17/21 17:02	1
Percent Moisture	18.6		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-39-5-10-2021
Date Collected: 05/14/21 11:41
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-23
Matrix: Solid
Percent Solids: 81.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		0.44		mg/Kg	☼	05/17/21 13:45	05/18/21 21:36	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-50-5-10-2021
Date Collected: 05/14/21 10:36
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-24
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.9		0.1		%			05/17/21 17:02	1
Percent Moisture	22.1		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-50-5-10-2021
Date Collected: 05/14/21 10:36
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-24
Matrix: Solid
Percent Solids: 77.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		0.42		mg/Kg	☼	05/17/21 13:45	05/18/21 21:39	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-47-26-32-2021
Date Collected: 05/14/21 10:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-28
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1		%			05/17/21 17:02	1
Percent Moisture	20.3		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-47-26-32-2021
Date Collected: 05/14/21 10:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-28
Matrix: Solid
Percent Solids: 79.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6		0.38		mg/Kg	☼	05/17/21 13:45	05/18/21 21:43	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-51-5-10-2021
Date Collected: 05/14/21 09:31
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-34
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.1		0.1		%			05/17/21 17:02	1
Percent Moisture	21.9		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-51-5-10-2021
Date Collected: 05/14/21 09:31
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-34
Matrix: Solid
Percent Solids: 78.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.7		0.60		mg/Kg	☼	05/17/21 13:45	05/18/21 20:27	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-46-26-36-2021
Date Collected: 05/14/21 10:51
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-36
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.8		0.1		%			05/17/21 17:02	1
Percent Moisture	6.2		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-46-26-36-2021
Date Collected: 05/14/21 10:51
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-36
Matrix: Solid
Percent Solids: 93.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.38		mg/Kg	☼	05/17/21 13:45	05/18/21 22:02	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-48-28-34-2021
Date Collected: 05/14/21 10:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-40
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72.7		0.1		%			05/17/21 17:02	1
Percent Moisture	27.3		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-48-28-34-2021
Date Collected: 05/14/21 10:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-40
Matrix: Solid
Percent Solids: 72.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.2		0.43		mg/Kg	☼	05/17/21 13:45	05/18/21 22:06	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-49-24-30-2021
Date Collected: 05/14/21 10:31
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-41
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.9		0.1		%			05/17/21 17:02	1
Percent Moisture	8.1		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-49-24-30-2021
Lab Sample ID: 580-103094-41
Date Collected: 05/14/21 10:31
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 91.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.29		mg/Kg	☼	05/17/21 13:45	05/18/21 22:10	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-41-5-10-2021
Date Collected: 05/14/21 12:11
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-45
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.8		0.1		%			05/17/21 17:02	1
Percent Moisture	14.2		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-41-5-10-2021
Lab Sample ID: 580-103094-45
Date Collected: 05/14/21 12:11
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 85.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	29		0.36		mg/Kg	☼	05/17/21 13:45	05/18/21 22:14	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-40-5-10-2021
Date Collected: 05/14/21 12:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-46
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.8		0.1		%			05/17/21 17:02	1
Percent Moisture	12.2		0.1		%			05/17/21 17:02	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-40-5-10-2021
Date Collected: 05/14/21 12:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-46
Matrix: Solid
Percent Solids: 87.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.7		0.42		mg/Kg	☼	05/17/21 13:45	05/18/21 22:18	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-44-5-10-2021
Date Collected: 05/14/21 11:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-49
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.7		0.1		%			05/17/21 18:26	1
Percent Moisture	10.3		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-44-5-10-2021
Date Collected: 05/14/21 11:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-49
Matrix: Solid
Percent Solids: 89.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		0.43		mg/Kg	☼	05/17/21 13:45	05/18/21 22:22	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-43-5-10-2021
Date Collected: 05/14/21 11:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-52
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.7		0.1		%			05/17/21 18:26	1
Percent Moisture	10.3		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-43-5-10-2021
Date Collected: 05/14/21 11:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-52
Matrix: Solid
Percent Solids: 89.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.5		0.33		mg/Kg	☼	05/17/21 13:45	05/18/21 22:25	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-53-19-25-2021
Date Collected: 05/14/21 13:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-54
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.7		0.1		%			05/17/21 18:26	1
Percent Moisture	19.3		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-53-19-25-2021
Date Collected: 05/14/21 13:26
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-54
Matrix: Solid
Percent Solids: 80.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		0.37		mg/Kg	☼	05/17/21 13:48	05/18/21 18:09	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-52-5-10-2021
Date Collected: 05/14/21 13:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-56
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.9		0.1		%			05/17/21 18:26	1
Percent Moisture	10.1		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-52-5-10-2021
Date Collected: 05/14/21 13:16
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-56
Matrix: Solid
Percent Solids: 89.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.43		mg/Kg	☼	05/17/21 13:48	05/18/21 18:51	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-45-5-10-2021
Date Collected: 05/14/21 11:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-61
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.6		0.1		%			05/17/21 18:26	1
Percent Moisture	6.4		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-45-5-10-2021
Date Collected: 05/14/21 11:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-61
Matrix: Solid
Percent Solids: 93.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.41		mg/Kg	☼	05/17/21 13:48	05/18/21 18:55	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-36-36-42-2021
Date Collected: 05/14/21 15:18
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-66
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.1		0.1		%			05/17/21 18:26	1
Percent Moisture	12.9		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-36-36-42-2021
Date Collected: 05/14/21 15:18
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-66
Matrix: Solid
Percent Solids: 87.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		0.50		mg/Kg	☼	05/17/21 13:48	05/18/21 18:59	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-38-28-34-2021
Date Collected: 05/14/21 15:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-67
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.4		0.1		%			05/17/21 18:26	1
Percent Moisture	14.6		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-38-28-34-2021
Date Collected: 05/14/21 15:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-67
Matrix: Solid
Percent Solids: 85.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.31		mg/Kg	☼	05/17/21 13:48	05/18/21 19:02	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-32-5-10-2021
Date Collected: 05/14/21 13:41
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-69
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.8		0.1		%			05/17/21 18:26	1
Percent Moisture	13.2		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-32-5-10-2021
Date Collected: 05/14/21 13:41
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-69
Matrix: Solid
Percent Solids: 86.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		0.40		mg/Kg	☼	05/17/21 13:48	05/18/21 19:06	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-28-5-10-2021
Date Collected: 05/14/21 13:51
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-70
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.3		0.1		%			05/17/21 18:26	1
Percent Moisture	11.7		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-28-5-10-2021
Lab Sample ID: 580-103094-70
Date Collected: 05/14/21 13:51
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 88.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.31		mg/Kg	☼	05/17/21 13:48	05/18/21 19:10	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-33-5-10-2021
Date Collected: 05/14/21 14:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-74
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.6		0.1		%			05/17/21 18:26	1
Percent Moisture	5.4		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-33-5-10-2021
Date Collected: 05/14/21 14:01
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-74
Matrix: Solid
Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.7		0.24		mg/Kg	☼	05/17/21 13:48	05/18/21 19:14	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-37-36-42-2021
Date Collected: 05/14/21 16:55
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-79
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.5		0.1		%			05/17/21 18:26	1
Percent Moisture	17.5		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-37-36-42-2021
Date Collected: 05/14/21 16:55
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-79
Matrix: Solid
Percent Solids: 82.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		0.47		mg/Kg	☼	05/17/21 13:48	05/18/21 19:18	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-34-5-10-2021
Date Collected: 05/14/21 16:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-83
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.9		0.1		%			05/17/21 18:26	1
Percent Moisture	13.1		0.1		%			05/17/21 18:26	1

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-34-5-10-2021
Lab Sample ID: 580-103094-83
Date Collected: 05/14/21 16:06
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 86.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.4		0.43		mg/Kg	☼	05/17/21 13:48	05/18/21 19:22	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-356736/22-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356736

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/Kg		05/17/21 13:45	05/18/21 20:23	10

Lab Sample ID: LCS 580-356736/23-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356736

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	51.2		mg/Kg		102	80 - 120

Lab Sample ID: LCSD 580-356736/24-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356736

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	51.5		mg/Kg		103	80 - 120	1	20

Lab Sample ID: 580-103094-1 MS
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-27-5-10-2021
Prep Type: Total/NA
Prep Batch: 356736

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	18		39.9	51.3		mg/Kg	☼	83	80 - 120

Lab Sample ID: 580-103094-1 MSD
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-27-5-10-2021
Prep Type: Total/NA
Prep Batch: 356736

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	18		41.4	51.8		mg/Kg	☼	81	80 - 120	1	20

Lab Sample ID: 580-103094-1 DU
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-27-5-10-2021
Prep Type: Total/NA
Prep Batch: 356736

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	18		12.9	F3	mg/Kg	☼	33	20

Lab Sample ID: MB 580-356737/22-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/Kg		05/17/21 13:48	05/18/21 18:01	10

Lab Sample ID: LCS 580-356737/23-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	50.6		mg/Kg		101	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCSD 580-356737/24-A
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356737

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			50.0	51.0		mg/Kg		102	80 - 120	1	20

Lab Sample ID: 580-103094-54 MS
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-53-19-25-2021
Prep Type: Total/NA
Prep Batch: 356737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	4.2		34.8	40.0		mg/Kg	☼	103	80 - 120		

Lab Sample ID: 580-103094-54 MSD
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-53-19-25-2021
Prep Type: Total/NA
Prep Batch: 356737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.2		34.8	37.0		mg/Kg	☼	94	80 - 120	8	20

Lab Sample ID: 580-103094-54 DU
Matrix: Solid
Analysis Batch: 356895

Client Sample ID: P14-S-53-19-25-2021
Prep Type: Total/NA
Prep Batch: 356737

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	4.2		4.32		mg/Kg	☼	2	20

Method: 2540G - SM 2540G

Lab Sample ID: 580-103094-83 DU
Matrix: Solid
Analysis Batch: 356764

Client Sample ID: P14-S-34-5-10-2021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	86.9		89.3		%		3	20
Percent Moisture	13.1		10.7		%		20	20

Client Sample ID: P14-S-27-5-10-2021
Lab Sample ID: 580-103094-1
Date Collected: 05/14/21 16:26
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-27-5-10-2021
Lab Sample ID: 580-103094-1
Date Collected: 05/14/21 16:26
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 20:31	FCW	FGS SEA

Client Sample ID: P14-S-26-5-10-2021
Lab Sample ID: 580-103094-5
Date Collected: 05/14/21 16:21
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-26-5-10-2021
Lab Sample ID: 580-103094-5
Date Collected: 05/14/21 16:21
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:13	FCW	FGS SEA

Client Sample ID: P14-S-29-5-10-2021
Lab Sample ID: 580-103094-9
Date Collected: 05/14/21 16:16
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-29-5-10-2021
Lab Sample ID: 580-103094-9
Date Collected: 05/14/21 16:16
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:16	FCW	FGS SEA

Client Sample ID: P14-S-30-5-10-2021
Lab Sample ID: 580-103094-13
Date Collected: 05/14/21 15:01
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-30-5-10-2021
Lab Sample ID: 580-103094-13
Date Collected: 05/14/21 15:01
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:20	FCW	FGS SEA

Client Sample ID: P14-S-35-5-10-2021
Lab Sample ID: 580-103094-14
Date Collected: 05/14/21 16:06
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-35-5-10-2021
Lab Sample ID: 580-103094-14
Date Collected: 05/14/21 16:06
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:24	FCW	FGS SEA

Client Sample ID: P14-S-31-48-54-2021
Lab Sample ID: 580-103094-15
Date Collected: 05/14/21 15:41
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-31-48-54-2021
Lab Sample ID: 580-103094-15
Date Collected: 05/14/21 15:41
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:28	FCW	FGS SEA

Client Sample ID: P14-S-42-18-26-2021
Lab Sample ID: 580-103094-22
Date Collected: 05/14/21 11:51
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-42-18-26-2021
Lab Sample ID: 580-103094-22
Date Collected: 05/14/21 11:51
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:32	FCW	FGS SEA

Client Sample ID: P14-S-39-5-10-2021
Lab Sample ID: 580-103094-23
Date Collected: 05/14/21 11:41
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-39-5-10-2021
Lab Sample ID: 580-103094-23
Date Collected: 05/14/21 11:41
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:36	FCW	FGS SEA

Client Sample ID: P14-S-50-5-10-2021
Lab Sample ID: 580-103094-24
Date Collected: 05/14/21 10:36
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-50-5-10-2021
Lab Sample ID: 580-103094-24
Date Collected: 05/14/21 10:36
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 77.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:39	FCW	FGS SEA

Client Sample ID: P14-S-47-26-32-2021
Lab Sample ID: 580-103094-28
Date Collected: 05/14/21 10:16
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-47-26-32-2021
Lab Sample ID: 580-103094-28
Date Collected: 05/14/21 10:16
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 21:43	FCW	FGS SEA

Client Sample ID: P14-S-51-5-10-2021
Lab Sample ID: 580-103094-34
Date Collected: 05/14/21 09:31
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-51-5-10-2021
Lab Sample ID: 580-103094-34
Date Collected: 05/14/21 09:31
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 78.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 20:27	FCW	FGS SEA

Client Sample ID: P14-S-46-26-36-2021
Lab Sample ID: 580-103094-36
Date Collected: 05/14/21 10:51
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-46-26-36-2021
Lab Sample ID: 580-103094-36
Date Collected: 05/14/21 10:51
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:02	FCW	FGS SEA

Client Sample ID: P14-S-48-28-34-2021
Lab Sample ID: 580-103094-40
Date Collected: 05/14/21 10:16
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-48-28-34-2021
Lab Sample ID: 580-103094-40
Date Collected: 05/14/21 10:16
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 72.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:06	FCW	FGS SEA

Client Sample ID: P14-S-49-24-30-2021
Lab Sample ID: 580-103094-41
Date Collected: 05/14/21 10:31
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-49-24-30-2021
Lab Sample ID: 580-103094-41
Date Collected: 05/14/21 10:31
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:10	FCW	FGS SEA

Client Sample ID: P14-S-41-5-10-2021
Lab Sample ID: 580-103094-45
Date Collected: 05/14/21 12:11
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Client Sample ID: P14-S-41-5-10-2021
Lab Sample ID: 580-103094-45
Date Collected: 05/14/21 12:11
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:14	FCW	FGS SEA

Client Sample ID: P14-S-40-5-10-2021
Lab Sample ID: 580-103094-46
Date Collected: 05/14/21 12:01
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 17:02	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-40-5-10-2021
Lab Sample ID: 580-103094-46
Date Collected: 05/14/21 12:01
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:18	FCW	FGS SEA

Client Sample ID: P14-S-44-5-10-2021
Lab Sample ID: 580-103094-49
Date Collected: 05/14/21 11:16
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-44-5-10-2021
Lab Sample ID: 580-103094-49
Date Collected: 05/14/21 11:16
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:22	FCW	FGS SEA

Client Sample ID: P14-S-43-5-10-2021
Lab Sample ID: 580-103094-52
Date Collected: 05/14/21 11:26
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-43-5-10-2021
Lab Sample ID: 580-103094-52
Date Collected: 05/14/21 11:26
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356736	05/17/21 13:45	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 22:25	FCW	FGS SEA

Client Sample ID: P14-S-53-19-25-2021
Lab Sample ID: 580-103094-54
Date Collected: 05/14/21 13:26
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-53-19-25-2021
Lab Sample ID: 580-103094-54
Date Collected: 05/14/21 13:26
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 18:09	FCW	FGS SEA

Client Sample ID: P14-S-52-5-10-2021
Lab Sample ID: 580-103094-56
Date Collected: 05/14/21 13:16
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-52-5-10-2021
Lab Sample ID: 580-103094-56
Date Collected: 05/14/21 13:16
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 18:51	FCW	FGS SEA

Client Sample ID: P14-S-45-5-10-2021
Lab Sample ID: 580-103094-61
Date Collected: 05/14/21 11:06
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-45-5-10-2021
Lab Sample ID: 580-103094-61
Date Collected: 05/14/21 11:06
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 18:55	FCW	FGS SEA

Client Sample ID: P14-S-36-36-42-2021
Lab Sample ID: 580-103094-66
Date Collected: 05/14/21 15:18
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-36-36-42-2021
Lab Sample ID: 580-103094-66
Date Collected: 05/14/21 15:18
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 18:59	FCW	FGS SEA

Client Sample ID: P14-S-38-28-34-2021
Lab Sample ID: 580-103094-67
Date Collected: 05/14/21 15:06
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-38-28-34-2021
Lab Sample ID: 580-103094-67
Date Collected: 05/14/21 15:06
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:02	FCW	FGS SEA

Client Sample ID: P14-S-32-5-10-2021
Lab Sample ID: 580-103094-69
Date Collected: 05/14/21 13:41
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-32-5-10-2021
Lab Sample ID: 580-103094-69
Date Collected: 05/14/21 13:41
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:06	FCW	FGS SEA

Client Sample ID: P14-S-28-5-10-2021
Lab Sample ID: 580-103094-70
Date Collected: 05/14/21 13:51
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-28-5-10-2021
Lab Sample ID: 580-103094-70
Date Collected: 05/14/21 13:51
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:10	FCW	FGS SEA

Client Sample ID: P14-S-33-5-10-2021
Lab Sample ID: 580-103094-74
Date Collected: 05/14/21 14:01
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-33-5-10-2021
Lab Sample ID: 580-103094-74
Date Collected: 05/14/21 14:01
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:14	FCW	FGS SEA

Client Sample ID: P14-S-37-36-42-2021
Lab Sample ID: 580-103094-79
Date Collected: 05/14/21 16:55
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Client Sample ID: P14-S-37-36-42-2021
Lab Sample ID: 580-103094-79
Date Collected: 05/14/21 16:55
Matrix: Solid
Date Received: 05/15/21 11:45
Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:18	FCW	FGS SEA

Client Sample ID: P14-S-34-5-10-2021
Lab Sample ID: 580-103094-83
Date Collected: 05/14/21 16:06
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356764	05/17/21 18:26	CCH	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Client Sample ID: P14-S-34-5-10-2021
Date Collected: 05/14/21 16:06
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-83
Matrix: Solid
Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356737	05/17/21 13:48	TMH	FGS SEA
Total/NA	Analysis	6020B		10	356895	05/18/21 19:22	FCW	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103094-1
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103094-1	P14-S-27-5-10-2021	Solid	05/14/21 16:26	05/15/21 11:45	
580-103094-5	P14-S-26-5-10-2021	Solid	05/14/21 16:21	05/15/21 11:45	
580-103094-9	P14-S-29-5-10-2021	Solid	05/14/21 16:16	05/15/21 11:45	
580-103094-13	P14-S-30-5-10-2021	Solid	05/14/21 15:01	05/15/21 11:45	
580-103094-14	P14-S-35-5-10-2021	Solid	05/14/21 16:06	05/15/21 11:45	
580-103094-15	P14-S-31-48-54-2021	Solid	05/14/21 15:41	05/15/21 11:45	
580-103094-22	P14-S-42-18-26-2021	Solid	05/14/21 11:51	05/15/21 11:45	
580-103094-23	P14-S-39-5-10-2021	Solid	05/14/21 11:41	05/15/21 11:45	
580-103094-24	P14-S-50-5-10-2021	Solid	05/14/21 10:36	05/15/21 11:45	
580-103094-28	P14-S-47-26-32-2021	Solid	05/14/21 10:16	05/15/21 11:45	
580-103094-34	P14-S-51-5-10-2021	Solid	05/14/21 09:31	05/15/21 11:45	
580-103094-36	P14-S-46-26-36-2021	Solid	05/14/21 10:51	05/15/21 11:45	
580-103094-40	P14-S-48-28-34-2021	Solid	05/14/21 10:16	05/15/21 11:45	
580-103094-41	P14-S-49-24-30-2021	Solid	05/14/21 10:31	05/15/21 11:45	
580-103094-45	P14-S-41-5-10-2021	Solid	05/14/21 12:11	05/15/21 11:45	
580-103094-46	P14-S-40-5-10-2021	Solid	05/14/21 12:01	05/15/21 11:45	
580-103094-49	P14-S-44-5-10-2021	Solid	05/14/21 11:16	05/15/21 11:45	
580-103094-52	P14-S-43-5-10-2021	Solid	05/14/21 11:26	05/15/21 11:45	
580-103094-54	P14-S-53-19-25-2021	Solid	05/14/21 13:26	05/15/21 11:45	
580-103094-56	P14-S-52-5-10-2021	Solid	05/14/21 13:16	05/15/21 11:45	
580-103094-61	P14-S-45-5-10-2021	Solid	05/14/21 11:06	05/15/21 11:45	
580-103094-66	P14-S-36-36-42-2021	Solid	05/14/21 15:18	05/15/21 11:45	
580-103094-67	P14-S-38-28-34-2021	Solid	05/14/21 15:06	05/15/21 11:45	
580-103094-69	P14-S-32-5-10-2021	Solid	05/14/21 13:41	05/15/21 11:45	
580-103094-70	P14-S-28-5-10-2021	Solid	05/14/21 13:51	05/15/21 11:45	
580-103094-74	P14-S-33-5-10-2021	Solid	05/14/21 14:01	05/15/21 11:45	
580-103094-79	P14-S-37-36-42-2021	Solid	05/14/21 16:55	05/15/21 11:45	
580-103094-83	P14-S-34-5-10-2021	Solid	05/14/21 16:06	05/15/21 11:45	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 1 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY TAT			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-27-5-10-2021	5/14/21	1626	G	S			X	X	X			
P14-S-26-30-36-2021	5/14/21	1622		S			SM			X		
P14-S-27-0-5-2021	5/14/21	1625		S			X			X		
P14-S-29-0-5-2021	5/14/21	1615		S						X		
P14-S-26-5-10-2021	5/14/21	1621		S			X	X	X			
P14-S-27-30-36-2021	5/14/21	1622		S						X		
P14-S-26-0-5-2021	5/14/21	1620		S						X		
P14-S-29-30-36-2021	5/14/21	1617		S						X		
P14-S-29-5-10-2021	5/14/21	1616		S			X	X	X			
P14-S-35-0-5-2021	5/14/21	1605		S						X		
P14-S-35-30-36-2021	5/14/21	1607		S						X		

580-103094 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	SCP	5/15/21 1145	AQ		5/15/21 1145	EFSS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 2 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	N	X	
P14-S-30-30-36-2021	5/14/21	1602	G	S						X	1	
P14-S-30-5-16-2021	5/14/21	1501		S			X	X	X			
P14-S-35-5-10-2021	5/14/21	1604		S			X	X	X			
P14-S-31-48-54-2021	5/14/21	1541		S			X	X	X			
P14-S-36-0-5-2021	5/14/21	1600		S						X		
P14-S-31-0-5-2021	5/14/21	1540		S						X		
P14-S-42-0-5-2021	5/14/21	1150		S						X		58
P14-S-42-36-36-2021	5/14/21	1152		S						X		
P14-S-39-0-5-2021	5/14/21	1140		S						X		
P14-S-39-30-36-2021	5/14/21	1142		S						X		
P14-S-42-18-24-2021	5/14/21	1151	✓	S			X	X	X		✓	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	5/15/21 1145	AQ		5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins | Env[illegible]nt Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive											Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	N												
P14-S-39-5-10-2021	5/14/21	1141	G	S			X	X	X												1	
P14-S-50-5-10-2021	5/14/21	1036		S			X	X	X													
P14-S-48-0-5-2021	5/14/21	1015		S						X												
P14-S-50-0-5-2021	5/14/21	1035		S						X												
P14-S-50-30-36-2021	5/14/21	1037		S						X												
P14-S-47-26-32-2021	5/14/21	1016		S			X	X	X													
P14-S-[illegible]-30-36-2021	5/14/21	1052		S						X											5	TSP
P14-S-47-0-5-2021	5/14/21	1015		S						X												
P14-S-51-30-36-2021	5/14/21	931		S						X												
P14-S-46-0-5-2021	5/14/21	1050		S						X												
P14-S-47-32-38-2021	5/14/21	1017	↓	S						X											2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SCP	5/15/21 1145	AQ	[signature]	5/15/21 1045	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

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Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 8
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Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
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D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-51-5-16-2021	5/14/21	938	G	S			X	X	X			
P14-S-51-0-5-2021	5/14/21	930		S						X		
P14-S-46-24-30-2021	5/14/21	1051		S		X	X	X	X			
P14-S-49-0-5-2021	5/14/21	1038		S						X		
P14-S-48-30-46-2021	5/14/21	1017		S			X	X	X	X		HOLD
P14-S-49-30-36-2021	5/14/21	1032		S						X		
P14-S-48-24-34-2021	5/14/21	1016		S			X	X	X			
P14-S-49-24-36-2021	5/14/21	1031		S			X	X	X			
P14-S-41-0-5-2021	5/14/21	1210		S						X		P-41-0-5-2021
P14-S-40-30-36-2021	5/14/21	1202		S						X		
P14-S-41-30-36-2021	5/14/21	1212	↓	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SLP	5/15/21 1145	AQ	K Proze	5/15/21 1145	EFCS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 5 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-41-5-10-2021	5/14/21	1211	G	S			X	X	X		1	
P14-S-40-5-10-2021	5/14/21	1201		S			X	X	X			
P14-S-53-0-5-2021	5/14/21	1325		S						X		
P14-S-49-0-5-2021	5/14/21	1115		S						X		
P14-S-44-5-10-2021	5/14/21	1116		S			X	X	X			
P14-S-44-30-36-2021	5/14/21	1117		S						X		
P14-S-52-30-36-2021	5/14/21	1517		S						X		SP
P14-S-43-5-10-2021	5/14/21	1126		S			X	X	X			
P14-S-43-0-5-2021	5/14/21	1125		S						X		
P14-S-~~58-29-25~~-2021 SP	5/14/21			S								
P14-S-53-19-25-2021	5/14/21	1326	↓	S			X	X	X		↓	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EEGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 6 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-43-30-36-2021	5/14/21	1127	G	S						X	1	
P14-S-52-5-10-2021	5/14/21	1316		S			X	X	X			
P14-S-53-30-36-2021	5/14/21	1327		S						X		
P14-S-52-0-5-2021	5/14/21	1315		S						X		
P14-S-46-0-5-2021	5/14/21	1200		S						X		
P14-S-45-0-5-2021	5/14/21	1105		S						X		
P14-S-45-5-10-2021	5/14/21	1106		S			X	X	X			
P14-S-45-30-36-2021	5/14/21	1107		S						X		
P14-S-39-34-40-2021	5/14/21	1507		S						X		
P14-S-37-0-5-2021	5/14/21	1425		S						X		
P14-S-34-0-5-2021	5/14/21	1405		S						X		

Possible Hazard Identification
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Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EFOS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 7 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
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G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
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Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-36-36-42-2021	5/14/21	~~1510~~ 1502	G	S			X	X	X	X	1	15:18; TEST
P14-S-39-28-34-2021	5/14/21	1506		S			X	X	X			
P14-S-32-30-36-2021	5/14/21	1342		S						X		
P14-S-32-5-10-2021	5/14/21	1341		S			X	X	X			
P14-S-28-5-10-2021	5/14/21	1351		S			X	X	X			
P14-S-38-0-5-2021	5/14/21	1505		S						X		
P14-S-36-0-5-2021	5/14/21	1515		S						X		
P14-S-28-30-36-2021	5/14/21	1352		S						X		
P14-S-33-5-10-2021	5/14/21	1401		S			X	X	X			
P14-S-33-30-36-2021	5/14/21	1402		S						X		SP
P14-S-33-0-5-2021	5/14/21	1400		S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

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Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature] KPress	5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 8 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-34-30-36-2021	5/14/21	1407	G	S						X		
P14-S-30-42-48-2021	5/14/21	1517		S						X		
P14-S-37-36-42-2021	5/14/21	1455		S			X	X	X	X		RUN
P14-S-24-0-5-2021	5/14/21	1350		S						X		
P14-S-37-42-45-2021	5/14/21	1456		S						X		
P14-S-32-0-5-2021	5/14/21	1340		S						X		
P14-S-34-5-16-2021	5/14/21	1496		S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/15/21 1145	AQ		5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Therm. ID: IR9 Cor: 5.7° Unc: 5.5°
Cooler Dsc: 1
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 12.4° Unc: 12.2°
Cooler Dsc: 2
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client
Took temp after 12.2 - 13.6

Therm. ID: IR9 Cor: 3.7° Unc: 3.5°
Cooler Dsc: 3
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 5.6° Unc: 5.4°
Cooler Dsc: 4
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103094-1

Login Number: 103094
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103094-2
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

M. Elaine Walker

Authorized for release by:
5/25/2021 12:52:02 PM
Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

Designee for

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 7
Chronicle 8
Certification Summary 9
Sample Summary 10
Chain of Custody 11
Receipt Checklists 20

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-2

Job ID: 580-103094-2

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103094-2

Comments
This report is for the addition of 200.8 Zinc to sample 580-103094-44 (P14-S-41-30-36-2021), added at 4:19 on 5/19/2021 on a 3-day TAT. As the request was made past 3:00PM, the start date is 5/20/2021.

Receipt
The samples were received on 5/15/2021 11:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.7º C, 5.6º C, 5.7º C and 12.4º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Job ID: 580-103094-2
Project/Site: Parcel 14 Soil Investigation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-2

Client Sample ID: P14-S-41-30-36-2021
Date Collected: 05/14/21 12:12
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-44
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.7		0.1		%			05/23/21 19:27	1
Percent Moisture	17.3		0.1		%			05/23/21 19:27	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-2

Client Sample ID: P14-S-41-30-36-2021
Date Collected: 05/14/21 12:12
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-44
Matrix: Solid
Percent Solids: 82.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		0.56		mg/Kg	☼	05/20/21 19:24	05/21/21 15:46	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-357050/22-A
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357050

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25		mg/Kg		05/20/21 19:24	05/21/21 15:39	5

Lab Sample ID: LCS 580-357050/23-A
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	50.8		mg/Kg		102	80 - 120

Lab Sample ID: LCSD 580-357050/24-A
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 357050

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	52.8		mg/Kg		106	80 - 120	4	20

Lab Sample ID: 580-103094-44 MS
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: P14-S-41-30-36-2021
Prep Type: Total/NA
Prep Batch: 357050

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	3.0		55.7	56.3		mg/Kg	☼	96	80 - 120

Lab Sample ID: 580-103094-44 MSD
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: P14-S-41-30-36-2021
Prep Type: Total/NA
Prep Batch: 357050

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	3.0		57.1	57.8		mg/Kg	☼	96	80 - 120	3	20

Lab Sample ID: 580-103094-44 DU
Matrix: Solid
Analysis Batch: 357219

Client Sample ID: P14-S-41-30-36-2021
Prep Type: Total/NA
Prep Batch: 357050

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	3.0		2.92		mg/Kg	☼	2	20

Method: 2540G - SM 2540G

Lab Sample ID: 580-103094-44 DU
Matrix: Solid
Analysis Batch: 357208

Client Sample ID: P14-S-41-30-36-2021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	82.7		83.4		%		0.9	20
Percent Moisture	17.3		16.6		%		5	20

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-2

Client Sample ID: P14-S-41-30-36-2021
Date Collected: 05/14/21 12:12
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	357208	05/23/21 19:27	CCH	FGS SEA

Client Sample ID: P14-S-41-30-36-2021
Date Collected: 05/14/21 12:12
Date Received: 05/15/21 11:45

Lab Sample ID: 580-103094-44
Matrix: Solid
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			357050	05/20/21 19:24	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357219	05/21/21 15:46	FCW	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103094-2
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103094-44	P14-S-41-30-36-2021	Solid	05/14/21 12:12	05/15/21 11:45	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 1 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY TAT			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	N	X	
P14-S-27-5-10-2021	5/14/21	1626	G	S			X	X	X			
P14-S-26-30-36-2021	5/14/21	1622		S			SM			X		
P14-S-27-0-5-2021	5/14/21	1625		S			X			X		
P14-S-29-0-5-2021	5/14/21	1615		S						X		
P14-S-26-5-10-2021	5/14/21	1621		S			X	X	X			
P14-S-27-30-36-2021	5/14/21	1622		S						X		
P14-S-26-0-5-2021	5/14/21	1620		S						X		
P14-S-29-30-36-2021	5/14/21	1617		S						X		
P14-S-29-5-10-2021	5/14/21	1616		S			X	X	X			
P14-S-35-0-5-2021	5/14/21	1605		S						X		
P14-S-35-30-36-2021	5/14/21	1607		S						X		

580-103094 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	SCP	5/15/21 1145	AQ		5/15/21 1145	EFTS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 2 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-30-30-36-2021	5/14/21	1602	G	S						X	1	
P14-S-30-5-16-2021	5/14/21	1501		S			X	X	X			
P14-S-35-5-10-2021	5/14/21	1604		S			X	X	X			
P14-S-31-48-54-2021	5/14/21	1541		S			X	X	X			
P14-S-36-0-5-2021	5/14/21	1600		S						X		
P14-S-31-0-5-2021	5/14/21	1540		S						X		
P14-S-42-0-5-2021	5/14/21	1150		S						X		
P14-S-42-36-36-2021	5/14/21	1152		S						X		
P14-S-39-0-5-2021	5/14/21	1140		S						X		
P14-S-39-30-36-2021	5/14/21	1142		S						X		
P14-S-42-18-24-2021	5/14/21	1151	✓	S			X	X	X		✓	

58

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins | Env[illegible]nt Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive											Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N												
P14-S-39-5-10-2021	5/14/21	1141	G	S			X	X	X												1	
P14-S-50-5-10-2021	5/14/21	1036		S			X	X	X													
P14-S-48-0-5-2021	5/14/21	1015		S						X												
P14-S-50-0-5-2021	5/14/21	1035		S						X												
P14-S-50-30-36-2021	5/14/21	1037		S						X												
P14-S-47-26-32-2021	5/14/21	1016		S			X	X	X													
P14-S-40-30-36-2021	5/14/21	1052		S						X											5	TSP
P14-S-47-0-5-2021	5/14/21	1015		S						X												
P14-S-51-30-36-2021	5/14/21	931		S						X												
P14-S-46-0-5-2021	5/14/21	1050		S						X												
P14-S-47-32-38-2021	5/14/21	1017	↓	S						X											1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SCP	5/15/21 1145	AQ	[signature]	5/15/21 1045	EFS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-51-5-16-2021	5/14/21	938	6	S			X	X	X			
P14-S-51-0-5-2021	5/14/21	930		S						X		
P14-S-46-24-36-2021	5/14/21	1051		S		X	X	X	X			
P14-S-49-0-5-2021	5/14/21	1038		S						X		
P14-S-48-39-46-2021	5/14/21	1017		S			X	X	X	X		HOLD
P14-S-49-36-36-2021	5/14/21	1032		S						X		
P14-S-48-29-34-2021	5/14/21	1016		S			X	X	X			
P14-S-49-26-36-2021	5/14/21	1031		S			X	X	X			
P14-S-41-0-5-2021	5/14/21	1210		S						X		P-41-0-5-2021
P14-S-40-30-36-2021	5/14/21	1202		S						X		
P14-S-41-30-36-2021	5/14/21	1212	↓	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SLP	5/15/21 1145	AQ	K Proze	5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 5 of 8
Company: Anchor QEA LLC	PWSID:			Job #:

Address: 1201 3rd Ave Suite 2600	Due Date Requested:
City: Seattle	TAT Requested (days):
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No
Phone: 206-903-3394(Tel)	PO #: 200092-01.11
Email: cfields@anchorqea.com	WO #:
Project Name: Parcel 14 Soil Investigation	Project #: 58016541
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-41-5-10-2021	5/14/21	1211	G	S			X	X	X		1	
P14-S-40-5-10-2021	5/14/21	1201	|	S			X	X	X		|	
P14-S-53-0-5-2021	5/14/21	1325	|	S			|	|	|	X	|	
P14-S-49-0-5-2021	5/14/21	1115	|	S			|	|	|	X	|	
P14-S-44-5-10-2021	5/14/21	1116	|	S			X	X	X	|	|	
P14-S-44-30-36-2021	5/14/21	1117	|	S			|	|	|	X	|	
P14-S-52-30-36-2021	5/14/21	1517	|	S			|	|	|	X	|	SP
P14-S-43-5-10-2021	5/14/21	1126	|	S			X	X	X	|	|	
P14-S-43-0-5-2021	5/14/21	1125	|	S			|	|	|	X	|	
P14-S-~~53-29-35~~-2021 SP	5/14/21		|	S			|	|	|	|	|	
P14-S-53-19-25-2021	5/14/21	1326	↓	S			X	X	X	|	↓	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

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Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 6 of 8
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Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive											Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N												
P14-S-43-30-36-2021	5/14/21	1127	G	S						X											1	
P14-S-52-5-10-2021	5/14/21	1316		S			X	X	X													
P14-S-53-30-36-2021	5/14/21	1327		S						X												
P14-S-52-0-5-2021	5/14/21	1315		S						X												
P14-S-46-0-5-2021	5/14/21	1200		S						X												
P14-S-45-0-5-2021	5/14/21	1105		S						X												
P14-S-45-5-10-2021	5/14/21	1106		S			X	X	X													
P14-S-45-30-36-2021	5/14/21	1107		S						X												
P14-S-39-34-40-2021	5/14/21	1507		S						X												
P14-S-37-0-5-2021	5/14/21	1425		S						X												
P14-S-34-0-5-2021	5/14/21	1405		S						X												

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EFOS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 7 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

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J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-36-36-42-2021	5/14/21	1540	G	S			X	X	X	X	1	15:18; TEST
P14-S-39-28-34-2021	5/14/21	1506		S			X	X	X			
P14-S-32-30-36-2021	5/14/21	1342		S						X		
P14-S-32-5-10-2021	5/14/21	1341		S			X	X	X			
P14-S-28-5-10-2021	5/14/21	1351		S			X	X	X			
P14-S-38-0-5-2021	5/14/21	1505		S						X		
P14-S-36-0-5-2021	5/14/21	1515		S						X		
P14-S-28-30-36-2021	5/14/21	1352		S						X		
P14-S-33-5-10-2021	5/14/21	1401		S			X	X	X			
P14-S-33-30-36-2021	5/14/21	1402		S						X		SP
P14-S-33-0-5-2021	5/14/21	1400		S						X		

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Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/15/21 1145	AQ	KPress	5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

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State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

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			Preservation Code:				N	N	N	N		
P14-S-34-30-36-2021	5/14/21	1407	G	S						X		
P14-S-30-42-48-2021	5/14/21	1517		S						X		
P14-S-37-36-42-2021	5/14/21	1455		S			X	X	X	X		RUN
P14-S-24-0-5-2021	5/14/21	1350		S						X		
P14-S-37-42-45-2021	5/14/21	1456		S						X		
P14-S-32-0-5-2021	5/14/21	1340		S						X		
P14-S-34-5-16-2021	5/14/21	1496		S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/15/21 1145	AQ		5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Therm. ID: IR9 Cor: 5.7° Unc: 5.5°
Cooler Dsc: 1
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 12.4° Unc: 12.2°
Cooler Dsc: 2
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client
Took temp after 12.2 - 13.6

Therm. ID: IR9 Cor: 3.7° Unc: 3.5°
Cooler Dsc: 3
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 5.6° Unc: 5.4°
Cooler Dsc: 4
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103094-2

Login Number: 103094
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103094-3
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

Authorized for release by:
6/8/2021 3:56:24 PM

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 6
Chronicle 7
Certification Summary 8
Sample Summary 9
Chain of Custody 10
Receipt Checklists 19

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-3

Job ID: 580-103094-3

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103094-3

Comments
No additional comments.

Receipt
The samples were received on 5/15/2021 11:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.7º C, 5.6º C, 5.7º C and 12.4º C.

Receipt Exceptions
The following sample(s) was received at the laboratory outside the required temperature criteria: Cooler #2 was out of temp. at12.4°C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Job ID: 580-103094-3
Project/Site: Parcel 14 Soil Investigation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Anchor QEA LLC
Job ID: 580-103094-3
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-41-5-10-2021
Lab Sample ID: 580-103094-45
Date Collected: 05/14/21 12:11
Matrix: Solid
Date Received: 05/15/21 11:45

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 23:40	1

Method: 6010D - Metals (ICP) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 23:37	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-358332/14-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 22:55	1

Lab Sample ID: MB 580-358332/15-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 22:51	1

Lab Sample ID: LCS 580-358332/16-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358332

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.02		mg/L		102	80 - 120

Lab Sample ID: LCSD 580-358332/17-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358332

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.02		mg/L		102	80 - 120	0	20

Lab Chronicle

Client: Anchor QEA LLC
Job ID: 580-103094-3
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-41-5-10-2021
Lab Sample ID: 580-103094-45
Date Collected: 05/14/21 12:11
Matrix: Solid
Date Received: 05/15/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			358177	06/03/21 09:43	JLS	FGS SEA
SPLP West	Prep	3010A			358332	06/04/21 12:32	JLS	FGS SEA
SPLP West	Analysis	6010D		1	358569	06/07/21 23:37	TMH	FGS SEA
TCLP	Leach	1311			358165	06/03/21 09:19	JLS	FGS SEA
TCLP	Prep	3010A			358332	06/04/21 12:32	JLS	FGS SEA
TCLP	Analysis	6010D		1	358569	06/07/21 23:40	TMH	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103094-3
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103094-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103094-45	P14-S-41-5-10-2021	Solid	05/14/21 12:11	05/15/21 11:45	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

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eurofins Environment Testing America

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			Preservation Code:				N	N	N	N		
P14-S-27-5-10-2021	5/14/21	1626	G	S			X	X	X			
P14-S-26-30-36-2021	5/14/21	1622		S						X		
P14-S-27-0-5-2021	5/14/21	1625		S			X			X		
P14-S-29-0-5-2021	5/14/21	1615		S						X		
P14-S-26-5-10-2021	5/14/21	1621		S			X	X	X			
P14-S-27-30-36-2021	5/14/21	1622		S						X		
P14-S-26-0-5-2021	5/14/21	1620		S						X		
P14-S-29-30-36-2021	5/14/21	1617		S						X		
P14-S-29-5-10-2021	5/14/21	1616		S			X	X	X			
P14-S-35-0-5-2021	5/14/21	1605		S						X		
P14-S-35-30-36-2021	5/14/21	1607		S						X		

580-103094 Chain of Custody

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2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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Phone (253) 922-2310 Phone (425) 420-9210

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Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-30-30-36-2021	5/14/21	1602	G	S						X	1	
P14-S-30-5-16-2021	5/14/21	1501		S			X	X	X			
P14-S-35-5-10-2021	5/14/21	1604		S			X	X	X			
P14-S-31-48-54-2021	5/14/21	1541		S			X	X	X			
P14-S-36-0-5-2021	5/14/21	1600		S						X		
P14-S-31-0-5-2021	5/14/21	1540		S						X		
P14-S-42-0-5-2021	5/14/21	1150		S						X		58
P14-S-42-36-36-2021	5/14/21	1152		S						X		
P14-S-39-0-5-2021	5/14/21	1140		S						X		
P14-S-39-30-36-2021	5/14/21	1142		S						X		
P14-S-42-18-24-2021	5/14/21	1151	✓	S			X	X	X		✓	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/15/21 1145	AQ		5/15/21 1145	EGS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-39-5-10-2021	5/14/21	1141	G	S			X	X	X		1	
P14-S-50-5-10-2021	5/14/21	1036		S			X	X	X			
P14-S-48-0-5-2021	5/14/21	1015		S						X		
P14-S-50-0-5-2021	5/14/21	1035		S						X		
P14-S-50-30-36-2021	5/14/21	1037		S						X		
P14-S-47-26-32-2021	5/14/21	1016		S			X	X	X			
P14-S-40-30-36-2021	5/14/21	1052		S						X		
P14-S-47-0-5-2021	5/14/21	1015		S						X		
P14-S-51-30-36-2021	5/14/21	931		S						X		
P14-S-46-0-5-2021	5/14/21	1050		S						X		
P14-S-47-32-38-2021	5/14/21	1017	↓	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SCP	5/15/21 1145	AQ		5/15/21 1045	EFS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custod[illegible]ecord

eurofins Env[illegible]nt Testing Amer[illegible]

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 8
Company: Anchor QEA LLC	PWSID:			Job #:

Address: 1201 3rd Ave Suite 2600	Due Date Requested:
City: Seattle	TAT Requested (days):
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No
Phone: 206-903-3394(Tel)	PO #: 200092-01.11
Email: cfields@anchorqea.com	WO #:
Project Name: Parcel 14 Soil Investigation	Project #: 58016541
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-51-5-16-2021	5/14/21	938	6	S			X	X	X			
P14-S-51-0-5-2021	5/14/21	930		S						X		
P14-S-46-24-30-2021	5/14/21	1051		S		X	X	X	X			
P14-S-49-0-5-2021	5/14/21	1038		S						X		
P14-S-48-39-46-2021	5/14/21	1017		S			X	X	X	X		HOLD
P14-S-49-30-36-2021	5/14/21	1032		S						X		
P14-S-48-29-34-2021	5/14/21	1016		S			X	X	X			
P14-S-49-24-30-2021	5/14/21	1031		S			X	X	X			
P14-S-41-0-5-2021	5/14/21	1210		S						X		P-41-0-5-2021
P14-S-40-30-36-2021	5/14/21	1202		S						X		
P14-S-41-30-36-2021	5/14/21	1212	↓	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
LP	5/15/21 1145	AQ	K Proze	5/15/21 1145	EGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 5 of 8
Company: Anchor QEA LLC	PWSID:			Job #:

Address: 1201 3rd Ave Suite 2600	Due Date Requested:
City: Seattle	TAT Requested (days):
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No
Phone: 206-903-3394(Tel)	PO #: 200092-01.11
Email: cfields@anchorqea.com	WO #:
Project Name: Parcel 14 Soil Investigation	Project #: 58016541
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-41-5-10-2021	5/14/21	1211	G	S			X	X	X		1	
P14-S-40-5-10-2021	5/14/21	1201	|	S			X	X	X		|	
P14-S-53-0-5-2021	5/14/21	1325	|	S			|	|	|	X	|	
P14-S-49-0-5-2021	5/14/21	1115	|	S			|	|	|	X	|	
P14-S-44-5-10-2021	5/14/21	1116	|	S			X	X	X	|	|	
P14-S-44-30-36-2021	5/14/21	1117	|	S			|	|	|	X	|	
P14-S-52-30-36-2021	5/14/21	1517	|	S			|	|	|	X	|	SP
P14-S-43-5-10-2021	5/14/21	1126	|	S			X	X	X	|	|	
P14-S-43-0-5-2021	5/14/21	1125	|	S			|	|	|	X	|	
P14-S-~~53-29-35~~-2021 SP	5/14/21		|	S			|	|	|	|	|	
P14-S-53-19-25-2021	5/14/21	1326	↓	S			X	X	X	|	↓	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EEGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 6 of 8
Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-43-30-36-2021	5/14/21	1127	G	S						X	1	
P14-S-52-5-10-2021	5/14/21	1316		S			X	X	X			
P14-S-53-30-36-2021	5/14/21	1327		S						X		
P14-S-52-0-5-2021	5/14/21	1315		S						X		
P14-S-46-0-5-2021	5/14/21	1200		S						X		
P14-S-45-0-5-2021	5/14/21	1105		S						X		
P14-S-45-5-10-2021	5/14/21	1106		S			X	X	X			
P14-S-45-30-36-2021	5/14/21	1107		S						X		
P14-S-39-34-40-2021	5/14/21	1507		S						X		
P14-S-37-0-5-2021	5/14/21	1425		S						X		
P14-S-34-0-5-2021	5/14/21	1405		S						X		

Possible Hazard Identification
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Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/15/21 1145	AQ	[signature]	5/15/21 1145	EFOS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
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Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
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Preservation Codes:

A - HCL	M - Hexane
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			Preservation Code:				N	N	N	N		
P14-S-36-36-42-2021	5/14/21	~~1510~~ 1518	G	S			X	X	X	X	1	TEST
P14-S-39-28-34-2021	5/14/21	1506		S			X	X	X			
P14-S-32-30-36-2021	5/14/21	1342		S						X		
P14-S-32-5-10-2021	5/14/21	1341		S			X	X	X			
P14-S-28-5-10-2021	5/14/21	1351		S			X	X	X			
P14-S-38-0-5-2021	5/14/21	1505		S						X		
P14-S-36-0-5-2021	5/14/21	1515		S						X		
P14-S-28-30-36-2021	5/14/21	1352		S						X		
P14-S-33-5-10-2021	5/14/21	1401		S			X	X	X			
P14-S-33-30-36-2021	5/14/21	1402		S						X		SP
P14-S-33-0-5-2021	5/14/21	1400		S						X		

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Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/15/21 1145	AQ	KPress	5/15/21 1145	EFSS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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Company: Anchor QEA LLC	PWSID:			Job #:
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days):			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

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Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
P14-S-34-30-36-2021	5/14/21	1407	G	S						X		
P14-S-30-42-48-2021	5/14/21	1517		S						X		
P14-S-37-36-42-2021	5/14/21	1455		S			X	X	X	X		RUN
P14-S-24-0-5-2021	5/14/21	1350		S						X		
P14-S-37-42-45-2021	5/14/21	1456		S						X		
P14-S-32-0-5-2021	5/14/21	1340		S						X		
P14-S-34-5-16-2021	5/14/21	1496		S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/15/21 1145	AQ		5/15/21 1145	EFGS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Therm. ID: IR9 Cor: 5.7° Unc: 5.5°
Cooler Dsc: 1
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 12.4° Unc: 12.2°
Cooler Dsc: 2
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client
Took temp after 12.2 - 13.6

Therm. ID: IR9 Cor: 3.7° Unc: 3.5°
Cooler Dsc: 3
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Therm. ID: IR9 Cor: 5.6° Unc: 5.4°
Cooler Dsc: 4
Packing: Bub FedEx:
UPS:
Cust. Seal: Yes No X Lab Cour:
Blue Ice, Wet, Dry, None Other: Client

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103094-3

Login Number: 103094
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

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ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103138-1
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

M. Elaine Walker

Authorized for release by:
5/21/2021 1:35:54 PM
Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

Designee for

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

Review your project results through TotalAccess

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 33
Chronicle 34
Certification Summary 39
Sample Summary 40
Chain of Custody 41
Receipt Checklists 45

Job ID: 580-103138-1

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103138-1

Receipt
The samples were received on 5/18/2021 1:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.9º C and 7.0º C.

Receipt Exceptions

The container labesl for every sample did not match the information listed on the Chain-of-Custody (COC):P14-S-55-5-10-2021 (580-103138-2), P14-S-56-5-10-2021 (580-103138-5), P14-S-57-5-10-2021 (580-103138-8), P14-S-58-24-30-2021 (580-103138-11), P14-S-59-41-47-2021 (580-103138-15), P14-S-60-40-46-2021 (580-103138-18), P14-S-61-5-10-2021 (580-103138-20), P14-S-62-5-10-2021 (580-103138-24), P14-S-63-5-10-2021 (580-103138-26), P14-S-64-5-10-2021 (580-103138-29), P14-S-65-5-10-2021 (580-103138-32), P14-S-66-5-10-2021 (580-103138-35), P14-S-67-5-10-2021 (580-103138-38), and P14-S-54-41-47-2021 (580-103138-42). The container label of every sample lists the sampling date 5/14/21, while the COC lists 5/17/21. The samples are logged in per COC.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-55-5-10-2021
Date Collected: 05/17/21 10:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-2
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.6		0.1		%			05/20/21 12:48	1
Percent Moisture	8.4		0.1		%			05/20/21 12:48	1

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-55-5-10-2021
Date Collected: 05/17/21 10:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-2
Matrix: Solid
Percent Solids: 91.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		0.45		mg/Kg	☼	05/19/21 20:02	05/20/21 13:22	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-56-5-10-2021
Date Collected: 05/17/21 10:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-5
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.8		0.1		%			05/20/21 12:48	1
Percent Moisture	13.2		0.1		%			05/20/21 12:48	1

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-56-5-10-2021
Date Collected: 05/17/21 10:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-5
Matrix: Solid
Percent Solids: 86.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4		0.40		mg/Kg	☼	05/19/21 20:02	05/20/21 13:26	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-57-5-10-2021
Date Collected: 05/17/21 11:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-8
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.6		0.1		%			05/20/21 12:48	1
Percent Moisture	10.4		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-57-5-10-2021
Date Collected: 05/17/21 11:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-8
Matrix: Solid
Percent Solids: 89.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.8		0.49		mg/Kg	☼	05/19/21 20:02	05/20/21 13:30	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-58-24-30-2021
Date Collected: 05/17/21 12:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.5		0.1		%			05/20/21 12:48	1
Percent Moisture	11.5		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-58-24-30-2021
Date Collected: 05/17/21 12:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-11
Matrix: Solid
Percent Solids: 88.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.32		mg/Kg	☼	05/19/21 20:02	05/20/21 13:34	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-59-41-47-2021
Date Collected: 05/17/21 12:47
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-15
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.9		0.1		%			05/20/21 12:48	1
Percent Moisture	19.1		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-59-41-47-2021
Date Collected: 05/17/21 12:47
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-15
Matrix: Solid
Percent Solids: 80.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.3		0.34		mg/Kg	☼	05/19/21 20:02	05/20/21 13:37	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-60-40-46-2021
Date Collected: 05/17/21 13:22
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-18
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.0		0.1		%			05/20/21 12:48	1
Percent Moisture	16.0		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-60-40-46-2021
Date Collected: 05/17/21 13:22
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-18
Matrix: Solid
Percent Solids: 84.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.2		0.31		mg/Kg	☼	05/19/21 20:02	05/20/21 13:41	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-61-5-16-2021
Date Collected: 05/17/21 13:41
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-20
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.1		0.1		%			05/20/21 12:48	1
Percent Moisture	6.9		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Job ID: 580-103138-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-61-5-16-2021
Lab Sample ID: 580-103138-20
Date Collected: 05/17/21 13:41
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 93.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		0.34		mg/Kg	☼	05/19/21 20:02	05/20/21 14:04	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-62-5-10-2021
Date Collected: 05/17/21 14:11
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-24
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.3		0.1		%			05/20/21 12:48	1
Percent Moisture	3.7		0.1		%			05/20/21 12:48	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-62-5-10-2021
Date Collected: 05/17/21 14:11
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-24
Matrix: Solid
Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.34		mg/Kg	☼	05/19/21 20:02	05/20/21 14:08	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-63-5-10-2021
Date Collected: 05/17/21 14:31
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-26
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.5		0.1		%			05/20/21 13:00	1
Percent Moisture	10.5		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-63-5-10-2021
Date Collected: 05/17/21 14:31
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-26
Matrix: Solid
Percent Solids: 89.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.6		0.47		mg/Kg	☼	05/19/21 20:02	05/20/21 14:12	10

Client: Anchor QEA LLC
Job ID: 580-103138-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-64-5-10-2021
Lab Sample ID: 580-103138-29
Date Collected: 05/17/21 15:21
Matrix: Solid
Date Received: 05/18/21 13:50

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.8		0.1		%			05/20/21 13:00	1
Percent Moisture	10.2		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-64-5-10-2021
Date Collected: 05/17/21 15:21
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-29
Matrix: Solid
Percent Solids: 89.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.1		0.34		mg/Kg	☼	05/19/21 20:02	05/20/21 14:16	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-65-5-10-2021
Date Collected: 05/17/21 15:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-32
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.0		0.1		%			05/20/21 13:00	1
Percent Moisture	5.0		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-65-5-10-2021
Date Collected: 05/17/21 15:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-32
Matrix: Solid
Percent Solids: 95.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		0.34		mg/Kg	☼	05/19/21 20:02	05/20/21 14:19	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-66-5-10-2021
Date Collected: 05/17/21 15:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-35
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.6		0.1		%			05/20/21 13:00	1
Percent Moisture	11.4		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-66-5-10-2021
Date Collected: 05/17/21 15:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-35
Matrix: Solid
Percent Solids: 88.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	57		0.37		mg/Kg	☼	05/19/21 20:02	05/20/21 14:23	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-67-5-10-2021
Date Collected: 05/17/21 16:21
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-38
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.2		0.1		%			05/20/21 13:00	1
Percent Moisture	11.8		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Job ID: 580-103138-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-67-5-10-2021
Lab Sample ID: 580-103138-38
Date Collected: 05/17/21 16:21
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 88.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	38		0.36		mg/Kg	☼	05/19/21 20:02	05/20/21 14:27	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-54-41-47-2021
Date Collected: 05/17/21 10:17
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-42
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.7		0.1		%			05/20/21 13:00	1
Percent Moisture	17.3		0.1		%			05/20/21 13:00	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-54-41-47-2021
Date Collected: 05/17/21 10:17
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-42
Matrix: Solid
Percent Solids: 82.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	17		0.39		mg/Kg	☼	05/19/21 20:02	05/20/21 14:31	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-356952/23-A
Matrix: Solid
Analysis Batch: 357065

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356952

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/Kg		05/19/21 20:02	05/20/21 12:21	10

Lab Sample ID: LCS 580-356952/24-A
Matrix: Solid
Analysis Batch: 357065

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356952

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			50.0	49.8		mg/Kg		100	80 - 120		

Lab Sample ID: LCSD 580-356952/25-A
Matrix: Solid
Analysis Batch: 357065

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356952

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			50.0	49.1		mg/Kg		98	80 - 120	1	20

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-55-5-10-2021
Date Collected: 05/17/21 10:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-55-5-10-2021
Date Collected: 05/17/21 10:36
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-2
Matrix: Solid
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:22	FCW	FGS SEA

Client Sample ID: P14-S-56-5-10-2021
Date Collected: 05/17/21 10:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-56-5-10-2021
Date Collected: 05/17/21 10:56
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-5
Matrix: Solid
Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:26	FCW	FGS SEA

Client Sample ID: P14-S-57-5-10-2021
Date Collected: 05/17/21 11:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-57-5-10-2021
Date Collected: 05/17/21 11:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-8
Matrix: Solid
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:30	FCW	FGS SEA

Client Sample ID: P14-S-58-24-30-2021
Date Collected: 05/17/21 12:01
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-58-24-30-2021
Lab Sample ID: 580-103138-11
Date Collected: 05/17/21 12:01
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:34	FCW	FGS SEA

Client Sample ID: P14-S-59-41-47-2021
Lab Sample ID: 580-103138-15
Date Collected: 05/17/21 12:47
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-59-41-47-2021
Lab Sample ID: 580-103138-15
Date Collected: 05/17/21 12:47
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:37	FCW	FGS SEA

Client Sample ID: P14-S-60-40-46-2021
Lab Sample ID: 580-103138-18
Date Collected: 05/17/21 13:22
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-60-40-46-2021
Lab Sample ID: 580-103138-18
Date Collected: 05/17/21 13:22
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 13:41	FCW	FGS SEA

Client Sample ID: P14-S-61-5-16-2021
Lab Sample ID: 580-103138-20
Date Collected: 05/17/21 13:41
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-61-5-16-2021
Lab Sample ID: 580-103138-20
Date Collected: 05/17/21 13:41
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:04	FCW	FGS SEA

Client Sample ID: P14-S-62-5-10-2021
Lab Sample ID: 580-103138-24
Date Collected: 05/17/21 14:11
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 12:48	HDG	FGS SEA

Client Sample ID: P14-S-62-5-10-2021
Lab Sample ID: 580-103138-24
Date Collected: 05/17/21 14:11
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:08	FCW	FGS SEA

Client Sample ID: P14-S-63-5-10-2021
Lab Sample ID: 580-103138-26
Date Collected: 05/17/21 14:31
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Client Sample ID: P14-S-63-5-10-2021
Lab Sample ID: 580-103138-26
Date Collected: 05/17/21 14:31
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:12	FCW	FGS SEA

Client Sample ID: P14-S-64-5-10-2021
Lab Sample ID: 580-103138-29
Date Collected: 05/17/21 15:21
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-64-5-10-2021
Lab Sample ID: 580-103138-29
Date Collected: 05/17/21 15:21
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:16	FCW	FGS SEA

Client Sample ID: P14-S-65-5-10-2021
Lab Sample ID: 580-103138-32
Date Collected: 05/17/21 15:36
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Client Sample ID: P14-S-65-5-10-2021
Lab Sample ID: 580-103138-32
Date Collected: 05/17/21 15:36
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:19	FCW	FGS SEA

Client Sample ID: P14-S-66-5-10-2021
Lab Sample ID: 580-103138-35
Date Collected: 05/17/21 15:56
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Client Sample ID: P14-S-66-5-10-2021
Lab Sample ID: 580-103138-35
Date Collected: 05/17/21 15:56
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:23	FCW	FGS SEA

Client Sample ID: P14-S-67-5-10-2021
Lab Sample ID: 580-103138-38
Date Collected: 05/17/21 16:21
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Client Sample ID: P14-S-67-5-10-2021

Lab Sample ID: 580-103138-38
Date Collected: 05/17/21 16:21
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:27	FCW	FGS SEA

Client Sample ID: P14-S-54-41-47-2021

Lab Sample ID: 580-103138-42
Date Collected: 05/17/21 10:17
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356975	05/20/21 13:00	HDG	FGS SEA

Client Sample ID: P14-S-54-41-47-2021

Lab Sample ID: 580-103138-42
Date Collected: 05/17/21 10:17
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			356952	05/19/21 20:02	TMH	FGS SEA
Total/NA	Analysis	6020B		10	357065	05/20/21 14:31	FCW	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103138-1
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103138-2	P14-S-55-5-10-2021	Solid	05/17/21 10:36	05/18/21 13:50	
580-103138-5	P14-S-56-5-10-2021	Solid	05/17/21 10:56	05/18/21 13:50	
580-103138-8	P14-S-57-5-10-2021	Solid	05/17/21 11:01	05/18/21 13:50	
580-103138-11	P14-S-58-24-30-2021	Solid	05/17/21 12:01	05/18/21 13:50	
580-103138-15	P14-S-59-41-47-2021	Solid	05/17/21 12:47	05/18/21 13:50	
580-103138-18	P14-S-60-40-46-2021	Solid	05/17/21 13:22	05/18/21 13:50	
580-103138-20	P14-S-61-5-16-2021	Solid	05/17/21 13:41	05/18/21 13:50	
580-103138-24	P14-S-62-5-10-2021	Solid	05/17/21 14:11	05/18/21 13:50	
580-103138-26	P14-S-63-5-10-2021	Solid	05/17/21 14:31	05/18/21 13:50	
580-103138-29	P14-S-64-5-10-2021	Solid	05/17/21 15:21	05/18/21 13:50	
580-103138-32	P14-S-65-5-10-2021	Solid	05/17/21 15:36	05/18/21 13:50	
580-103138-35	P14-S-66-5-10-2021	Solid	05/17/21 15:56	05/18/21 13:50	
580-103138-38	P14-S-67-5-10-2021	Solid	05/17/21 16:21	05/18/21 13:50	
580-103138-42	P14-S-54-41-47-2021	Solid	05/17/21 10:17	05/18/21 13:50	

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, W[illegible]8424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 1 of 4
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Therm. ID: IR8 Cor: 4.9 ° Unc: 5.4 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx: [illegible]te
UPS: [illegible]id
Lab Cour:
Other: Citro [illegible] Acid

Therm. ID: IR8 Cor: 7.0 ° Unc: 7.5 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other:

Non Codes:
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Nu	Special Instructions/Note:
		5/17/21											
				Preservation Code:				N	N	N	N		
-1	P14-S-55-0-5-2021	5/14/21	1035	G	S						X		*HOLD ALC
	P14-S-55-5-10-2021	5/14/21	1036		S			X	X	X			TCLP + SPLP
-3	P14-S-55-30-36-2021	5/14/21	1032		S						X		UNTIL TOTAL As
	P14-S-56-0-5-2021	5/14/21	1055		S						X		RESULTS +
-5	P14-S-56-5-10-2021	5/14/21	1056		S			X	X	X			REQUEST FROM
	P14-S-56-30-36-2021	5/14/21	1057		S						X		AQ*
-7	P14-S-57-0-5-2021	5/14/21	1100		S						X		
	P14-S-57-5-10-2021	5/14/21	1101		S			X	X	X			
-9	P14-S-57-30-36-2021	5/14/21	1102		S						X		
	P14-S-58-0-5-2021	5/14/21	1200		S						X		
-11	P14-S-58-24-30-2021	5/14/21	1261		S			X	X	X			

SP

580-103138 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: SP	Date/Time: 5/18/21 1350	Company: AQ	Received by: Tom Stark
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Received by: Tom Stark	Date/Time: 5/18/21 1350	Company: EFGS
Received by:	Date/Time:	Company
Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 2 of 4
Company: Anchor QEA LLC	PWSID:			Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21		Preservation Code:				N	N	N	N		
P14-S-58-30-36-2021	5/14/21	1202	G	S						X		SEE PG 1
-13 P14-S-59-0-5-2021	5/14/21	1245		S						X		
P14-S-59-35-41-2021	5/14/21	1246		S						X		
-15 P14-S-59-41-47-2021	5/14/21	1247		S			X	X	X			SP
P14-S-60-0-5-2021	5/14/21	1320		S						X		
-17 P14-S-60-32-40-2021	5/14/21	1321		S						X		
P14-S-60-46-46-2021	5/14/21	1322		S			X	X	X			SP
-19 P14-S-61-0-5-2021	5/14/21	1340		S						X		
P14-S-61-5-11-2021	5/14/21	1341		S			X	X	X			
-21 P14-S-61-30-36-2021	5/14/21	1342		S						X		
P14-S-62-30-36-2021	5/14/21	1412	V	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	SP	5/18/21 1356	AQ	Tom Blunk	5/18/21 1350	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21											
	Preservation Code:						N	N	N	N		
-23 P14-S-02-0-5-2021	5/14/21	1410	G	S						X		SEE PS 1
P14-S-02-5-10-2021	5/14/21	1411		S			X	X	X			
-25 P14-S-03-0-5-2021	5/14/21	1430		S						X		
P14-S-03-5-10-2021	5/14/21	1431		S			X	X	X			
-27 P14-S-03-30-36-2021	5/14/21	1432		S						X		
P14-S-04-0-5-2021	5/14/21	1520		S						X		
-29 P14-S-04-5-10-2021	5/14/21	1521		S			X	X	X			
P14-S-04-30-36-2021	5/14/21	1522		S						X		
-31 P14-S-05-0-5-2021	5/14/21	1535		S						X		
P14-S-05-5-10-2021	5/14/21	1536		S			X	X	X			
-33 P14-S-05-30-36-2021	5/14/21	1537	N	S						X		

SP

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	SCP 5/18/21	5/18/21 1350	AQ	Tom Blanton	5/18/21 1350	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th St East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 4
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			Preservation Codes:
City: Seattle	TAT Requested (days): 3 DAY (TOTAL As)			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			Other:
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21											
			Preservation Code:				N	N	N	N		
P14-S-66-0-5-2021	5/14/21	1555	G	S						X		SP PS 1
-35 P14-S-66-5-10-2021	5/14/21	1556		S			X	X	X			
P14-S-66-30-36-2021	5/14/21	1557		S						X		
-37 P14-S-67-0.5-2021	5/14/21	1620		S						X		
P14-S-67-5-10-2021	5/14/21	1621		S			X	X	X			
-39 P14-S-67-30-36-2021	5/14/21	1622		S						X		
P14-S-54-0-5-2021	5/14/21	1015		S						X		SP
-41 P14-S-54-29-41-2021	5/14/21	1016		S						X		SP
P14-S-54-41-47-2021	5/14/21	1017	↓	S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
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Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SP	5/18/21 1350	AQ	Tom Blank	5/18/21 1350	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103138-1

Login Number: 103138
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103138-2
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

Authorized for release by:
6/8/2021 4:21:28 PM

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 6
Chronicle 8
Certification Summary 9
Sample Summary 10
Chain of Custody 11
Receipt Checklists 15

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-2

Job ID: 580-103138-2

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103138-2

Comments
No additional comments.

Receipt
The samples were received on 5/18/2021 1:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.9º C and 7.0º C.

Receipt Exceptions
The container labels for every sample did not match the information listed on the Chain-of-Custody (COC). The container label of every sample lists the sampling date 5/14/21, while the COC lists 5/17/21. The samples are logged in per COC.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Job ID: 580-103138-2
Project/Site: Parcel 14 Soil Investigation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Anchor QEA LLC
Job ID: 580-103138-2
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-66-5-10-2021
Lab Sample ID: 580-103138-35
Date Collected: 05/17/21 15:56
Matrix: Solid
Date Received: 05/18/21 13:50

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:35	06/07/21 12:29	1

Method: 6010D - Metals (ICP) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 23:34	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-358332/14-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 22:55	1

Lab Sample ID: MB 580-358332/15-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:32	06/07/21 22:51	1

Lab Sample ID: LCS 580-358332/16-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358332

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.02		mg/L		102	80 - 120

Lab Sample ID: LCSD 580-358332/17-A
Matrix: Solid
Analysis Batch: 358569

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358332

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.02		mg/L		102	80 - 120	0	20

Lab Sample ID: MB 580-358333/15-A
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		06/04/21 12:36	06/07/21 12:20	1

Lab Sample ID: LCS 580-358333/16-A
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCSD 580-358333/17-A
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.04		mg/L		104	80 - 120	1	20

Lab Sample ID: 580-103138-35 MS
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: P14-S-66-5-10-2021
Prep Type: TCLP
Prep Batch: 358333

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.04		mg/L		104	80 - 120

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-2

Method: 6010D - Metals (ICP)

Lab Sample ID: 580-103138-35 MSD
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: P14-S-66-5-10-2021
Prep Type: TCLP
Prep Batch: 358333

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.02		mg/L		102	80 - 120	2	20

Lab Sample ID: 580-103138-35 DU
Matrix: Solid
Analysis Batch: 358503

Client Sample ID: P14-S-66-5-10-2021
Prep Type: TCLP
Prep Batch: 358333

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	ND			ND		mg/L				NC	20

Lab Chronicle

Client: Anchor QEA LLC
Job ID: 580-103138-2
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-66-5-10-2021
Lab Sample ID: 580-103138-35
Date Collected: 05/17/21 15:56
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			358177	06/03/21 09:43	JLS	FGS SEA
SPLP West	Prep	3010A			358332	06/04/21 12:32	JLS	FGS SEA
SPLP West	Analysis	6010D		1	358569	06/07/21 23:34	TMH	FGS SEA
TCLP	Leach	1311			358165	06/03/21 09:19	JLS	FGS SEA
TCLP	Prep	3010A			358333	06/04/21 12:35	JLS	FGS SEA
TCLP	Analysis	6010D		1	358503	06/07/21 12:29	TMH	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103138-2
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103138-35	P14-S-66-5-10-2021	Solid	05/17/21 15:56	05/18/21 13:50	

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, W[illegible]8424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 1 of 4
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Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Therm. ID: IR8 Cor: 4.9 ° Unc: 5.4 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx: [illegible]te
UPS: [illegible]id
Lab Cour:
Other: Citro [illegible]Acid

Therm. ID: IR8 Cor: 7.0 ° Unc: 7.5 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other:

Non Codes:
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Nu	Special Instructions/Note:
		5/17/21											
				Preservation Code:				N	N	N	N		
-1	P14-S-55-0-5-2021	5/14/21	1035	G	S						X		*HOLD AIC
	P14-S-55-5-10-2021	5/14/21	1036		S			X	X	X			TCLP + SPLP
-3	P14-S-55-30-36-2021	5/14/21	1032		S						X		UNTIL TOTAL As
	P14-S-56-0-5-2021	5/14/21	1055		S						X		RESULTS +
-5	P14-S-56-5-10-2021	5/14/21	1056		S			X	X	X			REQUEST FROM
	P14-S-56-30-36-2021	5/14/21	1057		S						X		AQ*
-7	P14-S-57-0-5-2021	5/14/21	1100		S						X		
	P14-S-57-5-10-2021	5/14/21	1101		S			X	X	X			
-9	P14-S-57-30-36-2021	5/14/21	1102		S						X		
	P14-S-58-0-5-2021	5/14/21	1200		S						X		
-11	P14-S-58-24-30-2021	5/14/21	1261		S			X	X	X			

SP

580-103138 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: SP	Date/Time: 5/18/21 1350	Company: AQ	Received by: Tom Stark
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Date/Time:	Company
5/18/21 1350	EFGS
Date/Time:	Company
Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
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City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
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C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21		Preservation Code:				N	N	N	N		
P14-S-58-30-36-2021	5/14/21	1202	G	S						X		SEE PG 1
-13 P14-S-59-0-5-2021	5/14/21	1245		S						X		
P14-S-59-35-41-2021	5/14/21	1246		S						X		
-15 P14-S-59-41-47-2021	5/14/21	1247		S			X	X	X			SP
P14-S-60-0-5-2021	5/14/21	1320		S						X		
-17 P14-S-60-32-40-2021	5/14/21	1321		S						X		
P14-S-60-46-46-2021	5/14/21	1322		S			X	X	X			SP
-19 P14-S-61-0-5-2021	5/14/21	1340		S						X		
P14-S-61-5-11-2021	5/14/21	1341		S			X	X	X			
-21 P14-S-61-30-36-2021	5/14/21	1342		S						X		
P14-S-62-30-36-2021	5/14/21	1412	V	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	SP	5/18/21 1356	AQ	Tom Blunk	5/18/21 1350	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21		Preservation Code:				N	N	N	N		
-23 P14-S-02-0-5-2021	5/14/21	1410	G	S						X		SEE PS 1
P14-S-02-5-10-2021	5/14/21	1411		S			X	X	X			
-25 P14-S-03-0-5-2021	5/14/21	1430		S						X		
P14-S-03-5-10-2021	5/14/21	1431		S			X	X	X			
-27 P14-S-03-30-36-2021	5/14/21	1432		S						X		
P14-S-04-0-5-2021	5/14/21	1520		S						X		
-29 P14-S-04-5-10-2021	5/14/21	1521		S			X	X	X			
P14-S-04-30-36-2021	5/14/21	1522		S						X		
-31 P14-S-05-0-5-2021	5/14/21	1535		S						X		
P14-S-05-5-10-2021	5/14/21	1536		S			X	X	X			
-33 P14-S-05-30-36-2021	5/14/21	1537	N	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	SCP 5/18/21	5/18/21 1350	AQ	Tom Blanton	5/18/21 1350	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 4
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			Preservation Codes:
City: Seattle	TAT Requested (days): 3 DAY (TOTAL As)			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			Other:
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21											
			Preservation Code:				N	N	N	N		
P14-S-66-0-5-2021	5/14/21	1555	G	S						X		SP PS 1
-35 P14-S-66-5-16-2021	5/14/21	1556		S			X	X	X			
P14-S-66-30-36-2021	5/14/21	1557		S						X		
-37 P14-S-67-0.5-2021	5/14/21	1626		S						X		
P14-S-67-5-10-2021	5/14/21	1621		S			X	X	X			
-39 P14-S-67-30-36-2021	5/14/21	1622		S						X		SP
P14-S-54-0-5-2021	5/14/21	1015		S						X		
-41 P14-S-54-29-41-2021	5/14/21	1016		S						X		SP
P14-S-54-41-47-2021	5/14/21	1017	↓	S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: SP	Date/Time: 5/18/21 1350	Company: AQ	Received by: Tom Blank	Date/Time: 5/18/21 1350	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103138-2

Login Number: 103138
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103138-3
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

Authorized for release by:
5/25/2021 1:27:18 PM
Pauline Matlock, Project Manager
(253)922-2310
pauline.matlock@eurofinset.com

Designee for

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 9
Chronicle 10
Certification Summary 11
Sample Summary 12
Chain of Custody 13
Receipt Checklists 17

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Job ID: 580-103138-3

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103138-3

Comments
No additional comments.

Receipt
The samples were received on 5/18/2021 1:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.9º C and 7.0º C.

Receipt Exceptions
The container labels for every sample did not match the information listed on the Chain-of-Custody (COC): The container label of every sample lists the sampling date 5/14/21, while the COC lists 5/17/21. The samples are logged in per the COC.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Job ID: 580-103138-3
Project/Site: Parcel 14 Soil Investigation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Client Sample ID: P14-S-66-30-36-2021
Date Collected: 05/17/21 15:57
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-36
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.8		0.1		%			05/24/21 09:58	1
Percent Moisture	19.2		0.1		%			05/24/21 09:58	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Client Sample ID: P14-S-66-30-36-2021
Date Collected: 05/17/21 15:57
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-36
Matrix: Solid
Percent Solids: 80.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.44		mg/Kg	☼	05/22/21 08:19	05/25/21 04:28	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Client Sample ID: P14-S-67-30-36-2021
Date Collected: 05/17/21 16:22
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-39
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69.2		0.1		%			05/24/21 09:58	1
Percent Moisture	30.8		0.1		%			05/24/21 09:58	1

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Client Sample ID: P14-S-67-30-36-2021
Date Collected: 05/17/21 16:22
Date Received: 05/18/21 13:50

Lab Sample ID: 580-103138-39
Matrix: Solid
Percent Solids: 69.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.9		0.55		mg/Kg	☼	05/22/21 08:19	05/25/21 04:32	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-357165/23-A
Matrix: Solid
Analysis Batch: 357347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357165

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25		mg/Kg		05/22/21 08:19	05/25/21 03:38	5

Lab Sample ID: LCS 580-357165/24-A
Matrix: Solid
Analysis Batch: 357347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357165

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			50.0	50.5		mg/Kg		101	80 - 120		

Lab Sample ID: LCSD 580-357165/25-A
Matrix: Solid
Analysis Batch: 357347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 357165

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			50.0	50.1		mg/Kg		100	80 - 120	1	20

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Client Sample ID: P14-S-66-30-36-2021
Lab Sample ID: 580-103138-36
Date Collected: 05/17/21 15:57
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	357238	05/24/21 09:58	HDG	FGS SEA

Client Sample ID: P14-S-66-30-36-2021
Lab Sample ID: 580-103138-36
Date Collected: 05/17/21 15:57
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 80.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			357165	05/22/21 08:19	JCP	FGS SEA
Total/NA	Analysis	6020B		10	357347	05/25/21 04:28	FCW	FGS SEA

Client Sample ID: P14-S-67-30-36-2021
Lab Sample ID: 580-103138-39
Date Collected: 05/17/21 16:22
Matrix: Solid
Date Received: 05/18/21 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	357238	05/24/21 09:58	HDG	FGS SEA

Client Sample ID: P14-S-67-30-36-2021
Lab Sample ID: 580-103138-39
Date Collected: 05/17/21 16:22
Matrix: Solid
Date Received: 05/18/21 13:50
Percent Solids: 69.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			357165	05/22/21 08:19	JCP	FGS SEA
Total/NA	Analysis	6020B		10	357347	05/25/21 04:32	FCW	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103138-3
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103138-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103138-36	P14-S-66-30-36-2021	Solid	05/17/21 15:57	05/18/21 13:50	
580-103138-39	P14-S-67-30-36-2021	Solid	05/17/21 16:22	05/18/21 13:50	

Eurofins EGS, Seattle
5755 8th S[illegible]ast
Tacoma, W[illegible]8424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custo[illegible]ecord

eurofins En[illegible]nt Testing Ame[illegible]

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 1 of 4
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Therm. ID: IR8 Cor: 4.9 ° Unc: 5.4 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx: [illegible]te
UPS: [illegible]id
Lab Cour:
Other: Citro [illegible]Acid

Therm. ID: IR8 Cor: 7.0 ° Unc: 7.5 °
Cooler Dsc: Lg Blue
Packing: other
Cust. Seal: Yes No
Blue Ice: Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other:

Non Codes:
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Nu	Special Instructions/Note:
		5/17/21											
				Preservation Code:				N	N	N	N		
-1	P14-S-55-0-5-2021	5/14/21	1035	G	S						X		*HOLD ALC
	P14-S-55-5-10-2021	5/14/21	1036		S			X	X	X			TCLP + SPLP
-3	P14-S-55-30-36-2021	5/14/21	1032		S						X		UNTIL TOTAL As
	P14-S-56-0-5-2021	5/14/21	1055		S						X		RESULTS +
-5	P14-S-56-5-10-2021	5/14/21	1056		S			X	X	X			REQUEST FROM
	P14-S-56-30-36-2021	5/14/21	1057		S						X		AQ*
-7	P14-S-57-0-5-2021	5/14/21	1100		S						X		
	P14-S-57-5-10-2021	5/14/21	1101		S			X	X	X			
-9	P14-S-57-30-36-2021	5/14/21	1102		S						X		
	P14-S-58-0-5-2021	5/14/21	1200		S						X		
-11	P14-S-58-24-30-2021	5/14/21	1261		S			X	X	X			

SP

580-103138 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: SP	Date/Time: 5/18/21 1350	Company: AQ	Received by: Tom Stark
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Received by:	Date/Time:	Company
Tom Stark	5/18/21 1350	EFGS

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 2 of 4
Company: Anchor QEA LLC	PWSID:			Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21		Preservation Code:				N	N	N	N		
P14-S-58-30-36-2021	5/14/21	1202	G	S						X		SEE PG 1
-13 P14-S-59-0-5-2021	5/14/21	1245		S						X		
P14-S-59-35-41-2021	5/14/21	1246		S						X		
-15 P14-S-59-41-47-2021	5/14/21	1247		S			X	X	X			SP
P14-S-60-0-5-2021	5/14/21	1320		S						X		
-17 P14-S-60-32-40-2021	5/14/21	1321		S						X		
P14-S-60-46-46-2021	5/14/21	1322		S			X	X	X			SP
-19 P14-S-61-0-5-2021	5/14/21	1340		S						X		
P14-S-61-5-11-2021	5/14/21	1341		S			X	X	X			
-21 P14-S-61-30-36-2021	5/14/21	1342		S						X		
P14-S-62-30-36-2021	5/14/21	1412	V	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	SP	5/18/21 1356	AQ	Tom Blunk	5/18/21 1350	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TGS, Seattle
5755 8th S[illegible]ast
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: Anchor QEA LLC	PWSID:			Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY (TOTAL AS)			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21											
	Sample Date		Preservation Code:				N	N	N	N		
-23 P14-S-02-0-5-2021	5/14/21	1410	G	S						X		SEE PS 1
P14-S-02-5-10-2021	5/14/21	1411		S			X	X	X			
-25 P14-S-03-0-5-2021	5/14/21	1430		S						X		
P14-S-03-5-10-2021	5/14/21	1431		S			X	X	X			
-27 P14-S-03-30-36-2021	5/14/21	1432		S						X		
P14-S-04-0-5-2021	5/14/21	1520		S						X		
-29 P14-S-04-5-10-2021	5/14/21	1521		S			X	X	X			
P14-S-04-30-36-2021	5/14/21	1522		S						X		
-31 P14-S-05-0-5-2021	5/14/21	1535		S						X		
P14-S-05-5-10-2021	5/14/21	1536		S			X	X	X			
-33 P14-S-05-30-36-2021	5/14/21	1537	N	S						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	SCP 5/18/21	5/18/21 1350	AQ	Tom Blanton	5/18/21 1350	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Phone (425) 420-9210

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: SP	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43410-13885.1
Client Contact: Cindy Fields	Phone:	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 4
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103138
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			Preservation Codes:
City: Seattle	TAT Requested (days): 3 DAY (TOTAL As)			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: 200092-01.11			Other:
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Total Arsenic	6010D - TCLP Arsenic	6010D - SPLP Arsenic	Archive	Total Number of containers	Special Instructions/Note:
	5/17/21											
			Preservation Code:				N	N	N	N		
P14-S-66-0-5-2021	5/14/21	1555	G	S						X		SP PS 1
-35 P14-S-66-5-10-2021	5/14/21	1556		S			X	X	X			
P14-S-66-30-36-2021	5/14/21	1557		S						X		
-37 P14-S-67-0.5-2021	5/14/21	1626		S						X		
P14-S-67-5-10-2021	5/14/21	1621		S			X	X	X			
-39 P14-S-67-30-36-2021	5/14/21	1622		S						X		
P14-S-54-0-5-2021	5/14/21	1015		S						X		SP
-41 P14-S-54-29-41-2021	5/14/21	1016		S						X		SP
P14-S-54-41-47-2021	5/14/21	1017	↓	S			X	X	X			
P14-S- - -2021	5/14/21			S								
P14-S- - -2021	5/14/21			S								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
SP	5/18/21 1350	AQ	Tom Blank	5/18/21 1350	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103138-3

Login Number: 103138
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-103508-1
Client Project/Site: Parcel 14 Soil Investigation

For:
Anchor QEA LLC
1201 3rd Ave
Suite 2600
Seattle, Washington 98101

Attn: Cindy Fields

Authorized for release by:
6/7/2021 3:41:56 PM

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions 4
Client Sample Results 5
QC Sample Results 89
Chronicle 92
Certification Summary 106
Sample Summary 107
Chain of Custody 108
Receipt Checklists 113

Case Narrative

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Job ID: 580-103508-1

Laboratory: Eurofins FGS, Seattle

Narrative

Job Narrative
580-103508-1

Comments
No additional comments.

Receipt
The samples were received on 6/2/2021 3:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.3º C and 0.8º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-41-18-24-2021
Date Collected: 06/01/21 13:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1		%			06/03/21 09:49	1
Percent Moisture	12.3		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-41-18-24-2021
Date Collected: 06/01/21 13:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-1
Matrix: Solid
Percent Solids: 87.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.52		mg/Kg	☼	06/03/21 16:23	06/04/21 22:10	10

Client: Anchor QEA LLC
Job ID: 580-103508-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-66-18-24-2021
Lab Sample ID: 580-103508-2
Date Collected: 06/01/21 13:45
Matrix: Solid
Date Received: 06/02/21 15:45

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.7		0.1		%			06/03/21 09:49	1
Percent Moisture	15.3		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-66-18-24-2021
Date Collected: 06/01/21 13:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-2
Matrix: Solid
Percent Solids: 84.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.49		mg/Kg	☼	06/03/21 16:23	06/04/21 22:52	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-67-18-24-2021
Date Collected: 06/01/21 13:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-3
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.3		0.1		%			06/03/21 09:49	1
Percent Moisture	11.7		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-67-18-24-2021
Date Collected: 06/01/21 13:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-3
Matrix: Solid
Percent Solids: 88.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.55		mg/Kg	☼	06/03/21 16:23	06/04/21 22:56	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-71-21-2021
Date Collected: 06/01/21 12:10
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-4
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.0		0.1		%			06/03/21 09:49	1
Percent Moisture	9.0		0.1		%			06/03/21 09:49	1

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-71-21-2021
Date Collected: 06/01/21 12:10
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-4
Matrix: Solid
Percent Solids: 91.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		0.41		mg/Kg	☼	06/03/21 16:23	06/04/21 23:00	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-68-27-2021
Date Collected: 06/01/21 13:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-5
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.5		0.1		%			06/03/21 09:49	1
Percent Moisture	12.5		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-68-27-2021
Date Collected: 06/01/21 13:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-5
Matrix: Solid
Percent Solids: 87.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.44		mg/Kg	☼	06/03/21 16:23	06/04/21 23:04	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-69-27-2021
Date Collected: 06/01/21 13:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-6
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.5		0.1		%			06/03/21 09:49	1
Percent Moisture	9.5		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-69-27-2021
Date Collected: 06/01/21 13:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-6
Matrix: Solid
Percent Solids: 90.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.2		0.40		mg/Kg	☼	06/03/21 16:23	06/04/21 23:07	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-70-21-2021
Date Collected: 06/01/21 13:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-7
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.7		0.1		%			06/03/21 09:49	1
Percent Moisture	11.3		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-70-21-2021
Date Collected: 06/01/21 13:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-7
Matrix: Solid
Percent Solids: 88.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.8		0.55		mg/Kg	☼	06/03/21 16:23	06/04/21 23:11	10

Client Sample Results

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-72-21-2021
Date Collected: 06/01/21 12:05
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-8
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.1		0.1		%			06/03/21 09:49	1
Percent Moisture	5.9		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-72-21-2021
Date Collected: 06/01/21 12:05
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-8
Matrix: Solid
Percent Solids: 94.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.43		mg/Kg	☼	06/03/21 16:23	06/04/21 23:15	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-73-21-2021
Date Collected: 06/01/21 12:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-9
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.5		0.1		%			06/03/21 09:49	1
Percent Moisture	25.5		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-73-21-2021
Date Collected: 06/01/21 12:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-9
Matrix: Solid
Percent Solids: 74.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2		0.61		mg/Kg	☼	06/03/21 16:23	06/04/21 23:19	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-74-21-2021
Date Collected: 06/01/21 11:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-10
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.0		0.1		%			06/03/21 09:49	1
Percent Moisture	7.0		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-74-21-2021
Date Collected: 06/01/21 11:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-10
Matrix: Solid
Percent Solids: 93.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.42		mg/Kg	☼	06/03/21 16:23	06/04/21 23:23	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-75-21-2021
Date Collected: 06/01/21 11:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.3		0.1		%			06/03/21 09:49	1
Percent Moisture	16.7		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-75-21-2021
Date Collected: 06/01/21 11:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-11
Matrix: Solid
Percent Solids: 83.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.5		0.52		mg/Kg	☼	06/03/21 16:23	06/04/21 22:06	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-76-21-2021
Date Collected: 06/01/21 11:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-12
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.9		0.1		%			06/03/21 09:49	1
Percent Moisture	11.1		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-76-21-2021
Date Collected: 06/01/21 11:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-12
Matrix: Solid
Percent Solids: 88.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		0.42		mg/Kg	☼	06/03/21 16:23	06/05/21 02:12	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-77-18-2021
Date Collected: 06/01/21 11:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-13
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.0		0.1		%			06/03/21 09:49	1
Percent Moisture	8.0		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-77-18-2021
Date Collected: 06/01/21 11:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-13
Matrix: Solid
Percent Solids: 92.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.41		mg/Kg	☼	06/03/21 16:23	06/05/21 02:16	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-78-5-10-2021
Date Collected: 06/01/21 11:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-14
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.6		0.1		%			06/03/21 09:49	1
Percent Moisture	3.4		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-78-5-10-2021
Date Collected: 06/01/21 11:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-14
Matrix: Solid
Percent Solids: 96.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.8		0.51		mg/Kg	☼	06/03/21 16:23	06/05/21 02:20	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-78-18-24-2021
Date Collected: 06/01/21 11:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-15
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.0		0.1		%			06/03/21 09:49	1
Percent Moisture	10		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-78-18-24-2021
Date Collected: 06/01/21 11:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-15
Matrix: Solid
Percent Solids: 90.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.6		0.52		mg/Kg	☼	06/03/21 16:23	06/05/21 02:24	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-80-5-10-2021
Date Collected: 06/01/21 10:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-20
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.4		0.1		%			06/03/21 09:49	1
Percent Moisture	7.6		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-80-5-10-2021
Date Collected: 06/01/21 10:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-20
Matrix: Solid
Percent Solids: 92.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		0.49		mg/Kg	☼	06/03/21 16:23	06/05/21 02:27	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-80-18-24-2021
Date Collected: 06/01/21 10:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-21
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.6		0.1		%			06/03/21 09:49	1
Percent Moisture	11.4		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-80-18-24-2021
Date Collected: 06/01/21 10:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-21
Matrix: Solid
Percent Solids: 88.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		0.52		mg/Kg	☼	06/03/21 16:23	06/05/21 02:31	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-82-21-2021
Date Collected: 06/01/21 10:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-23
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.8		0.1		%			06/03/21 09:49	1
Percent Moisture	13.2		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-82-21-2021
Date Collected: 06/01/21 10:25
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-23
Matrix: Solid
Percent Solids: 86.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.52		mg/Kg	☼	06/03/21 16:23	06/05/21 02:35	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-83-21-2021
Date Collected: 06/01/21 10:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-24
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.4		0.1		%			06/03/21 09:49	1
Percent Moisture	13.6		0.1		%			06/03/21 09:49	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-83-21-2021
Date Collected: 06/01/21 10:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-24
Matrix: Solid
Percent Solids: 86.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	85	F1	0.37		mg/Kg	☼	06/04/21 09:52	06/04/21 23:50	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-84-12-2021
Date Collected: 06/01/21 10:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-25
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	59.8		0.1		%			06/03/21 09:52	1
Percent Moisture	40.2		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-84-12-2021
Date Collected: 06/01/21 10:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-25
Matrix: Solid
Percent Solids: 59.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.1		0.57		mg/Kg	☼	06/04/21 09:52	06/05/21 00:32	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-86-12-2021
Date Collected: 06/01/21 10:10
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-26
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.0		0.1		%			06/03/21 09:52	1
Percent Moisture	8.0		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-86-12-2021
Date Collected: 06/01/21 10:10
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-26
Matrix: Solid
Percent Solids: 92.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.44		mg/Kg	☼	06/04/21 09:52	06/05/21 00:36	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-87-12-2021
Date Collected: 06/01/21 10:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-27
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1		%			06/03/21 09:52	1
Percent Moisture	16.4		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-87-12-2021
Date Collected: 06/01/21 10:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-27
Matrix: Solid
Percent Solids: 83.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		0.36		mg/Kg	☼	06/04/21 09:52	06/05/21 00:40	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-88-15-2021
Date Collected: 06/01/21 09:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-28
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.8		0.1		%			06/03/21 09:52	1
Percent Moisture	21.2		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-88-15-2021
Date Collected: 06/01/21 09:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-28
Matrix: Solid
Percent Solids: 78.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.52		mg/Kg	☼	06/04/21 09:52	06/05/21 00:44	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-89-15-2021
Date Collected: 06/01/21 09:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-29
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.9		0.1		%			06/03/21 09:52	1
Percent Moisture	13.1		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-89-15-2021
Date Collected: 06/01/21 09:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-29
Matrix: Solid
Percent Solids: 86.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.0		0.39		mg/Kg	☼	06/04/21 09:52	06/05/21 00:47	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-91-15-2021
Date Collected: 06/01/21 09:15
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-30
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.0		0.1		%			06/03/21 09:52	1
Percent Moisture	4.0		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-91-15-2021
Date Collected: 06/01/21 09:15
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-30
Matrix: Solid
Percent Solids: 96.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.32		mg/Kg	☼	06/04/21 09:52	06/05/21 00:51	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-93-15-2021
Date Collected: 06/01/21 09:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-31
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.1		0.1		%			06/03/21 09:52	1
Percent Moisture	7.9		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-93-15-2021
Date Collected: 06/01/21 09:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-31
Matrix: Solid
Percent Solids: 92.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.32		mg/Kg	☼	06/04/21 09:52	06/05/21 00:55	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-94-15-2021
Date Collected: 06/01/21 09:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-32
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.5		0.1		%			06/03/21 09:52	1
Percent Moisture	4.5		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-94-15-2021
Date Collected: 06/01/21 09:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-32
Matrix: Solid
Percent Solids: 95.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.35		mg/Kg	☼	06/04/21 09:52	06/05/21 00:59	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-95-15-2021
Date Collected: 06/01/21 09:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-33
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.1		0.1		%			06/03/21 09:52	1
Percent Moisture	7.9		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-95-15-2021
Date Collected: 06/01/21 09:55
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-33
Matrix: Solid
Percent Solids: 92.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.41		mg/Kg	☼	06/04/21 09:52	06/05/21 01:22	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-96-18-2021
Date Collected: 06/01/21 11:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-34
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.7		0.1		%			06/03/21 09:52	1
Percent Moisture	7.3		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-96-18-2021
Date Collected: 06/01/21 11:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-34
Matrix: Solid
Percent Solids: 92.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.34		mg/Kg	☼	06/04/21 09:52	06/04/21 23:46	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-97-5-10-2021
Date Collected: 06/01/21 14:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-35
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.9		0.1		%			06/03/21 09:52	1
Percent Moisture	5.1		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-97-5-10-2021
Date Collected: 06/01/21 14:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-35
Matrix: Solid
Percent Solids: 94.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6		0.35		mg/Kg	☼	06/04/21 09:52	06/05/21 01:26	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-97-18-24-2021
Date Collected: 06/01/21 14:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-36
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.9		0.1		%			06/03/21 09:52	1
Percent Moisture	6.1		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-97-18-24-2021
Date Collected: 06/01/21 14:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-36
Matrix: Solid
Percent Solids: 93.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.39		mg/Kg	☼	06/04/21 09:52	06/05/21 01:30	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-98-5-15-2021
Date Collected: 06/01/21 15:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-38
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.2		0.1		%			06/03/21 09:52	1
Percent Moisture	6.8		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-98-5-15-2021
Date Collected: 06/01/21 15:00
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-38
Matrix: Solid
Percent Solids: 93.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.3		0.36		mg/Kg	☼	06/04/21 09:52	06/05/21 01:34	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-98-24--2021
Date Collected: 06/01/21 15:05
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-39
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.9		0.1		%			06/03/21 09:52	1
Percent Moisture	10.1		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-98-24--2021
Date Collected: 06/01/21 15:05
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-39
Matrix: Solid
Percent Solids: 89.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.46		mg/Kg	☼	06/04/21 09:52	06/05/21 01:37	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-99-5-10-2021
Date Collected: 06/01/21 15:15
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-41
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.6		0.1		%			06/03/21 09:52	1
Percent Moisture	7.4		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-99-5-10-2021
Date Collected: 06/01/21 15:15
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-41
Matrix: Solid
Percent Solids: 92.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.4		0.32		mg/Kg	☼	06/04/21 09:52	06/05/21 01:41	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-99-18-24-2021
Date Collected: 06/01/21 15:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-42
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.6		0.1		%			06/03/21 09:52	1
Percent Moisture	10.4		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-99-18-24-2021
Date Collected: 06/01/21 15:20
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-42
Matrix: Solid
Percent Solids: 89.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		0.31		mg/Kg	☼	06/04/21 09:52	06/05/21 01:45	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-100-5-10-2021
Date Collected: 06/01/21 14:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-44
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.3		0.1		%			06/03/21 09:52	1
Percent Moisture	8.7		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-100-5-10-2021
Date Collected: 06/01/21 14:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-44
Matrix: Solid
Percent Solids: 91.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0		0.35		mg/Kg	☼	06/04/21 09:52	06/05/21 01:49	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-100-18-24-2021
Date Collected: 06/01/21 14:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-45
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1		%			06/03/21 09:52	1
Percent Moisture	16.4		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Job ID: 580-103508-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-100-18-24-2021
Lab Sample ID: 580-103508-45
Date Collected: 06/01/21 14:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 83.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		0.43		mg/Kg	☼	06/04/21 09:58	06/04/21 21:20	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-101-15-2021
Date Collected: 06/01/21 15:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-47
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.0		0.1		%			06/03/21 09:52	1
Percent Moisture	12.0		0.1		%			06/03/21 09:52	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-101-15-2021
Date Collected: 06/01/21 15:30
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-47
Matrix: Solid
Percent Solids: 88.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.8		0.54		mg/Kg	☼	06/04/21 09:58	06/04/21 21:24	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-102-15-2021
Date Collected: 06/01/21 15:35
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-48
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1		%			06/03/21 09:53	1
Percent Moisture	20.3		0.1		%			06/03/21 09:53	1

Client: Anchor QEA LLC
Job ID: 580-103508-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-102-15-2021
Lab Sample ID: 580-103508-48
Date Collected: 06/01/21 15:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 79.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2		0.57		mg/Kg	☼	06/04/21 09:58	06/04/21 21:28	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-103-21-2021
Date Collected: 06/01/21 15:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-49
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.6		0.1		%			06/03/21 09:53	1
Percent Moisture	7.4		0.1		%			06/03/21 09:53	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-103-21-2021
Date Collected: 06/01/21 15:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-49
Matrix: Solid
Percent Solids: 92.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.47		mg/Kg	☼	06/04/21 09:58	06/04/21 21:32	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-104-12-2021
Date Collected: 06/01/21 15:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-50
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.3		0.1		%			06/03/21 09:53	1
Percent Moisture	9.7		0.1		%			06/03/21 09:53	1

Client: Anchor QEA LLC
Job ID: 580-103508-1
Project/Site: Parcel 14 Soil Investigation

Client Sample ID: P14-S-104-12-2021
Lab Sample ID: 580-103508-50
Date Collected: 06/01/21 15:40
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 90.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		0.51		mg/Kg	☼	06/04/21 09:58	06/04/21 21:36	10

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-79-36-40-2021
Date Collected: 06/01/21 11:17
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-51
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.0		0.1		%			06/03/21 09:53	1
Percent Moisture	14.0		0.1		%			06/03/21 09:53	1

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-79-36-40-2021
Date Collected: 06/01/21 11:17
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-51
Matrix: Solid
Percent Solids: 86.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.50		mg/Kg	☼	06/04/21 09:58	06/04/21 21:39	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-358248/22-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/Kg		06/03/21 16:23	06/04/21 22:02	10

Lab Sample ID: LCS 580-358248/23-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	50.5		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 580-358248/24-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358248

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	50.5		mg/Kg		101	80 - 120	0	20

Lab Sample ID: 580-103508-1 MS
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-41-18-24-2021
Prep Type: Total/NA
Prep Batch: 358248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.9		51.5	53.1		mg/Kg	☼	100	80 - 120

Lab Sample ID: 580-103508-1 MSD
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-41-18-24-2021
Prep Type: Total/NA
Prep Batch: 358248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.9		54.5	56.7		mg/Kg	☼	101	80 - 120	7	20

Lab Sample ID: 580-103508-1 DU
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-41-18-24-2021
Prep Type: Total/NA
Prep Batch: 358248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.9		1.60		mg/Kg	☼	16	20

Lab Sample ID: MB 580-358301/22-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358301

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/Kg		06/04/21 09:52	06/04/21 23:42	10

Lab Sample ID: LCS 580-358301/23-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	51.4		mg/Kg		103	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCSD 580-358301/24-A
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358301

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			50.0	51.1		mg/Kg		102	80 - 120	0	20

Lab Sample ID: 580-103508-24 MS
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-83-21-2021
Prep Type: Total/NA
Prep Batch: 358301

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	85	F1	36.4	94.3	F1	mg/Kg	☼	25	80 - 120

Lab Sample ID: 580-103508-24 MSD
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-83-21-2021
Prep Type: Total/NA
Prep Batch: 358301

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	85	F1	37.2	85.2	F1	mg/Kg	☼	-0.04	80 - 120	10	20

Lab Sample ID: 580-103508-24 DU
Matrix: Solid
Analysis Batch: 358450

Client Sample ID: P14-S-83-21-2021
Prep Type: Total/NA
Prep Batch: 358301

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	85	F1	54.2	F3	mg/Kg	☼	45	20

Lab Sample ID: MB 580-358304/12-A
Matrix: Solid
Analysis Batch: 358452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25		mg/Kg		06/04/21 09:58	06/04/21 20:30	5

Lab Sample ID: LCS 580-358304/13-A
Matrix: Solid
Analysis Batch: 358452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358304

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			50.0	48.9		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 580-358304/14-A
Matrix: Solid
Analysis Batch: 358452

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358304

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			50.0	49.4		mg/Kg		99	80 - 120	1	20

Method: 2540G - SM 2540G

Lab Sample ID: 580-103508-1 DU
Matrix: Solid
Analysis Batch: 358178

Client Sample ID: P14-S-41-18-24-2021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	87.7			87.6		%				0.2	20
Percent Moisture	12.3			12.4		%				1	20

Lab Sample ID: 580-103508-25 DU
Matrix: Solid
Analysis Batch: 358178

Client Sample ID: P14-S-84-12-2021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	59.8			60.8		%				2	20
Percent Moisture	40.2			39.2		%				2	20

Lab Sample ID: 580-103508-48 DU
Matrix: Solid
Analysis Batch: 358178

Client Sample ID: P14-S-102-15-2021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	79.7			79.6		%				0.05	20
Percent Moisture	20.3			20.4		%				0.2	20

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-41-18-24-2021
Date Collected: 06/01/21 13:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-41-18-24-2021
Date Collected: 06/01/21 13:50
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-1
Matrix: Solid
Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 22:10	FCW	FGS SEA

Client Sample ID: P14-S-66-18-24-2021
Date Collected: 06/01/21 13:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-66-18-24-2021
Date Collected: 06/01/21 13:45
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-2
Matrix: Solid
Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 22:52	FCW	FGS SEA

Client Sample ID: P14-S-67-18-24-2021
Date Collected: 06/01/21 13:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-67-18-24-2021
Date Collected: 06/01/21 13:40
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-3
Matrix: Solid
Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 22:56	FCW	FGS SEA

Client Sample ID: P14-S-71-21-2021
Date Collected: 06/01/21 12:10
Date Received: 06/02/21 15:45

Lab Sample ID: 580-103508-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-71-21-2021
Lab Sample ID: 580-103508-4
Date Collected: 06/01/21 12:10
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:00	FCW	FGS SEA

Client Sample ID: P14-S-68-27-2021
Lab Sample ID: 580-103508-5
Date Collected: 06/01/21 13:20
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-68-27-2021
Lab Sample ID: 580-103508-5
Date Collected: 06/01/21 13:20
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:04	FCW	FGS SEA

Client Sample ID: P14-S-69-27-2021
Lab Sample ID: 580-103508-6
Date Collected: 06/01/21 13:25
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-69-27-2021
Lab Sample ID: 580-103508-6
Date Collected: 06/01/21 13:25
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:07	FCW	FGS SEA

Client Sample ID: P14-S-70-21-2021
Lab Sample ID: 580-103508-7
Date Collected: 06/01/21 13:30
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-70-21-2021
Lab Sample ID: 580-103508-7
Date Collected: 06/01/21 13:30
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:11	FCW	FGS SEA

Client Sample ID: P14-S-72-21-2021
Lab Sample ID: 580-103508-8
Date Collected: 06/01/21 12:05
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-72-21-2021
Lab Sample ID: 580-103508-8
Date Collected: 06/01/21 12:05
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:15	FCW	FGS SEA

Client Sample ID: P14-S-73-21-2021
Lab Sample ID: 580-103508-9
Date Collected: 06/01/21 12:00
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-73-21-2021
Lab Sample ID: 580-103508-9
Date Collected: 06/01/21 12:00
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 74.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:19	FCW	FGS SEA

Client Sample ID: P14-S-74-21-2021
Lab Sample ID: 580-103508-10
Date Collected: 06/01/21 11:55
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-74-21-2021
Lab Sample ID: 580-103508-10
Date Collected: 06/01/21 11:55
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:23	FCW	FGS SEA

Client Sample ID: P14-S-75-21-2021
Lab Sample ID: 580-103508-11
Date Collected: 06/01/21 11:50
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-75-21-2021
Lab Sample ID: 580-103508-11
Date Collected: 06/01/21 11:50
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 22:06	FCW	FGS SEA

Client Sample ID: P14-S-76-21-2021
Lab Sample ID: 580-103508-12
Date Collected: 06/01/21 11:40
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-76-21-2021
Lab Sample ID: 580-103508-12
Date Collected: 06/01/21 11:40
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:12	FCW	FGS SEA

Client Sample ID: P14-S-77-18-2021
Lab Sample ID: 580-103508-13
Date Collected: 06/01/21 11:45
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-77-18-2021
Lab Sample ID: 580-103508-13
Date Collected: 06/01/21 11:45
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:16	FCW	FGS SEA

Client Sample ID: P14-S-78-5-10-2021
Lab Sample ID: 580-103508-14
Date Collected: 06/01/21 11:20
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-78-5-10-2021
Lab Sample ID: 580-103508-14
Date Collected: 06/01/21 11:20
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:20	FCW	FGS SEA

Client Sample ID: P14-S-78-18-24-2021
Lab Sample ID: 580-103508-15
Date Collected: 06/01/21 11:25
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-78-18-24-2021
Lab Sample ID: 580-103508-15
Date Collected: 06/01/21 11:25
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:24	FCW	FGS SEA

Client Sample ID: P14-S-80-5-10-2021
Lab Sample ID: 580-103508-20
Date Collected: 06/01/21 10:50
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-80-5-10-2021
Lab Sample ID: 580-103508-20
Date Collected: 06/01/21 10:50
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:27	FCW	FGS SEA

Client Sample ID: P14-S-80-18-24-2021
Lab Sample ID: 580-103508-21
Date Collected: 06/01/21 10:55
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-80-18-24-2021
Lab Sample ID: 580-103508-21
Date Collected: 06/01/21 10:55
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:31	FCW	FGS SEA

Client Sample ID: P14-S-82-21-2021
Lab Sample ID: 580-103508-23
Date Collected: 06/01/21 10:25
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Client Sample ID: P14-S-82-21-2021
Lab Sample ID: 580-103508-23
Date Collected: 06/01/21 10:25
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358248	06/03/21 16:23	JLS	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 02:35	FCW	FGS SEA

Client Sample ID: P14-S-83-21-2021
Lab Sample ID: 580-103508-24
Date Collected: 06/01/21 10:20
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:49	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-83-21-2021
Lab Sample ID: 580-103508-24
Date Collected: 06/01/21 10:20
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:50	FCW	FGS SEA

Client Sample ID: P14-S-84-12-2021
Lab Sample ID: 580-103508-25
Date Collected: 06/01/21 10:00
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-84-12-2021
Lab Sample ID: 580-103508-25
Date Collected: 06/01/21 10:00
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 59.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:32	FCW	FGS SEA

Client Sample ID: P14-S-86-12-2021
Lab Sample ID: 580-103508-26
Date Collected: 06/01/21 10:10
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-86-12-2021
Lab Sample ID: 580-103508-26
Date Collected: 06/01/21 10:10
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:36	FCW	FGS SEA

Client Sample ID: P14-S-87-12-2021
Lab Sample ID: 580-103508-27
Date Collected: 06/01/21 10:30
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-87-12-2021
Lab Sample ID: 580-103508-27
Date Collected: 06/01/21 10:30
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:40	FCW	FGS SEA

Client Sample ID: P14-S-88-15-2021
Lab Sample ID: 580-103508-28
Date Collected: 06/01/21 09:35
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-88-15-2021
Lab Sample ID: 580-103508-28
Date Collected: 06/01/21 09:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:44	FCW	FGS SEA

Client Sample ID: P14-S-89-15-2021
Lab Sample ID: 580-103508-29
Date Collected: 06/01/21 09:30
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-89-15-2021
Lab Sample ID: 580-103508-29
Date Collected: 06/01/21 09:30
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:47	FCW	FGS SEA

Client Sample ID: P14-S-91-15-2021
Lab Sample ID: 580-103508-30
Date Collected: 06/01/21 09:15
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-91-15-2021
Lab Sample ID: 580-103508-30
Date Collected: 06/01/21 09:15
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:51	FCW	FGS SEA

Client Sample ID: P14-S-93-15-2021
Lab Sample ID: 580-103508-31
Date Collected: 06/01/21 09:45
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-93-15-2021
Lab Sample ID: 580-103508-31
Date Collected: 06/01/21 09:45
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:55	FCW	FGS SEA

Client Sample ID: P14-S-94-15-2021
Lab Sample ID: 580-103508-32
Date Collected: 06/01/21 09:50
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-94-15-2021
Lab Sample ID: 580-103508-32
Date Collected: 06/01/21 09:50
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 00:59	FCW	FGS SEA

Client Sample ID: P14-S-95-15-2021
Lab Sample ID: 580-103508-33
Date Collected: 06/01/21 09:55
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-95-15-2021
Lab Sample ID: 580-103508-33
Date Collected: 06/01/21 09:55
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:22	FCW	FGS SEA

Client Sample ID: P14-S-96-18-2021
Lab Sample ID: 580-103508-34
Date Collected: 06/01/21 11:35
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-96-18-2021
Lab Sample ID: 580-103508-34
Date Collected: 06/01/21 11:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/04/21 23:46	FCW	FGS SEA

Client Sample ID: P14-S-97-5-10-2021
Lab Sample ID: 580-103508-35
Date Collected: 06/01/21 14:45
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-97-5-10-2021
Lab Sample ID: 580-103508-35
Date Collected: 06/01/21 14:45
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:26	FCW	FGS SEA

Client Sample ID: P14-S-97-18-24-2021
Lab Sample ID: 580-103508-36
Date Collected: 06/01/21 14:50
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-97-18-24-2021
Lab Sample ID: 580-103508-36
Date Collected: 06/01/21 14:50
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:30	FCW	FGS SEA

Client Sample ID: P14-S-98-5-15-2021
Lab Sample ID: 580-103508-38
Date Collected: 06/01/21 15:00
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-98-5-15-2021
Lab Sample ID: 580-103508-38
Date Collected: 06/01/21 15:00
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:34	FCW	FGS SEA

Client Sample ID: P14-S-98-24--2021
Lab Sample ID: 580-103508-39
Date Collected: 06/01/21 15:05
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-98-24--2021
Lab Sample ID: 580-103508-39
Date Collected: 06/01/21 15:05
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:37	FCW	FGS SEA

Client Sample ID: P14-S-99-5-10-2021
Lab Sample ID: 580-103508-41
Date Collected: 06/01/21 15:15
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-99-5-10-2021
Lab Sample ID: 580-103508-41
Date Collected: 06/01/21 15:15
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:41	FCW	FGS SEA

Client Sample ID: P14-S-99-18-24-2021
Lab Sample ID: 580-103508-42
Date Collected: 06/01/21 15:20
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-99-18-24-2021
Lab Sample ID: 580-103508-42
Date Collected: 06/01/21 15:20
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:45	FCW	FGS SEA

Client Sample ID: P14-S-100-5-10-2021
Lab Sample ID: 580-103508-44
Date Collected: 06/01/21 14:30
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-100-5-10-2021
Lab Sample ID: 580-103508-44
Date Collected: 06/01/21 14:30
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358301	06/04/21 09:52	JCP	FGS SEA
Total/NA	Analysis	6020B		10	358450	06/05/21 01:49	FCW	FGS SEA

Client Sample ID: P14-S-100-18-24-2021
Lab Sample ID: 580-103508-45
Date Collected: 06/01/21 14:35
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-100-18-24-2021
Lab Sample ID: 580-103508-45
Date Collected: 06/01/21 14:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:20	FCW	FGS SEA

Client Sample ID: P14-S-101-15-2021
Lab Sample ID: 580-103508-47
Date Collected: 06/01/21 15:30
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:52	HDG	FGS SEA

Client Sample ID: P14-S-101-15-2021
Lab Sample ID: 580-103508-47
Date Collected: 06/01/21 15:30
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 88.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:24	FCW	FGS SEA

Client Sample ID: P14-S-102-15-2021
Lab Sample ID: 580-103508-48
Date Collected: 06/01/21 15:35
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:53	HDG	FGS SEA

Client Sample ID: P14-S-102-15-2021
Lab Sample ID: 580-103508-48
Date Collected: 06/01/21 15:35
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:28	FCW	FGS SEA

Client Sample ID: P14-S-103-21-2021
Lab Sample ID: 580-103508-49
Date Collected: 06/01/21 15:45
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:53	HDG	FGS SEA

Lab Chronicle

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Client Sample ID: P14-S-103-21-2021
Lab Sample ID: 580-103508-49
Date Collected: 06/01/21 15:45
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:32	FCW	FGS SEA

Client Sample ID: P14-S-104-12-2021
Lab Sample ID: 580-103508-50
Date Collected: 06/01/21 15:40
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:53	HDG	FGS SEA

Client Sample ID: P14-S-104-12-2021
Lab Sample ID: 580-103508-50
Date Collected: 06/01/21 15:40
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:36	FCW	FGS SEA

Client Sample ID: P14-S-79-36-40-2021
Lab Sample ID: 580-103508-51
Date Collected: 06/01/21 11:17
Matrix: Solid
Date Received: 06/02/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	358178	06/03/21 09:53	HDG	FGS SEA

Client Sample ID: P14-S-79-36-40-2021
Lab Sample ID: 580-103508-51
Date Collected: 06/01/21 11:17
Matrix: Solid
Date Received: 06/02/21 15:45
Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			358304	06/04/21 09:58	C1K	FGS SEA
Total/NA	Analysis	6020B		10	358452	06/04/21 21:39	FCW	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Anchor QEA LLC
Job ID: 580-103508-1
Project/Site: Parcel 14 Soil Investigation

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Anchor QEA LLC
Project/Site: Parcel 14 Soil Investigation

Job ID: 580-103508-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-103508-1	P14-S-41-18-24-2021	Solid	06/01/21 13:50	06/02/21 15:45	
580-103508-2	P14-S-66-18-24-2021	Solid	06/01/21 13:45	06/02/21 15:45	
580-103508-3	P14-S-67-18-24-2021	Solid	06/01/21 13:40	06/02/21 15:45	
580-103508-4	P14-S-71-21-2021	Solid	06/01/21 12:10	06/02/21 15:45	
580-103508-5	P14-S-68-27-2021	Solid	06/01/21 13:20	06/02/21 15:45	
580-103508-6	P14-S-69-27-2021	Solid	06/01/21 13:25	06/02/21 15:45	
580-103508-7	P14-S-70-21-2021	Solid	06/01/21 13:30	06/02/21 15:45	
580-103508-8	P14-S-72-21-2021	Solid	06/01/21 12:05	06/02/21 15:45	
580-103508-9	P14-S-73-21-2021	Solid	06/01/21 12:00	06/02/21 15:45	
580-103508-10	P14-S-74-21-2021	Solid	06/01/21 11:55	06/02/21 15:45	
580-103508-11	P14-S-75-21-2021	Solid	06/01/21 11:50	06/02/21 15:45	
580-103508-12	P14-S-76-21-2021	Solid	06/01/21 11:40	06/02/21 15:45	
580-103508-13	P14-S-77-18-2021	Solid	06/01/21 11:45	06/02/21 15:45	
580-103508-14	P14-S-78-5-10-2021	Solid	06/01/21 11:20	06/02/21 15:45	
580-103508-15	P14-S-78-18-24-2021	Solid	06/01/21 11:25	06/02/21 15:45	
580-103508-20	P14-S-80-5-10-2021	Solid	06/01/21 10:50	06/02/21 15:45	
580-103508-21	P14-S-80-18-24-2021	Solid	06/01/21 10:55	06/02/21 15:45	
580-103508-23	P14-S-82-21-2021	Solid	06/01/21 10:25	06/02/21 15:45	
580-103508-24	P14-S-83-21-2021	Solid	06/01/21 10:20	06/02/21 15:45	
580-103508-25	P14-S-84-12-2021	Solid	06/01/21 10:00	06/02/21 15:45	
580-103508-26	P14-S-86-12-2021	Solid	06/01/21 10:10	06/02/21 15:45	
580-103508-27	P14-S-87-12-2021	Solid	06/01/21 10:30	06/02/21 15:45	
580-103508-28	P14-S-88-15-2021	Solid	06/01/21 09:35	06/02/21 15:45	
580-103508-29	P14-S-89-15-2021	Solid	06/01/21 09:30	06/02/21 15:45	
580-103508-30	P14-S-91-15-2021	Solid	06/01/21 09:15	06/02/21 15:45	
580-103508-31	P14-S-93-15-2021	Solid	06/01/21 09:45	06/02/21 15:45	
580-103508-32	P14-S-94-15-2021	Solid	06/01/21 09:50	06/02/21 15:45	
580-103508-33	P14-S-95-15-2021	Solid	06/01/21 09:55	06/02/21 15:45	
580-103508-34	P14-S-96-18-2021	Solid	06/01/21 11:35	06/02/21 15:45	
580-103508-35	P14-S-97-5-10-2021	Solid	06/01/21 14:45	06/02/21 15:45	
580-103508-36	P14-S-97-18-24-2021	Solid	06/01/21 14:50	06/02/21 15:45	
580-103508-38	P14-S-98-5-15-2021	Solid	06/01/21 15:00	06/02/21 15:45	
580-103508-39	P14-S-98-24--2021	Solid	06/01/21 15:05	06/02/21 15:45	
580-103508-41	P14-S-99-5-10-2021	Solid	06/01/21 15:15	06/02/21 15:45	
580-103508-42	P14-S-99-18-24-2021	Solid	06/01/21 15:20	06/02/21 15:45	
580-103508-44	P14-S-100-5-10-2021	Solid	06/01/21 14:30	06/02/21 15:45	
580-103508-45	P14-S-100-18-24-2021	Solid	06/01/21 14:35	06/02/21 15:45	
580-103508-47	P14-S-101-15-2021	Solid	06/01/21 15:30	06/02/21 15:45	
580-103508-48	P14-S-102-15-2021	Solid	06/01/21 15:35	06/02/21 15:45	
580-103508-49	P14-S-103-21-2021	Solid	06/01/21 15:45	06/02/21 15:45	
580-103508-50	P14-S-104-12-2021	Solid	06/01/21 15:40	06/02/21 15:45	
580-103508-51	P14-S-79-36-40-2021	Solid	06/01/21 11:17	06/02/21 15:45	

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information
Client Contact: Cindy Fields
Company: Anchor QEA LLC
Address: 1201 3rd Ave Suite 2600
City: Seattle
State, Zip: WA, 98101
Phone: 206-903-3394(Tel)
Email: cfields@anchorqea.com
Project Name: Parcel 14 Soil Investigation
Site: PARCEL 14

Sampler: S. STREET
Phone: 206 287 9150
PWSID:
Due Date Requested:
TAT Requested (days): 3 DAY
Compliance Project: Δ Yes Δ No
PO #: Purchase Order Requested
WO #:
Project #: 58016541
SSOW#:

Lab PM: Lewis, Nathan A
E-Mail: Nathan.Lewis@Eurofinset.com
Carrier Tracking No(s):
State of Origin:

COC No: 580-43604-13945.1
Page: Page 1 of 5
Job #: 103508

Analysis Requested

580-103508 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	Total Number of containers	Special Instructions/Note:
	Preservation Code:							N		
-1	P14-S-41-18-24-2021	6-1-21	1350	G	Solid			1		
	P14-S-66-18-24-2021		1345		Solid			1		
-3	P14-S-67-18-24-2021		1340		Solid			1		
	~~P14-S-68-18-24-2021 1550~~				Solid			1		
	~~P14-S-69-18-24-2021 1550~~				Solid			1		
	~~P14-S-70-18-24-2021 1550~~				Solid			1		
	P14-S-71-21-2021		1210		Solid			1		
-5	P14-S-68-27-2021		1320		Solid			1		
	P14-S-69-27-2021		1325		Solid			1		
-7	P14-S-70-21-2021		1330		Solid			1		
	P14-S-72-21-2021	6-1-21	1205	G	Solid			1		

Therm. ID: A1 Cor: 0.3 ° Unc: 0.5 °
Cooler Dsc: Lg Green
Packing: Ext
Cust. Seal: Yes ___ No ✓
Blue Ice (Wet) Dry None
FedEx: ___ UPS: ___ Lab Cour: ___ Other: Cindy

Therm. ID: A1 Cor: 0.8 ° Unc: 1.0 °
Cooler Dsc: Lg Blue
Packing: Bub
Cust. Seal: Yes ___ No ✓
Blue Ice (Wet) Dry None
FedEx: ___ UPS: ___ Lab Cour: ___ Other: ___

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months

Deliverable Requested: I, II, III, IV, Other (specify) PER CONTRACT VIA CINDY FIELDS

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: STEPHEN STREET	6-2-21 / TUE		Received by: Tom Stanton	6/2/21 1545	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

eurofins Environment Testing America

Chain of Custody Record

Client Information	Sampler: S. SMELTZ	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43604-13945.2
Client Contact: Cindy Fields	Phone: 206 [illegible] 2879134	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 2 of 5
Company: Anchor QEA LLC	PWSID:			Job #: 103508
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: Purchase Order Requested			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site: PARCEL 14	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	Archive	Total Number of containers	Special Instructions/Note:
	Preservation Code:							N			
-9	P14-S-73-21-2021	6-1-21	1200	G	Solid			X			
	P14-S-74-21-2021		1155		Solid			X			
-11	P14-S-75-21-2021		1150		Solid			X			
	P14-S-76-21-2021		1140		Solid			X			
-13	P14-S-77-18-2021		1145		Solid			X			
	P14-S-78-5-10-2021		1120		Solid			X			
-15	P14-S-78-18-24-2021		1125		Solid			X			
	P14-S-78-30-36-2021		1130		Solid				X		
-17	P14-S-79-5-10-2021		1105		Solid				X		
	P14-S-79-18-24-2021		1110		Solid				X		
-19	P14-S-79-30-36-2021	6-1-21	1115	G	Solid			6	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by: STEPHEN SMELTZ	Date/Time: 6-2-21 / 1545	Company	Received by: Tom Hamburger	Date/Time: 6/2/21 1545	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

Ver: 11/01/2020

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: S. SMITH	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43604-13945.3
Client Contact: Cindy Fields	Phone: 206 287 9130	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 3 of 5
Company: Anchor QEA LLC	PWSID:			Job #: 103508
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: Purchase Order Requested			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site: PARCEL 14	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	AR-CHLOR	Total Number of containers	Special Instructions/Note:
	Preservation Code:							N			
	P14-S-80-5-10-2021	6-1-21	1050	G	Solid			X			
-21	P14-S-80-18-24-2021		1055		Solid			X			
	P14-S-80-30-36-2021		1100		Solid				X		
	~~P14-S-87-12-2021~~ 5/5/2021		~~1030~~		Solid			~~X~~			
-23	P14-S-82-21-2021		1025		Solid			X			
	P14-S-83-21-2021		1020		Solid			X			
-25	P14-S-84-12-2021		1000		Solid			X			
	P14-S-85-12-2021		1010		Solid			X			
-27	P14-S-87-12-2021		1030		Solid			X			
	P14-S-88-15-2021		0935		Solid			X			
-29	P14-S-89-15-2021	6-1-21	0930	G	Solid			X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)

Method of Shipment:

	Date:	Time:			
Empty Kit Relinquished by:					
Relinquished by: STEPHEN SMITH	Date/Time: 6-2-21 / 1845	Company	Received by: Tom B	Date/Time: 6/2/21 1545	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

6/7/2021

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: S. STUERZ	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43604-13945.4
Client Contact: Cindy Fields	Phone: 206 297 9130	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 4 of 5
Company: Anchor QEA LLC	PWSID:			Job #: 103508
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			
City: Seattle	TAT Requested (days): 3 DAY			
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: Purchase Order Requested			
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site: PARCEL 14	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	Archive	Total Number of containers	Special Instructions/Note:
				Preservation Code:				N			
	P14-S-91-15-2021	6-1-21	0915	G	Solid			X			
-31	P14-S-93-15-2021		0945		Solid			X			
	P14-S-94-15-2021		0950		Solid			X			
-33	P14-S-95-15-2021		0955		Solid			X			
	P14-S-96-18-2021		1135		Solid			X			
-35	P14-S-97-5-10-2021		1445		Solid			X			
	P14-S-97-18-24-2021		1450		Solid			X			
-37	P14-S-97-30-36-2021		1455		Solid				X		
	P14-S-98-5-10-2021		1500		Solid			X			
-39	P14-S-98-18-24-2021		1505		Solid			X			
	P14-S-98-30-36-2021	6-1-21	1510	G	Solid				X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Stephen Stuerz	Date/Time: 6-7-21 1545	Company	Received by: Tom Blank	Date/Time: 6/2/21 1545	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: S. STEPHL	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-43604-13945.5
Client Contact: Cindy Fields	Phone: 206 287 9130	E-Mail: Nathan.Lewis@Eurofinset.com	State of Origin:	Page: Page 5 of 5
Company: Anchor QEA LLC	PWSID:	Analysis Requested		Job #: 103508
Address: 1201 3rd Ave Suite 2600	Due Date Requested:			Preservation Codes:
City: Seattle	TAT Requested (days): 3 DAY			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: WA, 98101	Compliance Project: Δ Yes Δ No			
Phone: 206-903-3394(Tel)	PO #: Purchase Order Requested			Other:
Email: cfields@anchorqea.com	WO #:			
Project Name: Parcel 14 Soil Investigation	Project #: 58016541			
Site: PARCEL 14	SSOW#:			

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	Archive	Total Number of containers	Special Instructions/Note:
	Preservation Code:							N			
-41	P14-S-99-5-10-2021	6-1-21	1515	G	Solid			X			
	P14-S-99-18-24-2021		1520		Solid			X			
-43	P14-S-99-30-36-2021		1525		Solid				X		
	P14-S-100-5-10-2021		1430		Solid			X			
-45	P14-S-100-18-24-2021		1435		Solid			X			
	P14-S-100-30-36-2021		1440		Solid				X		
-47	P14-S-101-15-2021		1530					X			
	P14-S-102-15-2021		1535					X			
-49	P14-S-103-21-2021		1545					X			
	P14-S-104-12-2021		1540					X			
-51	P14-S-79-36-40-2021	6-1-21	1117	G				X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	STEPHEN STEPHL	6-2-21 / 1545		Tom Blankenship	6/2/21 1545	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Anchor QEA LLC

Job Number: 580-103508-1

Login Number: 103508
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins FGS, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix E
Ecology 2021 NFA Recission Letter

Electronic Copy

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • 360-407-6300
Call 711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

August 17, 2021

Stanley Sasser
Port of Tacoma
PO Box 1837
Tacoma, Washington 98401
ssasser@portoftacoma.com

Re: Rescission of No Further Action (NFA) Status for the following Site:

- **Site Name:** Port of Tacoma, Parcel 14
- **Site Address:** 1131 Alexander Ave, Tacoma, Pierce County, WA 98401
- **Facility/Site ID:** 6836
- **Cleanup Site ID:** 12725
- **ERTS No.:** 701857

Dear Stanley Sasser:

The Department of Ecology (Ecology) issued a No Further Action (NFA) determination for the Port of Tacoma, Parcel 14 (Site) on April 22, 2015, (Enclosure A). A subsequent notification to Ecology's Environmental Report Tracking System (ERTS) on July 6, 2021, provided additional information that additional contamination remains at this Site (Enclosure B).

Contamination was recently identified at concentrations greater than Model Toxics Control Act Method A cleanup screening levels for the following constituents:

- Metals in soil. (Enclosure C)

Based on this information, Ecology believes the contamination identified is related to historical releases and rescinds the April 22, 2015, NFA determination letter. The effective date of the rescission is the date of this letter.

Next Steps

Ecology will update its records to reflect that Ecology has rescinded the No Further Action determination for this Site, and the Site will be listed in future publications of the Confirmed and Suspected Contaminated Sites List.[1]

If you have any questions about the rescission or next steps, please contact me at (360) 407-6257 or rebecca.lawson@ecy.wa.gov.

Sincerely,

Rebecca S. Lawson, P.E., LHG
Section Manager
Toxics Cleanup Program
Southwest Regional Office

NMA/tm

Enclosures (3): A – April 22, 2015 Initial Investigation
B – ERTS 707840
C – Figures

cc by email: Niklas Bacher, Anchor QEA, LLC, nbacher@anchorqea.com
Nicholas Acklam, Ecology, nicholas.acklam@ecy.wa.gov
Eva Barber, Ecology, eva.barber@ecy.wa.gov
Ecology Site File

[1] Available at: https://apps.ecology.wa.gov/tcpwebreporting/reports/cleanup/contaminated

Enclosure A

Ecology II NFA

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WASHINGTON STATE DEPARTMENT OF ECOLOGY

INITIAL INVESTIGATION FIELD REPORT

ERTS Number: 649884
Parcel #(s): 0320013145
COUNTY: Pierce

SITE INFORMATION

Site Name (e.g., Co. name over door):	Site Address (including City and Zip+4):	Site Phone:
Port of Tacoma, Parcel 14	1131 E. Alexander Avenue Tacoma, WA 98424	none
Site Contact and Title: Rob Healy, Sr. Manager Environmental Quality	Site Contact Address (including City and Zip+4): Port of Tacoma PO Box 1837, Tacoma WA 98401	Site Contact Phone: 253/383-5841
Site Owner: Port of Tacoma	Site Owner Address (including City and Zip+4): PO Box 1837 Tacoma WA 98401	Site Owner Phone: 253/383-5841
Site Owner Contact: Mark Larsen	Site Owner Contact Address (including City and Zip+4): Anchor QEA, LLC 1119 Pacific Avenue, Suite 1600; Tacoma 98402	Owner Contact Phone: 206/287-9130
Alternate Site Name(s):	Comments:	
Previous Site Owner(s):	Comments:	

Latitude (Decimal Degrees): 47.24881
Longitude (Decimal Degrees): -122.36815

INSPECTION INFORMATION

Inspection Conducted? Yes ☐ No ☒	Date/Time:	Entry Notice: Announced ☐	Unannounced ☐
Photographs taken?	Yes ☐	No ☒	
Samples collected?	Yes ☐	No ☒	If *Yes*, be sure to include a figure/sketch showing sample locations.

RECOMMENDATION

No Further Action (Check appropriate box below):		**LIST on Confirmed and Suspected Contaminated Sites List:** ☐
Release or threatened release does not pose a threat	☐	
No release or threatened release	☐	
Refer to program/agency (Name: _____)	☐	
Independent Cleanup Action Completed (i.e., contamination removed)	☒	

COMPLAINT (Brief Summary of ERTS Complaint):
Arsenic contaminated soils were detected at this site in association with the presence of slag deposits.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):
The soil contamination has been sufficiently remediated.

Investigator: S. Bell	Date Submitted: 04.22.15

OBSERVATIONS

Description (please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

This site is part of a Port of Tacoma wetland mitigation project involving excavation of over 7 acres to create a forested wetland and reconfigure Wapato Creek from a channelized flow around the perimeter of the property to a more naturalized meandering flow. As part of that process, an evaluation of the site conditions was required that led to the discovery of a localized area of arsenic contaminated soil. The arsenic contamination appears to be associated with slag material used as fill on the site, likely originating from the now defunct Asarco Refinery. The impact area is located in the northeast corner of parcel number 0320013145.

The site evaluation documentation provided by the Port of Tacoma encompassed work conducted by GeoEngineers in 2010, and Anchor QEA's efforts in 2014. Investigative efforts included multiple shallow borings and test pits, visual assessment and field screening, soil sampling, and analysis primarily for total metals but also including some limited analysis for petroleum hydrocarbons, SVOCs, VOCs, PCBs, chlorinated pesticides, and organochlorine herbicides. Arsenic was determined to be the only contaminant of concern. Although groundwater monitoring wells were installed, they were only sampled for water levels and conventionals (salinity, conductivity, pH, dissolved oxygen, etc.); no groundwater samples were collected for contaminant analyses. Groundwater was measured at depths ranging from 8.5 to 12 feet bgs in 2009 and from 9 to 13' bgs in 2010.

After finding arsenic contamination in boring B5, GeoEngineers visually identified slag material in four of their test pits near B5, with elevated arsenic concentrations detected in one sample collected from TP-3. The GeoEngineers report concluded "The arsenic contaminated soil appears to extend to 5 feet bgs in the area of test pit TP-3 and grades to 1.5 feet bgs in area of test pits TP-4 and TP-5."

The combined investigative results found 4 samples with arsenic concentrations exceeding the unrestricted land use cleanup level of 20 mg/kg. The sample exceedances were from 1 boring and 3 test pits:

Data Source	Sample ID	Depth of Sample	Arsenic Detection
GeoEngineers, 2010	TP-3	4. 5' bgs	152 mg/kg
GeoEngineers, 2010	B5-7C	0 – 7' bgs (composite)	53 mg/kg
Anchor QEA, 2014	TP-05A	0 – 1' bgs	49 mg/kg
Anchor QEA, 2014	TP-13A	2 – 3' bgs	95 mg/kg

Two additional samples (TP01A and TP-02A) were collected by Anchor QEA (Anchor) on 03.20.14 within Area B, in proximity to the B5 composite and TP-3 discrete samples, to provide additional information about soil conditions. The results ranged from 9-17 mg/kg arsenic in the 2 to 3' bgs samples and from 8-13 mg/kg arsenic in the 5 to 6' bgs samples. Anchor also evaluated eight samples for arsenic leaching potential using the Synthetic Precipitation Leaching Procedure (SPLP) method (SW-846/1311). No arsenic was detected in the SPLP leachate, so Anchor QEA concluded that the arsenic contamination in the soil at this location was not a potential source of groundwater contamination.

In September 2014, Anchor removed 943 tons of soil from five areas on the site. Three of the areas excavated encompassed the arsenic exceedances tabulated above. The excavated soils were brought to LRI for proper disposal.

- Area A was excavated to 2' bgs and encompassed the contamination detected in TP-05A at 0-1' bgs. It was L-shaped and measured 55' at it longest dimension and 45' wide. 5 confirmation samples were collected, one from each sidewall and the bottom of the excavation. Analytical results for arsenic were below the MTCA Method A cleanup level of 20 mg/kg for arsenic.
- Area B was excavated to 5' bgs and was co-located around contamination detected in TP-3 at 4.5' bgs from a 3-5' bgs fill layer, and a composite sample collected in Boring 5. This excavation was also L-shaped, 65' long and 38' at its widest point. 5 confirmation samples were collected from this excavation, one from each sidewall and the bottom of the excavation. Analytical results were below the MTCA Method A cleanup level.
- Area C was excavated to 4' bgs, encompassing the contamination detected in TP-13A at 2-3' bgs. The excavation measured 52' long by 40' wide. Initial performance sampling indicated two residual areas of contamination that were subsequently overexcavated. Final confirmation soil samples were collected from the sidewalls and bottom of the excavation. Analytical results for arsenic were below the MTCA Method A cleanup level.

Summary: Arsenic contaminated soil detected in the northeast corner of this site was removed and properly disposed of; SPLP results were used in lieu of actual groundwater sampling to demonstrate no potential for groundwater impact. The TPCHD recommends no further action at this time.

(fill in contaminant matrix below with appropriate status choice from the key below the table)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	BEDROCK	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nlh.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropranol, formic acid, acetic acid, stoddard solvent, Naptha). *Use this when TEX contaminants are present independently of gasoline.*
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						Other Non-Halogenated Organics (Example: Phthalates)
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Crude oil and any fraction thereof. Petroleum products that are not specifically Gasoline or Diesel.
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics						Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nlh.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents						Solvents containing halogens (Halogen is typically chlorine, but can also be fluorine, bromine, iodine), and their breakdown products (Examples: Trichloroethylene; Tetrachloroethylene (aka Perchloroethylene); TCE; TCA; trans and cis 1,2 dichloroethylene; vinyl chloride)
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). *Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270*
Metals	Metals - Other						Metals other than arsenic, lead, or mercury. (Examples: cadmium, antimony, zinc, copper, silver)
	Lead						Lead
	Mercury						Mercury

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	BEDROCK	DESCRIPTION
	Arsenic	RB					Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures						For sediments, a failure to meet bioassay criteria from the Sediment Management Standards. For soils, a failure to meet TEE bioassay criteria for plant, animal or soil biota toxicity.
Reactive Wastes	Unexploded Ordinance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes						Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)

Status choices for contaminants	
Contaminant Status	**Definition**
B - Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested
S - Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C - Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example - above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA - Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example - capped area).
RB - Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example - complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivitive. Referral to the HSDB is recommended you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in Ch. 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY USE ONLY (For Listing Sites):

How did the Site come to be known: ☐ **Site Discovery (received a report):** _____ (Date Report Received)
☒ **ERTS Complaint**
☐ **Other (please explain):** _____

Does an Early Notice Letter need to be sent: ☐ Yes ☒ No
If *No*, please explain why: N/A

NAICS Code (if known): _____
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):
_____

Site Unit(s) to be created (Unit Type): ☒ Upland (includes VCP & LUST) ☐ Sediment

If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit):
☐ No Process
☐ Voluntary Cleanup Program
☐ Federal-supervised or conducted
☒ Independent Action
☐ Ecology-supervised or conducted

Site Status:
☐ Awaiting Cleanup
☐ Cleanup Started
☒ No Further Action Required
☐ Construction Complete – Performance Monitoring
☐ Cleanup Complete – Active O&M/Monitoring

Site Manager (Default: Southwest Region): _____

Specific confirmed contaminants include:

_____ in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
_____

COUNTY ASSESSOR INFO:

Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.

Enclosure B

ERTS 707840

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Initial Investigation Close-Out Router

ERTS #: 707840	Site Name: Port of Tacoma Parcel 14

1

Recommended Action: Circle one of the appropriate categories:

No Further Action (NFA) | List on Confirmed and Suspected Contaminated Sites List (CSCSL)

Initial Investigator: Kirsten Wecker

2

Recommended Action: Circle one of the appropriate categories:

NFA (Non-List) | NFA (List on CSCSL as NFA; cleanup occurred) | List on CSCSL

Unit Supervisor/Regional Coordinator: Kirsten Wecker

3

Final Action: Circle one of the appropriate categories:

NFA (Non-List) | NFA (List on CSCSL as NFA; cleanup occurred) | List on CSCSL

Section Manager:

LUST ☐ Docs on Y: ☐ NFA Letter Requested ☐

New UNIT Only ☐ New CSID Only ☐ Rescind NFA ■

Send to Nick before Rebecca!

_____

NFA Model Remedy ☐ ☐

Non-Listed NFAs go Directly to the Incident Tracker, and Then the File Room; Others Follow the Process Below

4

Date Entered into ISIS:

Cleanup Site ID Number: 12725

Facility/Site ID Number: 6836

Date Early Notice Letter Sent (*Listed Sites Only, excludes NFA-List*):

FS/ISIS Coordinator:

5 Incident Tracker: Date:

6 File Room: County: File Type:

Clear Entire Form

INITIAL INVESTIGATION FIELD REPORT

WASHINGTON STATE DEPARTMENT OF ECOLOGY

☐ **Check this box if you have attached any documents to this form (using the paperclip icon on the left).**

ERTS #(s):	707840
Parcel #(s):	0320013157
County:	Pierce
FSID #:	6836
CSID #:	12725
UST #:	

SITE INFORMATION

Site Name (Name over door): Port of Tacoma Parcel 14	Site Address (including City, State and Zip): 1131 E Alexander Ave Tacoma, WA 98421	Phone Email
Site Contact, Title, Business: Stan Sasser Port of Tacoma	Site Contact Address (including City, State and Zip): PO Box 1837 Tacoma, WA 98401	Phone (253) 383-9439 Email ssasser@portoftacoma.com
Site Owner, Title, Business: Port of Tacoma	Site Owner Address (including City, State and Zip): PO Box 1837 Tacoma, WA 98401	Phone Email
Site Owner Contact, Title, Business:	Site Owner Contact Address (including City, State and Zip):	Phone Email
Previous Site Owner(s): Alternate Site Name(s):	Additional Info (for any Site Information Item):	

Latitude (Decimal Degrees):	47.27202
Longitude (Decimal Degrees):	-122.39325

INSPECTION INFORMATION Clear Inspection Specific Info

☐ Please check this box if there is relevant inspection information, such as data or photos, in an existing site report for this site.

Inspection Conducted? Yes ☐ No ☒	Date/Time:	Entry Notice: Announced ☐	Unannounced ☐
Photographs taken?	Yes ☐	No ☐	Note: Attach photographs or upload to PIMS
Samples collected?	Yes ☐	No ☐	Note: Attach record with media, location, depth, etc.

RECOMMENDATION

No Further Action (Check appropriate box below):		**LIST on Confirmed and Suspected Contaminated Sites List**: ☒
Release or threatened release does not pose a threat	☐	
No release or threatened release	☐	
Refer to program/agency (Name: _____)	☐	
Independent Cleanup Action Completed (contamination removed)	☐	

COMPLAINT (Brief Summary of ERTS Complaint):

ASARCO slag and associated arsenic-containing soils identified in the eastern portion of the parcel above the MTCA Method A Cleanup Level for arsenic

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):

Recommendation for rescission of current NFA status given confirmed levels of arsenic existing in soil as high as 85 mg/Kg, the suspected lead contamination with the arsenic in soil, and the potential for groundwater contamination by both lead and arsenic at this Site.

Investigator: Kirsten Wecker Date Submitted: 7/27/2021

OBSERVATIONS ☐ **Please check this box if you included information on the Supplemental Page at end of report.**

Description (If site visit made, please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

Anchor QEA, Data Report and Cleanup Plan Parcel 14 Slag Removal, June 2021

- Previous testing in 2010 identified two locations of arsenic contamination above the 20 mg/KG MTCA Method A Cleanup Level (GeoEngineers, 2010)
- Additional testing was completed in 2014 to assist in delineating the arsenic-contaminated soil (Anchor QEA, 2014)
  - Four of the 54 soil samples exceeded the 20 mg/Kg Cleanup Level for arsenic
- In 2014 943 tons of impacted soil was removed from the Site for disposal, confirmation samples were collected to ensure successful remedial efforts. A status of no further action was recommended through the Initial Investigation Process of the Department of Ecology in April 2015.
- The Port of Tacoma conducted a shallow soil sampling of the top 4" of soil throughout the parcel to characterize material planned for off-site reuse. Twenty-five distributed test locations were selected using a point dispersion took (Port, 2021)
  - The samples from this event were analyzed for heavy metals, petroleum, and PAHs
  - No sample result returned above their respective MTCA Method A Cleanup Level in soil except arsenic in the eastern portion of the Site
  - Slag material had been noted beneath two sample locations
- Between May 1 and June 11, 2021, 121 soil samples were collected from 101 sample locations for arsenic analysis
- Based upon the sampling 8,000 cubic yards of soil is planned for eventual removal from 3 areas identified as having contaminated material with confirmation soil samples collected from the sidewalls and bottoms of the three areas. No groundwater samples are planned to be collected.

I recommend this Site's no further action status be rescinded as the contamination is likely the same source, ASARCO slag and associated arsenic-contaminated soil. The reason for this rescission is the confirmed levels of arsenic existing in soil as high as 85 mg/Kg, the suspected lead contamination with the arsenic in soil, and the potential for groundwater contamination by both lead and arsenic at this Site.

Documents reviewed:

Anchor QEA, Data Report and Cleanup Plan Parcel 14 Slag Removal, June 2021

Reset Contaminant Selections

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropranol, formic acid, acetic acid, stoddard solvent, Naptha). *Use this when TEX contaminants are present independently of gasoline.*
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						TEX
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Oil-range organics
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics						Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents						PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). *Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270*
Metals	Metals - Other						Cr, Se, Ag, Ba, Cd
	Lead	S	S				Lead
	Mercury						Mercury
	Arsenic	C	S				Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)

CONTAMINANT GROUP	CONTAMINANT	*SOIL*	*GROUNDWATER*	*SURFACE WATER*	*AIR*	*SEDIMENT*	DESCRIPTION
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
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Reactive Wastes	Unexploded Ordinance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes						Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)

(fill in contaminant matrix above with appropriate status choice from the key below the table)

Status choices for contaminants	
Contaminant Status	**Definition**
B— Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested
S— Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C— Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example—above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA— Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example—capped area).
RB— Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example— complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivative. Referral to the HSDB is recommended if you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in WAC 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY II REVIEWER USE ONLY (For Listing Sites):

How did the Site come to be known: ☐ **Site Discovery (received a report):** _____ (Date Report Received)
☑ **ERTS Complaint**
☐ **Other (please explain):** _____

Does an Early Notice Letter need to be sent: ☒ Yes ☐ No
If *No*, please explain why: _____

NAICS Code (if known): _____
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):
_____

Site Unit(s) to be created (Unit Type): ☒ Upland (includes VCP & LUST) ☐ Sediment
If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit): ☐ No Process ☑ Independent Action
☐ Voluntary Cleanup Program ☐ Ecology-supervised or conducted
☐ Federal-supervised or conducted

Site Status: ☒ Awaiting Cleanup ☐ Construction Complete – Performance Monitoring
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring
☐ No Further Action Required

Model Remedy Used? ☐
If yes, was this a transformer spill? ☐

Site Manager (Default: Southwest): Southwest

Specific confirmed contaminants include:

arsenic in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
6836

Cleanup Site ID No. (if known):
12725

COUNTY ASSESSOR INFO: Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.

Additional or Supplemental Information from Observations Page

Please use this box for any text that requires special formatting

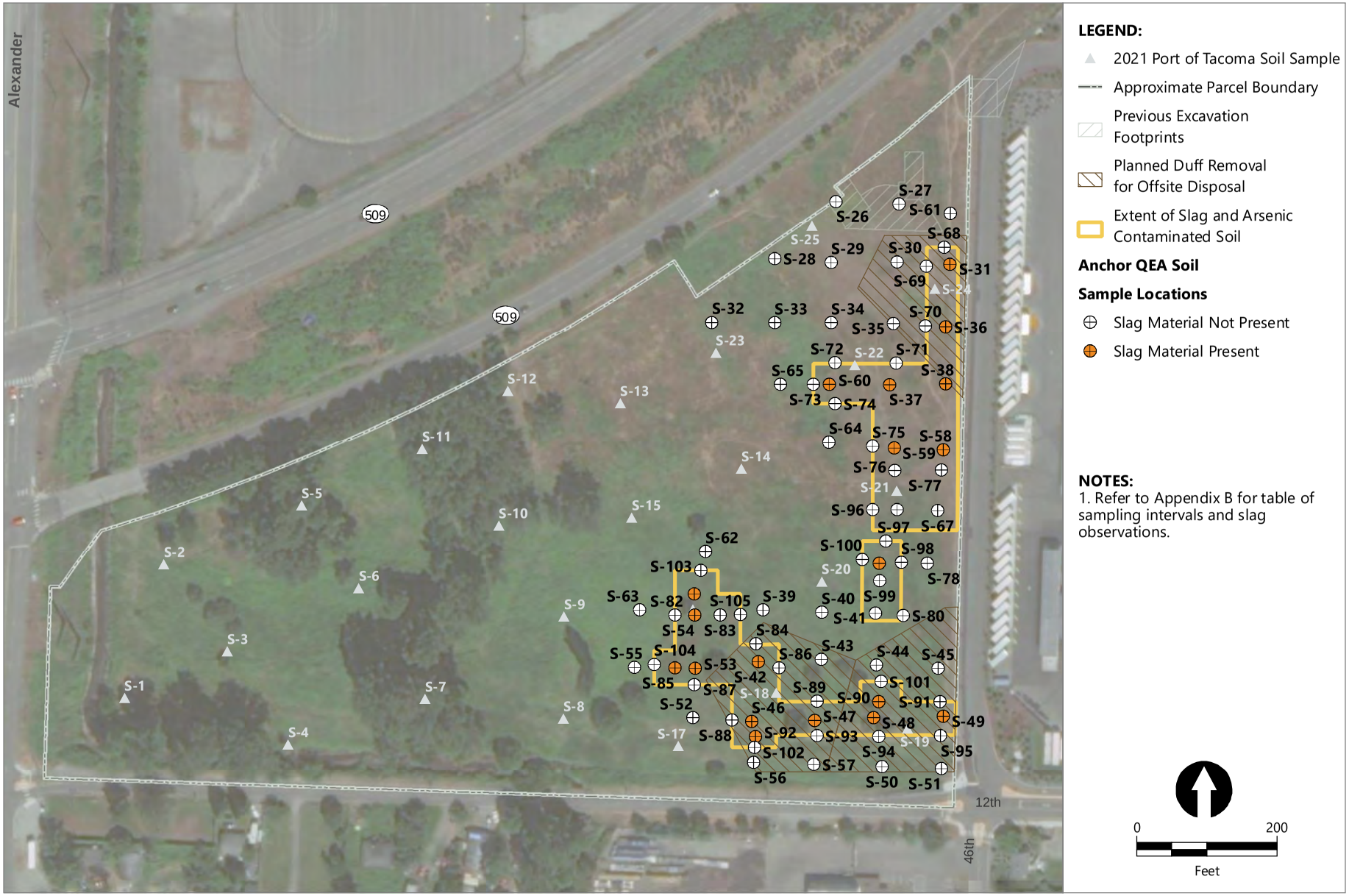
Enclosure C

Figure 1 – Site Overview

Figure 4 – Proposed Cleanup Plan

(Anchor QEA, LLC, *Data Report and Cleanup Plan Parcel 14 Slag Removal*, June, 2021)

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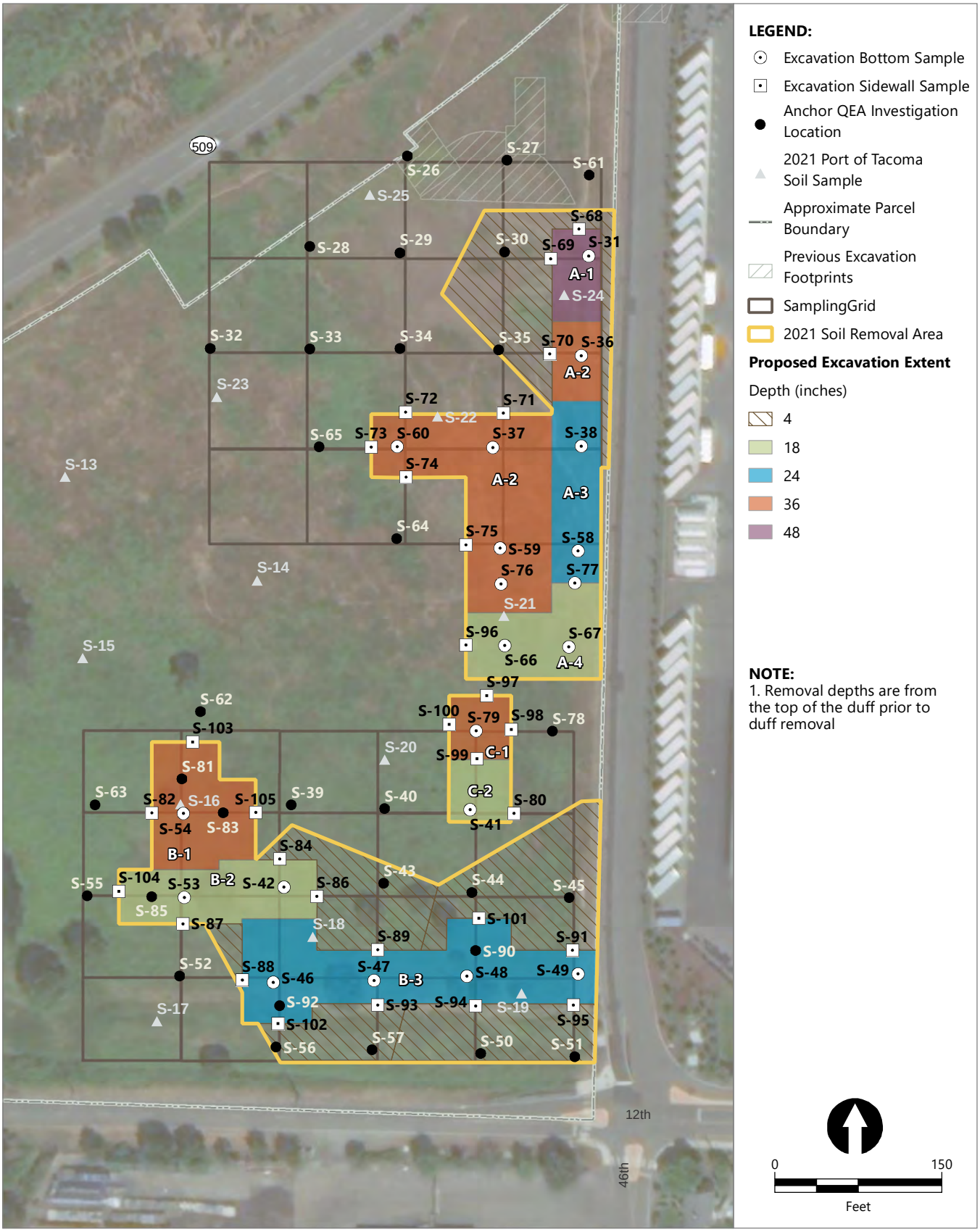


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Filepath: \\orcas\GIS\Jobs\Port_of_Tacoma_0092\Parcel_14_Sampling\Maps\Parcel14_SoilInvestigation\DataReport\Figure1_PoT_Parcel14Soil_Investigation.mxd

ANCHOR QEA

Figure 1
Site Overview
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma

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ANCHOR QEA

Figure 4
Proposed Cleanup Plan
Parcel 14 Data Report and Cleanup Plan
Port of Tacoma

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Appendix F
Waste Disposal Authorization and Landfill Soil Disposal Summary

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
692467	08/10/21	08:30	08/10/21	08:48	29.01
692468	08/10/21	08:32	08/10/21	08:48	22.43
692471	08/10/21	08:34	08/10/21	08:50	25.54
692474	08/10/21	08:37	08/10/21	08:51	26.11
692479	08/10/21	08:41	08/10/21	09:04	25.26
692480	08/10/21	08:42	08/10/21	08:57	20.66
692483	08/10/21	08:44	08/10/21	09:04	27.56
692484	08/10/21	08:45	08/10/21	09:08	27.28
692491	08/10/21	08:51	08/10/21	09:10	22.08
692492	08/10/21	08:52	08/10/21	09:13	21.95
692493	08/10/21	08:53	08/10/21	09:16	22.54
692498	08/10/21	08:58	08/10/21	09:51	23.15
692499	08/10/21	08:59	08/10/21	09:54	26.23
692513	08/10/21	09:12	08/10/21	09:52	21.92
692517	08/10/21	09:18	08/10/21	09:52	26.66
692525	08/10/21	09:36	08/10/21	09:56	27.59
692529	08/10/21	10:02	08/10/21	10:18	25.89
692546	08/10/21	11:06	08/10/21	11:20	26.61
692548	08/10/21	11:08	08/10/21	11:21	23.60
692552	08/10/21	11:20	08/10/21	11:35	27.57
692554	08/10/21	11:23	08/10/21	11:37	27.88
692555	08/10/21	11:26	08/10/21	11:40	20.38
692565	08/10/21	11:31	08/10/21	11:53	26.48
692566	08/10/21	11:33	08/10/21	11:52	27.22
692567	08/10/21	11:34	08/10/21	11:53	27.75
692570	08/10/21	11:45	08/10/21	11:58	23.76
692572	08/10/21	11:47	08/10/21	12:05	23.37
692582	08/10/21	12:03	08/10/21	13:04	26.65
692585	08/10/21	12:05	08/10/21	12:20	22.03
692586	08/10/21	12:08	08/10/21	13:05	22.60
692587	08/10/21	12:09	08/10/21	13:06	23.00
692591	08/10/21	12:22	08/10/21	12:36	27.68
692592	08/10/21	12:24	08/10/21	12:38	27.78
692600	08/10/21	12:49	08/10/21	13:03	25.17
692618	08/10/21	13:31	08/10/21	13:46	24.77
692620	08/10/21	13:38	08/10/21	13:50	21.18
692630	08/10/21	14:08	08/10/21	14:23	23.47
692631	08/10/21	14:15	08/10/21	14:28	19.18
692633	08/10/21	14:19	08/10/21	14:32	25.12
692635	08/10/21	14:20	08/10/21	14:34	23.16
692639	08/10/21	14:27	08/10/21	14:40	22.04
692640	08/10/21	14:28	08/10/21	14:45	20.73
692646	08/10/21	14:40	08/10/21	14:55	21.37

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
692648	08/10/21	14:41	08/10/21	15:00	25.73
692650	08/10/21	14:43	08/10/21	14:59	22.79
692655	08/10/21	15:21	08/10/21	15:33	25.72
692659	08/10/21	15:33	08/10/21	15:46	23.36
692660	08/10/21	15:36	08/10/21	15:57	27.73
692672	08/11/21	08:03	08/11/21	08:18	21.51
692673	08/11/21	08:04	08/11/21	08:19	21.15
692674	08/11/21	08:05	08/11/21	08:20	20.37
692676	08/11/21	08:07	08/11/21	08:21	25.62
692684	08/11/21	08:12	08/11/21	08:26	25.25
692687	08/11/21	08:14	08/11/21	08:28	20.51
692691	08/11/21	08:17	08/11/21	08:30	19.92
692696	08/11/21	08:21	08/11/21	08:37	23.29
692699	08/11/21	08:23	08/11/21	08:41	23.13
692700	08/11/21	08:24	08/11/21	08:42	26.61
692711	08/11/21	08:33	08/11/21	08:45	19.49
692712	08/11/21	08:34	08/11/21	08:51	24.49
692720	08/11/21	08:39	08/11/21	08:56	27.76
692729	08/11/21	08:44	08/11/21	09:00	24.76
692734	08/11/21	08:48	08/11/21	09:04	27.89
692735	08/11/21	08:49	08/11/21	09:06	25.03
692736	08/11/21	08:50	08/11/21	09:07	24.82
692745	08/11/21	09:00	08/11/21	09:14	22.31
692747	08/11/21	09:02	08/11/21	09:19	24.57
692755	08/11/21	09:11	08/11/21	09:44	22.42
692756	08/11/21	09:12	08/11/21	12:21	24.82
692762	08/11/21	09:30	08/11/21	09:45	28.39
692772	08/11/21	10:03	08/11/21	10:15	25.72
692785	08/11/21	10:30	08/11/21	10:43	27.50
692786	08/11/21	10:31	08/11/21	10:43	22.47
692787	08/11/21	10:31	08/11/21	10:46	22.44
692788	08/11/21	10:32	08/11/21	10:47	23.08
692798	08/11/21	10:51	08/11/21	11:07	25.90
692799	08/11/21	10:53	08/11/21	11:08	23.97
692801	08/11/21	10:58	08/11/21	11:11	22.14
692805	08/11/21	11:03	08/11/21	11:20	25.85
692806	08/11/21	11:04	08/11/21	11:35	21.14
692807	08/11/21	11:04	08/11/21	11:21	22.21
692813	08/11/21	11:14	08/11/21	11:36	24.42
692815	08/11/21	11:15	08/11/21	11:32	29.75
692820	08/11/21	11:26	08/11/21	11:40	32.05
692821	08/11/21	11:27	08/11/21	11:41	30.63
692829	08/11/21	11:33	08/11/21	11:54	30.08

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
692834	08/11/21	11:39	08/11/21	11:55	27.52
692839	08/11/21	11:48	08/11/21	12:02	25.49
692840	08/11/21	11:51	08/11/21	12:07	26.62
692851	08/11/21	12:05	08/11/21	12:20	26.21
692864	08/11/21	12:35	08/11/21	12:49	27.05
692871	08/11/21	12:47	08/11/21	13:01	29.64
692879	08/11/21	13:03	08/11/21	13:19	28.91
692885	08/11/21	13:24	08/11/21	13:39	30.18
692889	08/11/21	13:28	08/11/21	13:41	26.53
692896	08/11/21	13:48	08/11/21	14:02	32.55
692897	08/11/21	13:49	08/11/21	14:03	23.62
692898	08/11/21	13:53	08/11/21	14:04	23.05
692899	08/11/21	13:55	08/11/21	14:07	23.52
692901	08/11/21	13:56	08/11/21	14:12	27.70
692907	08/11/21	14:04	08/11/21	14:24	27.92
692911	08/11/21	14:08	08/11/21	14:22	32.10
692917	08/11/21	14:19	08/11/21	14:34	25.19
692924	08/11/21	14:27	08/11/21	14:46	31.40
692926	08/11/21	14:34	08/11/21	14:50	28.68
692933	08/11/21	14:40	08/11/21	14:57	26.76
692934	08/11/21	14:40	08/11/21	14:58	26.25
692935	08/11/21	14:41	08/11/21	14:59	26.43
692946	08/11/21	15:47	08/11/21	15:58	28.79
692947	08/11/21	15:48	08/11/21	15:48	24.04
692955	08/12/21	06:35	08/12/21	06:51	30.13
692956	08/12/21	06:36	08/12/21	06:53	32.90
692957	08/12/21	06:38	08/12/21	06:54	24.68
692958	08/12/21	06:38	08/12/21	06:55	27.04
692959	08/12/21	06:40	08/12/21	06:56	31.57
692967	08/12/21	06:47	08/12/21	07:05	28.17
692968	08/12/21	06:48	08/12/21	07:01	23.15
692970	08/12/21	06:52	08/12/21	07:06	31.57
692971	08/12/21	06:53	08/12/21	07:09	32.76
692975	08/12/21	06:56	08/12/21	07:10	29.59
692993	08/12/21	07:15	08/12/21	07:26	24.68
693023	08/12/21	08:03	08/12/21	08:16	24.98
693030	08/12/21	08:18	08/12/21	08:33	30.19
693031	08/12/21	08:20	08/12/21	08:35	24.63
693041	08/12/21	08:37	08/12/21	08:53	29.08
693043	08/12/21	08:39	08/12/21	08:56	28.46
693044	08/12/21	08:40	08/12/21	08:57	29.55
693046	08/12/21	08:46	08/12/21	08:59	21.47
693052	08/12/21	08:52	08/12/21	09:06	32.85

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
693053	08/12/21	08:54	08/12/21	09:13	27.86
693058	08/12/21	09:01	08/12/21	09:15	33.16
693062	08/12/21	09:08	08/12/21	09:21	33.39
693063	08/12/21	09:09	08/12/21	09:22	34.01
693065	08/12/21	09:15	08/12/21	09:29	23.76
693066	08/12/21	09:16	08/12/21	09:31	24.64
693067	08/12/21	09:17	08/12/21	09:32	32.81
693068	08/12/21	09:18	08/12/21	09:37	12.75
693074	08/12/21	09:23	08/12/21	09:38	24.81
693075	08/12/21	09:24	08/12/21	09:45	31.50
693077	08/12/21	09:27	08/12/21	09:41	33.25
693081	08/12/21	09:33	08/12/21	09:46	32.05
693082	08/12/21	09:34	08/12/21	09:48	35.57
693095	08/12/21	09:53	08/12/21	10:07	23.99
693119	08/12/21	10:24	08/12/21	10:38	23.30
693129	08/12/21	10:43	08/12/21	10:57	22.30
693130	08/12/21	10:44	08/12/21	11:06	27.38
693140	08/12/21	11:18	08/12/21	11:34	30.46
693141	08/12/21	11:18	08/12/21	11:36	27.38
693145	08/12/21	11:21	08/12/21	11:37	31.52
693147	08/12/21	11:22	08/12/21	11:36	21.55
693158	08/12/21	11:36	08/12/21	11:56	28.36
693161	08/12/21	11:41	08/12/21	11:53	28.94
693162	08/12/21	11:42	08/12/21	11:59	32.21
693164	08/12/21	11:52	08/12/21	12:06	32.52
693165	08/12/21	11:53	08/12/21	12:05	32.22
693166	08/12/21	11:54	08/12/21	12:07	32.61
693169	08/12/21	12:01	08/12/21	12:14	23.29
693170	08/12/21	12:02	08/12/21	12:15	22.90
693175	08/12/21	12:17	08/12/21	12:30	23.65
693176	08/12/21	12:18	08/12/21	12:31	20.92
693178	08/12/21	12:23	08/12/21	12:39	25.56
693182	08/12/21	12:31	08/12/21	12:47	30.05
693183	08/12/21	12:33	08/12/21	12:48	33.24
693194	08/12/21	12:42	08/12/21	12:56	28.02
693202	08/12/21	13:03	08/12/21	13:17	28.62
693213	08/12/21	13:30	08/12/21	13:43	25.23
693215	08/12/21	13:32	08/12/21	13:47	28.56
693224	08/12/21	13:57	08/12/21	14:14	26.72
693227	08/12/21	14:05	08/12/21	14:21	29.02
693241	08/13/21	06:23	08/13/21	06:41	27.99
693247	08/13/21	06:26	08/13/21	06:43	31.38
693249	08/13/21	06:32	08/13/21	06:44	26.29

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
693250	08/13/21	06:32	08/13/21	06:45	30.16
693253	08/13/21	06:34	08/13/21	06:47	25.15
693254	08/13/21	06:35	08/13/21	06:49	22.93
693255	08/13/21	06:36	08/13/21	06:50	29.12
693258	08/13/21	06:38	08/13/21	06:52	33.18
693261	08/13/21	06:39	08/13/21	06:55	32.75
693262	08/13/21	06:40	08/13/21	06:55	32.26
693263	08/13/21	06:40	08/13/21	06:56	23.36
693265	08/13/21	06:42	08/13/21	06:58	22.84
693267	08/13/21	06:44	08/13/21	06:58	24.02
693271	08/13/21	06:47	08/13/21	07:07	28.17
693306	08/13/21	08:21	08/13/21	08:39	32.84
693307	08/13/21	08:22	08/13/21	08:39	31.48
693311	08/13/21	08:24	08/13/21	08:40	30.44
693313	08/13/21	08:30	08/13/21	08:42	34.63
693314	08/13/21	08:30	08/13/21	08:42	34.10
693323	08/13/21	09:00	08/13/21	09:12	33.74
693324	08/13/21	09:00	08/13/21	09:13	32.75
693326	08/13/21	09:01	08/13/21	09:15	29.26
693331	08/13/21	09:11	08/13/21	09:23	35.16
693334	08/13/21	09:19	08/13/21	09:33	31.67
693339	08/13/21	09:23	08/13/21	09:34	25.98
693340	08/13/21	09:24	08/13/21	09:37	27.52
693342	08/13/21	09:26	08/13/21	09:40	32.09
693344	08/13/21	09:29	08/13/21	09:39	24.54
693351	08/13/21	09:38	08/13/21	09:50	25.92
693354	08/13/21	09:41	08/13/21	09:55	33.08
693358	08/13/21	09:44	08/13/21	09:57	28.91
693359	08/13/21	09:45	08/13/21	09:57	23.79
693360	08/13/21	09:46	08/13/21	09:59	33.62
693361	08/13/21	09:47	08/13/21	10:01	24.49
693385	08/13/21	10:57	08/13/21	11:10	25.81
693390	08/13/21	11:05	08/13/21	11:21	28.30
693391	08/13/21	11:06	08/13/21	11:22	26.41
693392	08/13/21	11:07	08/13/21	11:24	30.57
693398	08/13/21	11:21	08/13/21	11:33	29.36
693402	08/13/21	11:37	08/13/21	11:52	25.58
693404	08/13/21	11:40	08/13/21	11:55	29.06
693409	08/13/21	11:49	08/13/21	12:02	25.47
693410	08/13/21	11:50	08/13/21	12:03	23.29
693413	08/13/21	11:57	08/13/21	12:10	31.05
693416	08/13/21	12:00	08/13/21	12:13	24.14
693418	08/13/21	12:08	08/13/21	12:22	29.16

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
693422	08/13/21	12:16	08/13/21	12:30	30.04
693425	08/13/21	12:18	08/13/21	12:31	31.81
693426	08/13/21	12:20	08/13/21	12:32	25.37
693427	08/13/21	12:21	08/13/21	12:33	20.75
693428	08/13/21	12:21	08/13/21	12:36	28.32
693431	08/13/21	12:26	08/13/21	12:41	30.24
693434	08/13/21	12:30	08/13/21	12:41	23.46
693435	08/13/21	12:40	08/13/21	12:52	23.30
693439	08/13/21	12:58	08/13/21	13:18	23.56
693451	08/13/21	13:48	08/13/21	14:03	25.27
693455	08/13/21	13:54	08/13/21	14:17	26.42
693547	08/16/21	08:02	08/16/21	08:16	29.83
693548	08/16/21	08:03	08/16/21	08:17	29.71
693559	08/16/21	08:10	08/16/21	08:23	21.81
693561	08/16/21	08:11	08/16/21	08:29	27.16
693567	08/16/21	08:16	08/16/21	08:31	31.52
693569	08/16/21	08:18	08/16/21	08:33	25.59
693575	08/16/21	08:24	08/16/21	08:42	24.20
693577	08/16/21	08:26	08/16/21	08:43	30.22
693581	08/16/21	08:30	08/16/21	08:47	32.25
693585	08/16/21	08:34	08/16/21	08:51	21.55
693586	08/16/21	08:35	08/16/21	08:52	22.43
693591	08/16/21	08:40	08/16/21	08:57	26.77
693592	08/16/21	08:42	08/16/21	08:58	27.63
693596	08/16/21	08:46	08/16/21	09:02	31.51
693600	08/16/21	08:49	08/16/21	09:06	29.37
693603	08/16/21	08:52	08/16/21	09:07	21.04
693606	08/16/21	08:54	08/16/21	09:12	25.09
693607	08/16/21	08:55	08/16/21	09:11	28.29
693617	08/16/21	09:06	08/16/21	09:06	29.05
693618	08/16/21	09:07	08/16/21	09:07	21.88
693623	08/16/21	09:28	08/16/21	09:40	28.75
693629	08/16/21	10:21	08/16/21	10:35	25.26
693636	08/16/21	10:33	08/16/21	10:48	30.12
693638	08/16/21	10:36	08/16/21	10:50	22.06
693639	08/16/21	10:37	08/16/21	10:52	29.79
693641	08/16/21	10:40	08/16/21	10:53	21.46
693643	08/16/21	10:44	08/16/21	10:56	30.33
693644	08/16/21	10:45	08/16/21	10:58	26.59
693651	08/16/21	10:52	08/16/21	11:04	26.23
693654	08/16/21	10:57	08/16/21	11:12	29.02
693655	08/16/21	10:58	08/16/21	11:14	21.81
693659	08/16/21	11:05	08/16/21	11:56	27.81

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
693661	08/16/21	11:06	08/16/21	11:55	27.55
693662	08/16/21	11:07	08/16/21	11:55	20.88
693666	08/16/21	11:11	08/16/21	11:56	21.33
693685	08/16/21	11:50	08/16/21	11:50	22.20
693686	08/16/21	11:51	08/16/21	12:08	21.58
693689	08/16/21	11:53	08/16/21	12:05	24.54
693690	08/16/21	11:54	08/16/21	11:54	26.79
693693	08/16/21	11:58	08/16/21	11:58	30.33
693707	08/16/21	12:31	08/16/21	12:40	3.77
693724	08/16/21	13:13	08/16/21	13:26	21.81
693725	08/16/21	13:15	08/16/21	13:32	26.72
693727	08/16/21	13:17	08/16/21	13:31	29.28
693728	08/16/21	13:19	08/16/21	13:33	22.52
693729	08/16/21	13:20	08/16/21	13:34	28.41
693731	08/16/21	13:23	08/16/21	13:35	25.37
693732	08/16/21	13:24	08/16/21	13:37	30.01
693736	08/16/21	13:32	08/16/21	13:47	26.18
693740	08/16/21	13:41	08/16/21	13:52	19.59
693742	08/16/21	13:48	08/16/21	14:00	23.07
693743	08/16/21	13:53	08/16/21	14:07	29.53
693746	08/16/21	13:56	08/16/21	14:08	31.15
693750	08/16/21	14:03	08/16/21	14:39	26.82
693751	08/16/21	14:05	08/16/21	14:35	19.86
693752	08/16/21	14:06	08/16/21	14:43	25.82
693764	08/16/21	14:41	08/16/21	14:56	22.34
693766	08/16/21	14:43	08/16/21	14:43	23.51
693768	08/16/21	14:47	08/16/21	14:47	18.80
693771	08/16/21	14:53	08/16/21	15:10	19.70
693775	08/16/21	15:04	08/16/21	15:16	25.96
693786	08/16/21	15:40	08/16/21	15:55	22.35
693787	08/16/21	15:41	08/16/21	15:54	19.37
693788	08/16/21	15:47	08/16/21	16:09	23.79
693789	08/16/21	15:48	08/16/21	16:09	18.88
693790	08/16/21	15:55	08/16/21	16:10	23.28
693794	08/16/21	16:06	08/16/21	16:19	22.14
693795	08/16/21	16:11	08/16/21	16:25	24.40
693796	08/16/21	16:16	08/16/21	16:26	18.42
693803	08/17/21	08:02	08/17/21	08:14	20.70
693805	08/17/21	08:04	08/17/21	08:17	26.29
693806	08/17/21	08:04	08/17/21	08:25	23.40
693822	08/17/21	08:13	08/17/21	08:27	22.16
693824	08/17/21	08:14	08/17/21	08:31	17.15
693830	08/17/21	08:18	08/17/21	08:35	25.91

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
693831	08/17/21	08:19	08/17/21	08:35	21.59
693834	08/17/21	08:21	08/17/21	08:38	25.01
693836	08/17/21	08:22	08/17/21	09:14	14.08
693842	08/17/21	08:25	08/17/21	08:42	25.00
693843	08/17/21	08:25	08/17/21	08:41	25.86
693850	08/17/21	08:29	08/17/21	08:47	23.30
693852	08/17/21	08:31	08/17/21	08:49	26.11
693855	08/17/21	08:34	08/17/21	08:48	20.25
693859	08/17/21	08:37	08/17/21	08:54	18.53
693873	08/17/21	09:11	08/17/21	09:28	27.89
693881	08/17/21	09:38	08/17/21	09:51	26.66
693886	08/17/21	10:06	08/17/21	10:19	21.47
693888	08/17/21	10:10	08/17/21	10:25	27.15
693891	08/17/21	10:17	08/17/21	10:32	23.61
693892	08/17/21	10:20	08/17/21	10:30	26.29
693893	08/17/21	10:21	08/17/21	10:35	24.90
693894	08/17/21	10:22	08/17/21	10:39	26.87
693897	08/17/21	10:25	08/17/21	10:38	19.72
693898	08/17/21	10:34	08/17/21	11:02	20.37
693900	08/17/21	10:40	08/17/21	10:58	24.17
693904	08/17/21	10:43	08/17/21	11:02	27.00
693913	08/17/21	10:51	08/17/21	11:06	26.43
693914	08/17/21	10:53	08/17/21	11:07	29.14
693921	08/17/21	10:59	08/17/21	11:13	20.12
693931	08/17/21	11:16	08/17/21	11:32	23.07
693942	08/17/21	11:39	08/17/21	11:54	27.37
693948	08/17/21	11:56	08/17/21	12:09	28.29
693953	08/17/21	12:03	08/17/21	12:19	28.59
693957	08/17/21	12:12	08/17/21	12:46	23.07
693958	08/17/21	12:14	08/17/21	12:27	22.53
693961	08/17/21	12:20	08/17/21	12:34	25.20
693963	08/17/21	12:26	08/17/21	12:39	25.11
693964	08/17/21	12:29	08/17/21	12:43	26.88
693965	08/17/21	12:33	08/17/21	12:47	19.84
693981	08/17/21	13:30	08/17/21	13:46	21.86
693982	08/17/21	13:31	08/17/21	13:44	18.37
693985	08/17/21	13:34	08/17/21	13:51	24.54
693986	08/17/21	13:36	08/17/21	13:51	23.32
693987	08/17/21	13:36	08/17/21	14:05	21.92
693988	08/17/21	13:37	08/17/21	13:52	19.99
693997	08/17/21	13:56	08/17/21	14:13	25.75
694006	08/17/21	14:16	08/17/21	14:30	25.66
694007	08/17/21	14:18	08/17/21	14:33	27.86

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
694015	08/17/21	14:32	08/17/21	14:49	28.35
694016	08/17/21	14:37	08/17/21	14:50	20.74
694018	08/17/21	14:42	08/17/21	14:58	24.21
694019	08/17/21	14:43	08/17/21	14:59	23.21
694022	08/17/21	15:00	08/17/21	15:14	23.08
694036	08/17/21	15:43	08/17/21	16:01	20.38
694037	08/17/21	15:43	08/17/21	16:00	24.40
694054	08/18/21	08:06	08/18/21	08:18	20.34
694056	08/18/21	08:07	08/18/21	08:21	22.03
694060	08/18/21	08:09	08/18/21	08:24	19.54
694067	08/18/21	08:14	08/18/21	08:27	25.36
694069	08/18/21	08:15	08/18/21	08:28	25.81
694071	08/18/21	08:16	08/18/21	08:29	17.64
694078	08/18/21	08:20	08/18/21	08:36	20.47
694079	08/18/21	08:21	08/18/21	08:38	19.16
694084	08/18/21	08:24	08/18/21	08:38	23.39
694086	08/18/21	08:25	08/18/21	08:53	27.43
694090	08/18/21	08:29	08/18/21	08:46	28.41
694091	08/18/21	08:30	08/18/21	08:45	26.97
694096	08/18/21	08:33	08/18/21	08:33	16.88
694097	08/18/21	08:35	08/18/21	08:49	25.34
694099	08/18/21	08:45	08/18/21	09:05	24.62
694100	08/18/21	08:49	08/18/21	09:07	25.34
694110	08/18/21	09:02	08/18/21	09:16	28.68
694120	08/18/21	09:23	08/18/21	09:37	31.09
694134	08/18/21	10:24	08/18/21	10:37	27.60
694139	08/18/21	10:30	08/18/21	10:50	24.98
694141	08/18/21	10:31	08/18/21	10:50	19.95
694144	08/18/21	10:49	08/18/21	10:59	21.44
694146	08/18/21	10:56	08/18/21	11:09	19.97
694147	08/18/21	10:57	08/18/21	11:11	27.51
694148	08/18/21	10:57	08/18/21	11:10	19.77
694154	08/18/21	11:06	08/18/21	11:18	21.24
694155	08/18/21	11:06	08/18/21	11:19	23.75
694157	08/18/21	11:11	08/18/21	11:25	27.31
694160	08/18/21	11:14	08/18/21	11:26	25.48
694161	08/18/21	11:14	08/18/21	11:29	25.92
694164	08/18/21	11:19	08/18/21	11:32	24.95
694165	08/18/21	11:20	08/18/21	11:36	27.55
694169	08/18/21	11:27	08/18/21	11:38	20.75
694174	08/18/21	11:33	08/18/21	11:54	21.50
694196	08/18/21	11:57	08/18/21	12:10	29.28
694198	08/18/21	12:03	08/18/21	12:20	26.59

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
694203	08/18/21	12:21	08/18/21	12:37	28.21
694205	08/18/21	12:23	08/18/21	12:55	24.27
694209	08/18/21	12:48	08/18/21	13:01	23.08
694211	08/18/21	12:51	08/18/21	13:08	24.76
694213	08/18/21	12:58	08/18/21	13:13	21.36
694217	08/18/21	13:01	08/18/21	13:14	21.00
694221	08/18/21	13:12	08/18/21	13:25	21.54
694223	08/18/21	13:16	08/18/21	13:31	28.31
694229	08/18/21	13:25	08/18/21	13:37	24.34
694231	08/18/21	13:32	08/18/21	13:45	26.83
694233	08/18/21	13:33	08/18/21	13:45	28.37
694234	08/18/21	13:34	08/18/21	13:48	26.05
694239	08/18/21	13:39	08/18/21	13:53	27.66
694246	08/18/21	13:56	08/18/21	14:09	21.41
694253	08/18/21	14:02	08/18/21	14:26	22.50
694257	08/18/21	14:14	08/18/21	14:28	28.11
694261	08/18/21	14:31	08/18/21	14:46	26.74
694268	08/18/21	15:08	08/18/21	15:21	24.26
694269	08/18/21	15:09	08/18/21	15:09	24.80
694270	08/18/21	15:09	08/18/21	15:27	22.15
694274	08/18/21	15:18	08/18/21	15:32	24.43
694277	08/18/21	15:31	08/18/21	15:46	24.62
694278	08/18/21	15:33	08/18/21	15:47	22.77
694281	08/18/21	15:37	08/18/21	15:48	25.10
694282	08/18/21	15:38	08/18/21	15:49	24.68
694283	08/18/21	15:55	08/18/21	16:09	28.98
694293	08/19/21	08:09	08/19/21	08:22	23.71
694303	08/19/21	08:15	08/19/21	08:29	22.09
694311	08/19/21	08:21	08/19/21	08:33	22.17
694312	08/19/21	08:22	08/19/21	08:34	26.45
694313	08/19/21	08:23	08/19/21	08:36	26.60
694318	08/19/21	08:26	08/19/21	08:37	27.30
694320	08/19/21	08:28	08/19/21	09:20	21.86
694322	08/19/21	08:29	08/19/21	08:43	19.93
694323	08/19/21	08:29	08/19/21	09:16	24.66
694326	08/19/21	08:31	08/19/21	08:51	26.40
694328	08/19/21	08:32	08/19/21	08:47	20.17
694331	08/19/21	08:35	08/19/21	08:46	20.77
694332	08/19/21	08:36	08/19/21	08:49	26.22
694333	08/19/21	08:37	08/19/21	08:51	24.83
694335	08/19/21	08:38	08/19/21	08:53	26.48
694340	08/19/21	08:45	08/19/21	09:17	24.86
694341	08/19/21	08:46	08/19/21	09:18	23.27

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
694343	08/19/21	08:48	08/19/21	09:18	21.91
694361	08/19/21	09:16	08/19/21	09:30	29.10
694364	08/19/21	09:19	08/19/21	09:19	28.59
694368	08/19/21	09:24	08/19/21	09:37	29.40
694378	08/19/21	10:11	08/19/21	10:21	24.44
694380	08/19/21	10:18	08/19/21	10:29	29.28
694382	08/19/21	10:19	08/19/21	10:30	28.68
694383	08/19/21	10:23	08/19/21	10:38	24.13
694385	08/19/21	10:26	08/19/21	10:39	25.45
694387	08/19/21	10:28	08/19/21	10:40	25.37
694389	08/19/21	10:30	08/19/21	10:42	23.20
694395	08/19/21	10:37	08/19/21	10:48	29.41
694396	08/19/21	10:41	08/19/21	10:55	29.43
694397	08/19/21	10:42	08/19/21	10:55	26.28
694398	08/19/21	10:43	08/19/21	10:59	28.11
694400	08/19/21	10:45	08/19/21	10:56	21.27
694404	08/19/21	10:49	08/19/21	11:05	25.75
694405	08/19/21	10:50	08/19/21	11:04	29.81
694409	08/19/21	10:55	08/19/21	11:11	25.34
694410	08/19/21	11:00	08/19/21	11:10	23.15
694416	08/19/21	11:15	08/19/21	11:31	22.38
694417	08/19/21	11:17	08/19/21	11:34	24.21
694428	08/19/21	11:29	08/19/21	11:46	27.29
694434	08/19/21	11:36	08/19/21	11:48	30.12
694450	08/19/21	12:13	08/19/21	12:25	28.79
694456	08/19/21	12:29	08/19/21	12:42	24.54
694458	08/19/21	12:32	08/19/21	12:46	27.85
694459	08/19/21	12:33	08/19/21	12:45	26.96
694461	08/19/21	12:35	08/19/21	12:46	25.19
694465	08/19/21	12:41	08/19/21	12:53	26.02
694467	08/19/21	12:42	08/19/21	12:55	27.05
694469	08/19/21	12:52	08/19/21	13:03	27.95
694470	08/19/21	12:53	08/19/21	13:08	31.22
694472	08/19/21	12:56	08/19/21	13:09	26.03
694477	08/19/21	13:02	08/19/21	13:17	30.57
694483	08/19/21	13:07	08/19/21	13:19	31.88
694484	08/19/21	13:09	08/19/21	13:26	29.74
694485	08/19/21	13:10	08/19/21	13:26	27.57
694494	08/19/21	13:23	08/19/21	13:53	26.02
694497	08/19/21	13:51	08/19/21	13:51	26.82
694499	08/19/21	13:52	08/19/21	13:53	28.47
694501	08/19/21	13:52	08/19/21	13:55	32.20
694502	08/19/21	13:53	08/19/21	13:56	26.52

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
694513	08/19/21	14:43	08/19/21	14:56	28.54
694514	08/19/21	14:44	08/19/21	14:57	22.55
694515	08/19/21	14:45	08/19/21	15:30	27.30
694516	08/19/21	14:47	08/19/21	15:00	22.45
694518	08/19/21	14:53	08/19/21	15:06	26.12
694519	08/19/21	14:54	08/19/21	15:05	22.95
694522	08/19/21	14:58	08/19/21	15:11	25.96
694527	08/19/21	15:10	08/19/21	15:24	29.23
694528	08/19/21	15:11	08/19/21	15:20	28.90
694529	08/19/21	15:12	08/19/21	15:25	23.22
694536	08/19/21	15:37	08/19/21	15:59	30.45
694538	08/19/21	15:45	08/19/21	16:06	25.92
694543	08/19/21	15:51	08/19/21	16:03	23.07
694548	08/19/21	16:05	08/19/21	16:16	30.47
694555	08/20/21	08:03	08/20/21	08:15	23.34
694556	08/20/21	08:04	08/20/21	08:16	24.31
694566	08/20/21	08:10	08/20/21	08:21	30.13
694570	08/20/21	08:12	08/20/21	08:25	26.52
694571	08/20/21	08:13	08/20/21	08:27	30.12
694572	08/20/21	08:14	08/20/21	08:29	29.89
694575	08/20/21	08:15	08/20/21	08:30	22.35
694581	08/20/21	08:20	08/20/21	08:34	28.48
694582	08/20/21	08:21	08/20/21	08:39	25.55
694583	08/20/21	08:22	08/20/21	08:34	23.43
694587	08/20/21	08:24	08/20/21	08:37	29.37
694589	08/20/21	08:26	08/20/21	08:43	28.74
694594	08/20/21	08:29	08/20/21	08:43	29.97
694597	08/20/21	08:32	08/20/21	08:44	23.49
694598	08/20/21	08:33	08/20/21	08:49	31.77
694637	08/20/21	10:18	08/20/21	10:31	23.21
694640	08/20/21	10:25	08/20/21	10:36	23.78
694644	08/20/21	10:34	08/20/21	10:52	29.41
694650	08/20/21	10:46	08/20/21	10:57	26.63
694651	08/20/21	10:47	08/20/21	11:00	23.42
694656	08/20/21	10:53	08/20/21	11:47	23.14
694658	08/20/21	10:55	08/20/21	11:08	28.68
694663	08/20/21	11:01	08/20/21	11:15	28.96
694665	08/20/21	11:02	08/20/21	11:14	28.03
694667	08/20/21	11:04	08/20/21	11:19	29.85
694668	08/20/21	11:10	08/20/21	11:25	24.77
694669	08/20/21	11:10	08/20/21	11:24	24.37
694673	08/20/21	11:15	08/20/21	11:30	30.27
694675	08/20/21	11:17	08/20/21	11:38	24.64

LRI Soil Disposal Summary
Port of Tacoma Account 1460 - WDA 2553

Ticket Number	Date In	Time In	Date Out	Time Out	Tons
694676	08/20/21	11:22	08/20/21	11:33	30.14
694681	08/20/21	11:26	08/20/21	11:37	23.31
694684	08/20/21	11:27	08/20/21	11:41	30.80
694690	08/20/21	11:36	08/20/21	11:47	23.62
694717	08/20/21	12:49	08/20/21	13:05	23.19
694723	08/20/21	12:59	08/20/21	13:13	23.53
694727	08/20/21	13:12	08/20/21	13:29	30.63
694736	08/20/21	13:39	08/20/21	13:52	23.52
694738	08/20/21	13:41	08/20/21	13:56	27.05
694739	08/20/21	13:41	08/20/21	13:54	28.84
694745	08/20/21	13:53	08/20/21	14:05	24.26
694747	08/20/21	13:56	08/20/21	14:13	30.41
694750	08/20/21	14:02	08/20/21	14:17	23.63
694753	08/20/21	14:05	08/20/21	14:27	31.22
694757	08/20/21	14:14	08/20/21	14:26	23.44
694758	08/20/21	14:14	08/20/21	14:31	30.70
694762	08/20/21	14:23	08/20/21	14:35	22.38
694763	08/20/21	14:23	08/20/21	14:36	30.39
694765	08/20/21	14:35	08/20/21	14:54	26.68
694770	08/20/21	14:44	08/20/21	14:55	23.49
694780	08/20/21	15:09	08/20/21	15:30	23.36
694783	08/20/21	15:29	08/20/21	15:43	22.00
694786	08/20/21	15:51	08/20/21	16:04	29.98
694789	08/20/21	16:19	08/20/21	16:19	24.14
694791	08/21/21	08:01	08/21/21	08:11	22.86
694794	08/21/21	08:03	08/21/21	08:14	22.16
694801	08/21/21	08:16	08/21/21	08:28	24.64
694824	08/21/21	10:35	08/21/21	10:47	24.03
694826	08/21/21	10:51	08/21/21	11:00	25.97
694828	08/21/21	10:52	08/21/21	11:02	28.53
694846	08/21/21	13:02	08/21/21	13:13	24.89
694854	08/21/21	14:00	08/21/21	14:11	27.38
				Total	14,149

Appendix G
Terrestrial Ecological Evaluation Exclusion Form

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Parcel 14	
Facility/Site Address: 1131 Alexander Ave, Tacoma, Pierce County, WA 98421	
Facility/Site No: 6836	VCP Project No.: Pending

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Jason Cornetta			Title: Managing Scientist
Organization: Anchor QEA			
Mailing address: 1119 Pacific Ave., Suite 1600			
City: Tacoma		State: WA	Zip code: 98402
Phone: 253-971-2680	Fax:		E-mail: jcornetta@anchorqea.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☒ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

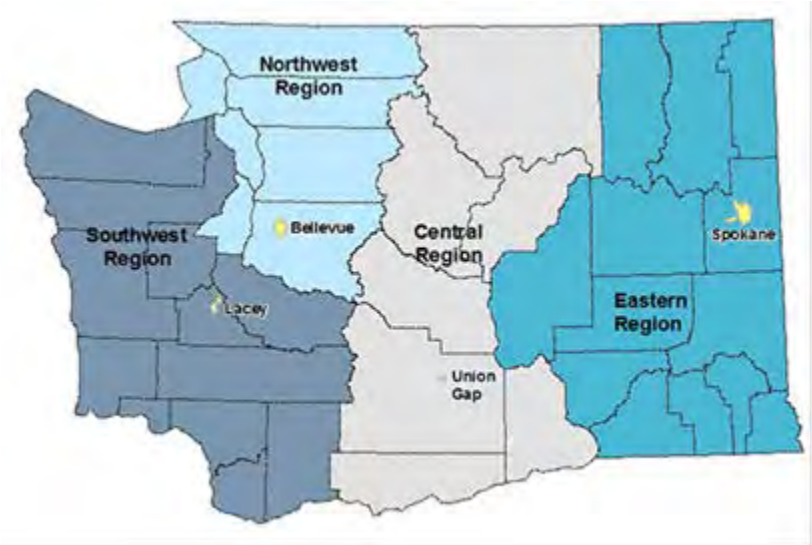
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

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