

SITE INVESTIGATION REPORT

Factory Street Properties
Honolulu, Oahu, Hawaii

TMK: [1] 1-2-001: Parcel 066 (Portion) & [1] 1-2-011: Parcel 001 (Portion)

Prepared For:

GOODSILL, ANDERSON, QUINN & STIFEL LLP
999 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Prepared By:



ENVIROSERVICES & TRAINING CENTER, LLC
505 Ward Avenue, Suite 202
Honolulu, Hawaii 96814
tel: (808) 839-7222

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TABLE OF CONTENTS

1.0	CERTIFICATIONS AND LIMITATIONS.....	2
2.0	EXECUTIVE SUMMARY.....	3
3.0	INTRODUCTION AND PURPOSE	5
4.0	SITE BACKGROUND	7
4.1	SITE DESCRIPTION AND LAND AREA.....	7
4.2	CURRENT AND PROPOSED FUTURE USE	7
4.3	HISTORY AND LAND USE	7
4.4	GEOLOGY AND HYDROGEOLOGY	8
4.4.1	Regional Geology	8
4.4.2	Site Geology.....	8
4.4.3	Regional Hydrogeology.....	8
4.4.4	Site Hydrogeology	9
4.5	INVESTIGATION HISTORY.....	9
5.0	DATA QUALITY OBJECTIVES	13
5.1	PROBLEM STATEMENT	13
5.2	DECISION MAKING.....	13
5.3	DECISION INPUTS	14
5.4	INVESTIGATION BOUNDARIES.....	14
5.5	DECISION RULES.....	15
5.6	DECISION ERROR	15
5.7	SAMPLING DESIGN.....	17
6.0	FIELD INVESTIGATION ACTIVITIES	19
6.1	INTRODUCTION	19
6.2	SCREENING CRITERIA	19
6.3	SAMPLE IDENTIFICATION	20
6.4	SITE ACCESS AND SUBCONTRACTOR COORDINATION.....	20
6.5	INITIAL SITE RECONNAISSANCE AND UTILITIES CLEARANCE	20
6.6	SAMPLE LOCATION AND FREQUENCY	20
6.7	SAMPLE ANALYSIS AND ANALYTICAL RESULTS	21
6.8	DECONTAMINATION.....	21
6.9	INVESTIGATION-DERIVED WASTE (IDW)	21
6.10	QUALITY CONTROL SAMPLES	22
7.0	FINDINGS AND DISCUSSION	23
7.1	DEVIATIONS FROM THE SITE INVESTIGATION WORK PLAN.....	23
7.2	PHYSICAL OBSERVATIONS.....	23
7.3	ANALYTICAL RESULTS	23
7.4	DATA QUALITY.....	25
7.5	CONCLUSIONS AND RECOMMENDATIONS	26
8.0	REFERENCES.....	27

APPENDICES

APPENDIX I: FIGURES

APPENDIX II: LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

1.0 CERTIFICATIONS AND LIMITATIONS

EnviroServices & Training Center (ETC), LLC has completed this Site Investigation Report for the project site. ETC's findings and conclusions presented in this report are professional opinions based solely upon visual observations of the project site, government regulations, and upon interpretation of the laboratory data and field measurements gathered at the time and location of the study.

This report is intended for the sole use of ETC's Client, exclusively for the project site indicated. The scope of services performed in execution of this site investigation may not be appropriate for satisfying the needs of other users, and any use or reuse of this report or the findings and conclusions presented herein is unauthorized and at the sole risk of said user.

ETC makes no guarantee or warranty; either expressed or implied, except that our services are consistent with good commercial or customary practices designed to conform to acceptable industry standards and governmental regulations. No warranty or representation, expressed or implied, is included or intended in its proposal, contracts, or reports. Opinions stated in this report apply only to the site as outlined and apply to the conditions present at the time of the site investigation activities. Moreover, these opinions do not apply to site changes that occur after the site investigation activities.

Prepared by:



Eva Kakone
Environmental Scientist
EnviroServices & Training Center, LLC

Reviewed by:



Damon Hamura
Principal
EnviroServices & Training Center, LLC

2.0 EXECUTIVE SUMMARY

EnviroServices & Training Center, LLC (ETC) was retained by Goodsill Anderson Quinn & Stifel LLP (GAQS) to perform site investigation activities at the Factory Street Properties located at 2003 North King Street and 1955 North King Street; and identified as Tax Map Key (TMK) identification numbers (1) 1-2-011: Parcel 001 (Portion) and (1) 1-2-001: Parcel 066 (Portion), respectively (herein referred to as the project site). According to City & County of Honolulu tax records, the property located at 2003 North King Street is owned by LKJ Holdings Company and the property located at 1955 North King Street is owned by MC Holdings Company.

ETC has completed this Site Investigation Report to document site investigation activities, present findings based on the data obtained from the investigation, and determine appropriate potential actions to address site conditions. This site investigation was conducted in accordance with the *Revised Site Investigation Work Plan, Factory Street Properties, Honolulu, Oahu, Hawaii, TMK: [1] 1-2-001: Parcel 066 (Portion) & [1] 1-2-011: Parcel 001 (Portion)* (SI-WP), dated June 2018, prepared by ETC. ETC performed the services in general accordance with the Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office's *Interim Final Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (HEER TGM) and the DOH's *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*, Summer 2016 (Updated January 2017), hereinafter referred to as the "EHE Document".

Previous environmental investigations have been conducted on adjacent properties in which elevated concentrations of lead were detected in the surface/subsurface soils. Based on the results from these studies, the current property owners received a letter dated November 16, 2017 from the DOH HEER Office directing the owners to conduct a site investigation to determine the presence and extent of contaminant impacts within the project site. As such, the primary purpose of this site investigation was to evaluate the presence and/or extent of contaminants of potential concern (COPC) concentrations within the project site soils. The COPC identified for this site investigation included total petroleum hydrocarbons (TPH) as oil (TPH-O) and total concentrations of antimony, arsenic, barium, cadmium, chromium, lead, and zinc. The media targeted for this project include surface and subsurface soils.

In accordance with the SI-WP, ETC divided the project site into five lateral decision unit (DU) areas. DU-1 corresponds to a paved driveway between two structures at 2003 North King Street. DU-2, DU-3, DU-4, and DU-5 correspond to areas within a paved parking lot at 1955 North King Street (currently occupied by Pat's Auto Detailing & Body Paint). Within each area, six separate DU depth layers were established at 0- to 0.5-feet, 0.5- to 1.0-feet, 1.0- to 2.0-feet, 2.0- to 3.0-feet, 3.0- to 4.0-feet, and 4.0- to 5.0-feet below the existing asphalt pavement. Multi-increment (MI) soil samples, each consisting of 30-soil increments, were collected from the six separate depth layer DUs within each soil core. In total, thirty primary MI soil samples were collected from the project site. In addition, two field replicate samples were collected from three of the DU depth layers (resulting in six replicate soil samples). All soil samples collected were submitted to TestAmerica Laboratories for multi-increment sample processing and analysis for select COPCs in accordance with the SI-WP.

Analytical data for the MI samples were compared to DOH Environmental Action Levels (EAL) for both unrestricted land use and commercial/industrial land use in areas where groundwater is not a current or potential drinking water source and where the nearest surface water body is greater than 150 meters from the site. Comparison of the data to DOH EALs indicated that TPH-O concentrations in ten samples, lead concentrations in two samples, and zinc concentrations in one sample exceeded DOH EALs for unrestricted land use. Furthermore, the zinc concentration detected also exceeded the DOH EAL for commercial/industrial land use.

The detected concentrations of lead, coupled with visual observations of the soil during sample collection, indicate that it is highly unlikely that the source of lead contamination previously identified in Factory Street originates from the 1955 North King Street and 2033 North King Street properties. However, since TPH-O, lead, and zinc were detected in site soils at concentrations exceeding the DOH EALs for unrestricted land use, corrective actions need to be considered to mitigate potential exposure pathways.

In order to address TPH-O, lead, and zinc concentrations in site soils, ETC recommends that an Environmental Hazard Evaluation (EHE) and an Environmental Hazard Management Plan (EHMP) be prepared for the project site. The EHE and EHMP should address the existing contaminants on the project site, taking into consideration current/future land use, potential exposure pathways, and receptors of concern.

3.0 INTRODUCTION AND PURPOSE

EnviroServices & Training Center, LLC (ETC) was retained by Goodsill Anderson Quinn & Stifel LLP (GAQS) to perform site investigation activities at the Factory Street Properties located at 2003 North King Street and 1955 North King Street; and identified as Tax Map Key (TMK) identification numbers (1) 1-2-011: Parcel 001 (Portion) and (1) 1-2-001: Parcel 066 (Portion), respectively (herein referred to as the project site).

ETC understands that previous environmental investigations have been conducted on adjacent properties in which elevated concentrations of lead were detected in the surface/subsurface soils. The current property owners received a letter dated November 16, 2017 from the Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office, directing that the owners conduct a site investigation to determine lead concentrations within the project site. As such, the objective of this site investigation was to determine whether contaminants of potential concern (COPC) concentrations at the project site exceed appropriate DOH Environmental Action Levels (EALs). The COPC identified for this investigation were established based on previous investigations performed in the general vicinity of the project site.

This site investigation was conducted in accordance with the *Revised Site Investigation Work Plan, Factory Street Properties, Honolulu, Oahu, Hawaii, TMK: [1] 1-2-001: Parcel 066 (Portion) & [1] 1-2-011: Parcel 001 (Portion)* (SI-WP), dated June 2018, prepared by ETC. ETC performed the services in general accordance with the DOH HEER Office's *Interim Final Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (HEER TGM) and the DOH's *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*, Summer 2016 (Updated January 2017), hereinafter referred to as the "EHE Document". Specifically, ETC completed the following tasks:

- Established five lateral decision unit areas (DUs) within the boundaries of the project site based on Attachment D – Assessment Target Areas included in the DOH HEER Office's November 16, 2017 letter to MC Holdings Company/LKJ Investment LLC regarding the Factory Street Lead Site, Notice of Rescission of No Further Action Determination, dated October 12, 1993.
- Subdivided the five established DUs into six separate depth layer decision units (0- to 0.5-feet, 0.5- to 1-feet, 1- to 2-feet, 2- to 3-feet, 3- to 4-feet, and 4- to 5-feet below ground surface (bgs)). A total of thirty DUs were established.
- Contacted the Hawaii One-call Center to identify and mark potential underground utilities in the vicinity of boring locations.
- Retained the services of Geotech Hawaii, Inc. (GTH) to perform utility toning and advance soil borings within the project site using a direct-push rig.
- Collected multi-increment (MI) soil samples, each consisting of thirty soil aliquots, from the thirty DUs (resulting in thirty primary MI samples).
- Collected two field replicate samples from three of the DU depth layers (resulting in six field replicate MI samples).

- Submitted thirty-six MI soil samples (thirty primary and six field replicates) to Test America Laboratories (TA) sample receiving center located in Honolulu, Hawaii, for MI sample processing in accordance with the DOH HEER TGM.
- Directed TA to analyze the processed MI soil samples for total petroleum hydrocarbons (TPH) as oil (TPH-O) via EPA Method 8015 and seven metals (arsenic, antimony, barium, cadmium, chromium, lead, and zinc) via EPA Method 6010 on a standard 10- to 15- working day turnaround time.
- Prepared this report documenting sample collection activities, presenting analytical data, evaluating existing environmental hazards, and providing recommendations for future activities to address potential exposure pathways within the project site.

4.0 SITE BACKGROUND

4.1 Site Description and Land Area

The project site consists of portions of two parcels located at the corners of North King Street and Factory Street, identified by the addresses 2003 North King Street and 1955 North King Street, in the Kalihi area of Honolulu, Oahu, Hawaii. The portions that comprise the project site include an approximate 1,500 square foot paved driveway between the two structures on the 2003 North King Street parcel and an approximate 6,200 square foot paved parking area on the 1955 North King Street parcel. The project site is located in an area of Kalihi that generally consists of mixed use commercial and residential properties; and the elevation at the project site ranges from approximately 45- to 49-feet above mean sea level. The current property owners acquired the properties on or around December 24, 1986.

Groundcover at the project site generally consists of asphalt pavement, in some instances demarcated with lines for parking stalls. The nearest surface water body is the Kalihi Stream, which is located approximately 1,100-feet north-northwest of the project site.

4.2 Current and Proposed Future Use

The project site is currently used for multi-family residential dwellings (2003 North King Street) and a commercial business (Pat's Auto Detailing & Body Paint at 1955 North King Street). According to City & County of Honolulu tax records, the property located at 2003 North King Street is owned by LKJ Holdings Company and the property located at 1955 North King Street is owned by MC Holdings Company. ETC understands that the property owners do not anticipate any change to the site usage in the near future.

4.3 History and Land Use

Early history of the areas encompassing the project site indicates previous use for commercial/industrial purposes. Previous reports indicate that since 1952 or so, the area has been predominantly residential with mixed commercial use.

Previous investigations include accounts from a witness who alleges that between 1955 and 1966, ash containing lead was dumped on the 2003 North King Street property. Notable commercial tenants at the site included a fishing supply store, a dental office and a sign printing shop. All three commercial tenants were identified by the DOH HEER Office in the April 1996 *Site Investigation – Factory Street Lead Site* as having used or stored chemicals on site.

Other documents (including a 1993 *Underground Storage Tank Closure Report* for Pacific Tire and a January 27, 1994 DOH Fax Message from Michael Richardson to Leslie Au) indicated that the 1955 North King Street property was previously operated as a Shell Oil Company service station that conducted automobile fueling, repairs and maintenance; a tire retail and installation station; and a battery rebuilder.

4.4 Geology and Hydrogeology

4.4.1 Regional Geology

The island of Oahu is formed by the erosional remnants of two shield volcanoes. These are the Waianae range to the west and the Koolau range to the east. The Waianae volcano is estimated to have formed 2.4 to 3.6 million years ago. It consists of a tholeiitic lava shield with a thick cap of transitional to alkalic rock. Rejuvenation-stage volcanics of undifferentiated age occur in Kolekole Pass and on the south flank of the Waianae shield. Dike orientations define northwest and southwest rift zones (Macdonald et al., 1983).

The Koolau volcano is estimated to have formed 1.8 to 2.6 million years ago (Macdonald et al., 1983). It consists of a tholeiitic lava shield and lacks an alkalic cap. It has well defined major dike complex trending northwest-southwest. A third, minor rift zone referred to as the Kaau rift trends southward from Kaau crater, near the upland crest of the Koolau Ridge. After a long dormant period and periods of deep erosion, the Koolau volcano developed abundant and scattered rejuvenation-stage vents, typically aligned on northeast-striking fissures (Macdonald, et al., 1983).

4.4.2 Site Geology

The soil on the project site is identified as Honouliuli clay, 0 to 2 percent slopes (HxA). HxA consists of well-drained soils in the lowlands on coastal plains on the island of Oahu. These soils developed in alluvium derived from basic igneous rock and also include small areas of fine-textured alluvial soils with a stony subsoil and small areas of shallow, red, friable soils underlain by reef limestone. In a representative profile, the soil is dark reddish-brown, very sticky and very plastic clay with a high shrink-swell potential. Permeability is moderately slow, runoff is slow, and the erosion hazard is no more than slight. This land type is typically used for sugarcane, truck crops, and pasture (USDA, 1972).

4.4.3 Regional Hydrogeology

The primary drinking water in the Hawaiian Islands is drawn from basal groundwater. Basal groundwater is formed by rainwater percolating down through the residual soils and permeable volcanic rock. The portion of the island situated below sea level is saturated with ocean salt water, except within rift zones of the volcanoes where fresh water forms a basal lens called the Ghyben-Herzberg lens. A zone of transition between the fresh groundwater and the ocean salt water occurs due to the constant movement of the interface as a result of tidal fluctuations, seasonal fluctuations in recharge and discharge and aquifer development (Macdonald et al., 1983).

Groundwater aquifers in Hawaii occurs under two principal conditions at high altitudes above sea level: perched and dike-impounded. Downward percolation of rainwater may be impeded by low permeability materials such as dense volcanic sediments, alluvial clay, and volcanic ash, which can cause the formation of a perched aquifer. A dike-impounded aquifer results from steeply dipping volcanic dikes serving as a barrier, sequestering water into compartments and reservoirs of impermeable lavas. Recharge of freshwater aquifers occur in areas of high rainfall, which are the interior mountainous areas. The groundwater flows from the

recharge areas to the areas of discharge along the shoreline. Frictional resistance to groundwater flow causes it to pile up within the island until it attains sufficient hydraulic head to overcome friction. Thus, basal groundwater tends to slope toward the shoreline (Nichols et al., 1996).

4.4.4 Site Hydrogeology

The site is underlain by the Kalihi Aquifer System, which is part of the Honolulu Aquifer Sector on the island of Oahu. The aquifer is classified by Mink and Lau, 1990, with the system identification number 30103116 (13321). This system includes an unconfined basal aquifer in sedimentary (nonvolcanic) lithology. The groundwater in this aquifer is described as being currently in use and containing groundwater with a moderate salinity (1,000 to 5,000 mg/l Cl⁻). The groundwater is neither a drinking water source nor ecologically important, and is also described as replaceable with a high vulnerability to contamination (Mink and Lau, 1990).

The site is further underlain by a second aquifer of the same system. The aquifer is a confined, basal aquifer in flank compartments, and is classified with the system identification number 30103121 (11113). The aquifer is described as a currently used drinking water source containing groundwater with a fresh salinity (<250 mg/l Cl⁻). It is also described as irreplaceable with a low vulnerability to contamination (Mink and Lau, 1990).

4.5 Investigation History

In 1993, the DOH HEER Office conducted a lead exposure study inside and outside of buildings on Factory Street to investigate possible sources of high lead blood levels in children living on Factory Street. Soil samples collected as part of this investigation from exposed areas along the shoulder area near the intersection of Factory Street and North King Street identified lead concentrations ranging from 7,870 to 342,000 mg/kg. Subsequently, the property owner removed contaminated soil and paved over additional areas under the close supervision of William Perry from the DOH HEER Office. As a result of these efforts, the DOH HEER Office issued a letter dated October 12, 1993 concurring that no further action was required at the time.

A Preliminary Assessment (PA) was completed by the DOH HEER Office on May 25, 1995 and submitted to the EPA. After reviewing the PA, the EPA decided that further investigation was necessary at the Factory Street Lead (FSL) site, defined by the DOH HEER Office as a four-block area centered on the intersection of Factory and North King Streets. Therefore, in 1995, the EPA conducted further site assessment through the collection of 86 soil samples from 20 borings to a maximum depth of approximately 5 feet below ground surface (bgs). The findings of this assessment are documented in the September 30, 1995 Factory Street Lead Site Assessment Report prepared for the EPA Region IX Emergency Response Section by Ecology and Environment, Inc. A number of these samples were collected adjacent to the project site and are listed with their respective concentrations in Table 1 below.

The soil samples with the highest lead concentrations detected during the investigation originated from a narrow strip between the building at 2003 North King Street and Factory Street, and from the edge of a parking lot at 1955 North King Street in locations where soil with high lead concentrations had reportedly been removed. These areas appear to be located within the street shoulders of Factory Street. There were 6 samples that appear to have been collected from within the driveway of the 2003 North King Street property – sample numbers 19 to 20, 21 to 23, and 39. The lead concentrations in these samples were below the XRF detection limit of 60 mg/kg (4 samples), 90 mg/kg (1 sample) and 289 mg/kg (1 sample). The conclusions made from the 1995 assessment indicated that:

- “[T]here did not appear to be any consistent distribution pattern such as might be expected in a downgradient surface migration plume.”
- “[O]ff-site lead contamination cannot be attributed to contamination arising at the Factory Street Site.”
- Limited areas of contamination were located in curbside strips along either side of Factory Street adjacent to 2003 North King Street and 1955 North King Street. These were areas where the landowner reportedly removed contaminated soil and paved over exposed soil.

Table 1 - Applicable Factory Street Lead Results, 1995

Sample #	Address	Type	Depth	XRF	Lab
19	2003 N King	Grab	0.25-0.5'	289	
20	2003 N King	Grab	1-1.5'	<60	
21	2003 N King	Grab	0-0.5'	<60	
22	2003 N King	Grab	1-1.5'	<60	
23	2003 N King	Grab	2-2.5'	<60	
33	2003 N King	Grab	0.25-0.5'	18,570	
34	2003 N King	Grab	1-1.5'	12,850	37,400
35	2003 N King	Grab	2-2.5'	72	
36	2003 N King	Grab	3-3.5'	200	
37	2003 N King	Grab	4-4.5'	<60	308
38	2003 N King	Grab	5-5.5'	<60	
39	2003 N King	Grab	0.25-0.5'	90	
55	1955 N King	Composite	surface	883	
62	1955 N King	Grab	0-0.5'	23,780	117,000
63	1955 N King	Grab	1-1.5'	521	
64	1955 N King	Grab	2-2.5'	216	
65	2003 N King	Grab	0.25-0.5'	585	
66	2003 N King	Grab	0.167-0.5'	13,850	
67	2003 N King	Grab	1-1.5'	223	
68	2003 N King	Grab	2-2.5'	361	
85	1955 N King	Grab	0.167-0.5'	1,118	
86	1955 N King	Grab	1-1.5'	<60	

XRF and Lab sample concentrations in mg/kg

In July 2017, TetraTech conducted a site investigation within Factory Street to characterize the areas of highest lead contamination using more representative sampling techniques. This investigation was conducted on behalf of the DOH HEER Office in order to assess the environmental hazards beneath the asphalt pavement. The portion of Factory Street between North King Street and Waterhouse Street was conceptually subdivided into six lateral DU areas of approximately 1,000- to 1,500-square feet in area. Each of the six DU areas were subdivided into six depth layers described as Layer A (0- to 0.5-feet bgs), Layer B (0.5- to 1-foot bgs), Layer C (1- to 2-feet bgs), Layer D (2- to 3-feet bgs), Layer E (3- to 4-feet bgs), and Layer F (4- to 5-feet bgs).

TetraTech collected MI soil samples from each of the six DU layers in each of the six DU areas using a direct push rig. In addition, triplicate samples were collected from each of the six DU layers in DU-6 for field quality control purposes. A total of 48 multi-increment soil samples were collected as part of the investigation. Certain metals (including lead) and TPH-O were detected in these samples.

In relation to this project site, TetraTech's decision unit area DU-5 was adjacent to the 1955 North King Street portion of the project site and decision unit area DU-6 was adjacent to the 2003 North King Street portion of the project site. Analytical data indicated that lead concentrations in DU-5 were 8,450 mg/kg in the 0- to 0.5-foot layer and 429 mg/kg in the 0.5- to 1-foot layer. Samples at depth greater than 1-foot were below the DOH HEER Office's EAL of 200 mg/kg for unrestricted land use. In DU-6, lead concentrations in the triplicate soil samples in the 0- to 0.5-foot layer ranged from 13,400 mg/kg to 24,800 mg/kg. Lead concentrations in the 0.5- to 1-foot depth layer and the 1- to 2-foot depth layer were significantly lower than the concentrations in the 0- to 0.5-foot layer, but still remained above the DOH EAL for unrestricted land use. With the exception of one sample at the 3- to 4-foot depth layer, all remaining samples below 2-feet bgs had lead concentrations below the DOH EAL for unrestricted land use.

Although other constituents were detected at concentrations exceeding DOH EALs for unrestricted land use (e.g., barium, TPH-O), lead is the primary risk driver for the planned investigation.

5.0 DATA QUALITY OBJECTIVES

The DQO process is an iterative approach for defining the criteria for environmental data collection operations. The process includes stating the problem to be investigated, identifying the decisions that need to be made, identifying the inputs to the decision-making process, defining the boundaries of the investigation, developing decision rules that will be applied, specifying tolerable limits on the decision errors, and optimizing the sampling design to be used in the investigation. For the purposes of this project, a DQO decision-making process was formulated. DQOs described in the following sections detail the projected initial step in identifying COPC concentrations at the property, comparing such concentrations to current action levels (ALs), and determining whether further evaluation and/or corrective actions may be needed to address such COPC. Selected subsections are discussed to further define the objectives of the sampling activities.

5.1 Problem Statement

Previous environmental investigations conducted within Factory Street have indicated the presence of elevated lead concentrations in the soil beneath the asphalt pavement. The suspect sources of contamination are unknown. Therefore, in order to determine if environmental hazards associated with lead contaminated soil exist on the properties at 1955 North King Street and 2003 North King Street, and to identify the potential source type and source area of lead contamination, additional investigation using representative sampling techniques was needed. The resultant data was comparable to depths and analytes from the previous 2017 investigation within Factory Street and provides input into decisions on managing environmental hazards associated with the lead contamination.

5.2 Decision Making

The decision-making process includes a description of: 1) decisions to be made; 2) inputs to the decision-making process; 3) the boundaries of the investigation; and 4) development of the decision rules that will govern the process.

The decisions to be made for the project are based on the Principle Study Question (PSQ) for the project. The PSQ identify key unknown or unresolved issues that reveal the solution to the problem and the purpose for identifying the PSQ is to narrow the scope of the search for information needed to address the problem. Associated with the PSQ are feasible alternative actions (AAs) that might be taken based on the outcome of the investigation. The AAs should be consistent with regulatory objectives and should help achieve the goal of protecting human health and the environment. A decision statement is then formulated for the PSQ. The decision statement links the AAs with the PSQ and expresses a choice between AAs based on the outcome of the investigation. The decision statement for the project site determines whether mean COPC concentrations in soil within the identified decision units at the project site exceed ALs and may require additional investigation and/or corrective actions to mitigate exposure pathways; if not then the decision unit will not be included in the area requiring corrective actions. The PSQ and associated AAs for this project are provided in the table below.

PSQ#	PSQ	AA#	AA
1	Do lead concentrations in multi-increment soil samples in the identified decision units exceed the default EAL of 200 mg/kg for the project site?	1a	Yes – Consider additional investigation and/or corrective actions to mitigate exposure pathways. Overburden soil may require special handling and/or disposal.
		1b	No – No corrective actions necessary and/or no restrictions on soil re-use.
2	Do the data collected during the investigation suggest that the source of lead contamination within Factory Street originates from the project site?	2a	Yes – Consider corrective actions to mitigate exposure pathways due to the source of lead contamination.
		2b	No – Corrective actions to address contaminant source not needed, revert to PSQ #1.

5.3 Decision Inputs

The purpose of identifying decision inputs is to specify the information needed to support the decision statement. This information is necessary so that appropriate data may be collected to resolve the decision statement. Although data from a previous environmental investigation exists, more representative data was needed to quantify COPC impacts to the project site. For the purposes of this investigation, the inputs to the decision-making process included the following:

- The source of information on the environmental variables used in the decision-making process was new data obtained through collection of soil samples at the property.
- Soil samples were processed and quantitatively analyzed by an environmental laboratory.
- Analytical data were compared to project ALs, which are current DOH EALs for sites where groundwater is not a current or potential drinking water source and where the nearest surface water body is greater than 150 meters from the site.
- Laboratory reporting limits were lower than the project ALs and laboratory quality control parameters met those limits specified in the standard EPA analytical methods described in the *SW-846 On-line Test Methods for Evaluating Solid Waste Physical/Chemical Methods* and in the selected laboratory's quality assurance program.

5.4 Investigation Boundaries

The investigation boundaries defined the population, or site characteristics, that environmental data represent. This investigation was not constrained by temporal boundaries since the contaminant sources are due to historic usage of the site and surrounding areas, and there are no immediate plans for re-development. The usability of the data gathered during this investigation is not constrained by temporal boundaries since the COPC being investigated are persistent in the environment and will not greatly vary in concentrations in the soil over relatively short time periods.

Spatial limitations encountered during the investigation included the presence of subsurface features (i.e., large rocks, very compacted soils, etc.) and live underground utilities, which inhibited the collection of specific samples.

The environmental media of interest for this investigation includes site soil within the property boundaries of 1955 North King Street and 2003 North King Street. Furthermore, soil was defined as any portion of the representative soil samples that pass through a 2-millimeter sieve.

5.5 Decision Rules

The decision rules are statements regarding the appropriate regulatory response action depending on whether the data indicated COPC concentrations are greater or less than the appropriate action levels. In theory, the environmental data are used to estimate the statistical parameter of interest (typically the mean). However, in practice, the statistical parameters will almost surely differ from the true parameter value due to the natural variability (compositional and distributional heterogeneity) in data combined with the need to take a relatively small sample (in comparison to the overall size of the entire population of interest). The uncertainty associated with the difference between the theoretical estimate and the true parameter value results in the possibility of decision error and can be minimized (but not eliminated) through the sampling design.

5.6 Decision Error

Decision errors occur when sample data misleads the decision maker(s) into making a wrong decision and therefore taking the wrong response action. The possibility of a decision error exists since decisions are based on sample data that may be inaccurate due to random and systematic errors incurred at different stages of acquisition. Sources of decision error include sampling error (both field sampling and laboratory subsampling), analytical error (laboratory error during analysis), statistical error (improper use of statistical analysis and data assumptions), and regulatory interpretation error. The primary source of decision error is usually the sampling error. The primary phenomena that cause sampling error are the two types of heterogeneity, compositional heterogeneity and distributional heterogeneity.

Compositional heterogeneity is the natural state of particles that make up the population and refers to the variability of concentrations between particles that make up the population. Distributional heterogeneity is the natural state of particles that make up the population and refers to the nonrandom placement of particles within the population.

Heterogeneity can be controlled through representative sampling. A truly representative sample includes some of all the particles of all the different concentrations in the exact proportion that exists in the population. Heterogeneity is generally the prime contributor to total sampling error. Controlling heterogeneity is essential to controlling total sampling error, thereby reducing the potential for decision error.

Total sampling error consists of several components: fundamental error, grouping and segregation error, materialization error (consists of delimitation error and extraction error), preparation error, long-range heterogeneity fluctuation error, and periodic heterogeneity fluctuation error.

Fundamental error is the result of compositional heterogeneity. It is the only error that cannot be eliminated and the only error that can be estimated prior to sampling. Increasing the number of random samples collected so that the population is better represented and increasing the sample mass to be analyzed are the primary methods that can be used to control fundamental error.

Grouping and segregation error is the result of distributional heterogeneity, which may be due to nature (gravity, chemistry) or due to man (movement of material, process changes). In some cases, mixing may reduce the magnitude of grouping and segregation error, but in other cases mixing may promote segregation and therefore increase the magnitude of grouping and segregation error. Controlling the fundamental error and collecting a sample that consists of numerous random increments (i.e., 30 to 50) are methods to control grouping and segregation error.

Materialization error consists of delimitation error and extraction error. Delimitation error is caused by collection of an improper increment shape and is a function of selecting the proper sampling tool. Extraction error is caused by incomplete extraction of the ideal increment shape and is a function of proper use of the sampling tool. Proper increment shape collection and extraction is essential for maintaining equiprobable selection of all particles in the population and thereby controlling materialization error.

Preparation error is the error that occurs after sampling, but before analysis. Preparation error is the only non-selective error and may be due to several factors, such as losses (i.e., physical loss of fine particles), cross-contamination, and/or documentation (i.e., incorrect labeling). Preparation error can be controlled by maintaining a sample's integrity prior to analysis.

Long-range heterogeneity fluctuation error (i.e., error that is caused by changes in contaminant concentrations across space or over time due to natural or physical processes) and periodic heterogeneity fluctuation error (i.e., error that is caused by periodic levels across space or over time due to natural or physical processes) are not significant for the purposes of this investigation due to the non-volatile and relatively immobile nature of the COPC in soil.

Although other decision errors, such as measurement error and statistical error, can contribute to the total error, such errors can be controlled by checking laboratory quality control data and by ensuring the use of appropriate assumptions in the statistical analysis.

Decision errors are defined by the assumed "true value" or baseline condition. The baseline condition becomes the assumed outcome when insufficient evidence exists to refute the baseline condition. The outcome opposite the baseline condition then becomes the alternate decision. For the purposes of this investigation, since previous environmental investigations have indicated that certain COPC concentrations in areas to be sampled have exceeded ALs, it was decided that the more conservative baseline condition would be that "CO[P]C concentrations exceed the appropriate ALs."

There are two general types of decision errors associated with the assumed baseline, a false acceptance error and a false rejection error. A false acceptance error occurs when the decision is made that the baseline condition is true, but in actuality, it is false. Conversely, a false rejection error occurs when the decision is made that the baseline condition is false, but in actuality, it is true. For the purposes of this investigation, decision errors are defined as follows:

- *False Acceptance:* The decision is made that data indicate COPC concentrations exceed the ALs, when in actuality, the COPC concentrations are below the ALs. The consequence of making a false acceptance error is the decision to perform additional activities to address the elevated COPC concentrations, when in actuality such activities do not need be performed. This decision error is the less severe since it does not increase the risk to human health or the environment.
- *False Rejection:* The decision is made that data indicate COPC concentrations are below the ALs, when in actuality the COPC concentrations exceed the ALs. The consequence of making a false rejection error is the decision to forego additional activities to address elevated COPC concentrations, when in actuality such activities should be performed to protect potential receptors. This decision error is the more severe consequence since the risk to human health and the environment remains unaddressed.

Controlling the various sources of decision error, and in particular, controlling sampling error, will minimize the possibility of decision-making errors. Therefore, it is essential that an appropriate sampling methodology designed to minimize the sources of significant decision error (sampling error) be selected. Furthermore, it would be prudent to incorporate a statistics-based margin of error, such as adding the standard deviation calculated from replicate samples to the mean COPC concentrations, to further reduce the potential for decision errors

5.7 Sampling Design

In order to minimize the occurrence of decision errors, a statistics-based sampling design was selected to generate data that provides an effective representation of existing mean COPC concentrations within various decision units at the property. The objective of the sampling design is to provide sufficient data to resolve the Decision Statements described in Section 5.2.

ETC used a MI sampling approach for collection and analysis of soil samples. MI sampling is a method employed to obtain representative samples that exhibit mean concentrations of the material being sampled and that account for the variability of concentrations within that particular material. Such a method was developed to provide accurate (closeness of the sample value to its actual value) and precise (closeness of repeated sample values, or repeatability) data. If data is considered sufficiently accurate and precise, then the data can be considered reliable estimates of the true concentrations.

Sampling accuracy is usually achieved by some type of random sampling. In random sampling, every unit in the population has a theoretically equal chance of being sampled and measured. Consequently, statistics generated by the sample (i.e., mean and standard deviation of the mean) are unbiased (accurate) estimators of true population parameters – in other words, the sample is representative of the population.

Sampling precision is commonly achieved by taking an appropriate number of samples from the population. By looking at the equation for the standard deviation of the mean of a sample (standard error of the mean), precision increases (variability decreases) as the number of samples increase, although it is not a one-to-one relationship. Another method to increase the sampling precision is to increase the physical size (weight or volume) of the samples that are collected and analyzed. This technique has the effect of minimizing between-sample variation and decreasing the standard deviation of the mean of the sample. Increasing the number of samples collected and/or the size of the samples from a population not only increases sampling precision, it also has the secondary effect of increasing sampling accuracy.

The MI sampling technique considers the need for sufficiently accurate and precise sample data. The technique includes requirements for: 1) collection of random samples; 2) collection of a larger number of samples; and 3) collection of a physically larger sample volume than standard discrete sampling techniques.

The MI sampling approach provided mean COPC concentrations for the specific DU that the sample is meant to represent. Therefore, appropriate decision units were defined to meet the project DQOs.

In general, the areas of interest on the project site consisted of five DU areas consisting of six soil layers, with thirty soil increments in each layer. Soil increment/boring locations were selected using a triangular grid pattern in DU1 and a square grid pattern in DU2 through DU5. Increment spacing was dictated by the size of the decision unit area and the number of increments planned for each decision unit area (in this case, thirty increments).

6.0 FIELD INVESTIGATION ACTIVITIES

6.1 Introduction

In order to minimize the occurrence of decision errors, a statistics-based sampling design was selected to generate data that provides an effective representation of existing average COPC concentrations at the project site. The sampling design provided sufficient data to resolve the four Decision Statements described in the June 2018 SI-WP.

Based on ETC's evaluation of the potential contaminant sources, the primary populations of interest for the sampling activities were identified as follows:

- Surface soils, defined as the top 6-inches of soil (beneath the existing asphalt pavement) throughout the project site.
- Subsurface soils, defined as soils at depths greater than 6-inches below the existing asphalt pavement to 5-feet bgs throughout the project site.

A MI sampling approach was established and used for the collection and analysis of surface and subsurface soil samples throughout the project site. The DUs were constrained laterally by current property boundaries and physical constraints (existing structures).

6.2 Screening Criteria

The project ALs that were used to evaluate data obtained from this investigation were the DOH EALs for both unrestricted and commercial/industrial land use in areas where groundwater is not a current or potential drinking water source and the where nearest surface water body is greater than 150-meters from the project site. The project ALs are summarized in the table below:

Table 2 - Project Action Levels

Constituent	DOH EAL - Unrestricted	DOH EAL - Commercial
Antimony	6.3	82
Arsenic	24	95
Barium	1000	2500
Cadmium	14	72
Chromium (Total)	1100	1100
Lead	200	800
Zinc	1000	2500
TPH-O	500	2500

All values in mg/kg.

6.3 Sample Identification

This sample identification, or sample naming, procedure describes the naming convention for samples collected and analyzed during this field investigation. The following format was used for MI soil samples collected at the project site.

X.Y.Z where:

X	=	Property address (either 1955 or 2003)
Y	=	decision unit designation (DU1 to DU5)
Z	=	indicates the depth layer (A, B, C, D, E, or F)

Field replicate samples were labeled in a similar manner as described above using fictitious DU designations such that the samples were indistinguishable from primary samples.

The labeling method was used for all samples collected at the project site. In the field logbook, personnel recorded the sample number as well as other identifying information, including narrative, sample ID, date, time, depth, location, matrix description, and/or other comments as appropriate. Each sample container (i.e. resealable plastic bag or glass bottle) was labeled with the sample ID, date/time of sampling, and sample depth layer using an indelible ink marker. A spreadsheet with sample names, depth layers, and laboratory analyses was prepared in advance of sampling to assist field personnel with avoiding potential sample labeling errors in the field.

6.4 Site Access and Subcontractor Coordination

Site access was coordinated with the property owners and their tenant (Pat's Auto Detailing). ETC subcontracted GTH to perform underground utility toning and drilling activities. TA was subcontracted to perform multi-increment sample processing and laboratory analysis of soil samples.

6.5 Initial Site Reconnaissance and Utilities Clearance

On August 6, 2018, GTH personnel used surface-penetrating radar and electromagnetic instrumentation to scan for underground utilities within the project site. Suspect underground utilities were marked with spray paint.

6.6 Sample Location and Frequency

Soil sampling activities were performed at the project site on August 6 through 9, 2018. In accordance with the SI-WP, ETC conceptually divided the project site into five lateral DU areas (DU1, DU2, DU3, DU4, and DU5). Each of the established DU areas were further subdivided into six separate depth layer DUs identified as Layer A (0- to 0.5-feet bgs), Layer B (0.5- to 1-feet bgs), Layer C (1- to 2-feet bgs), Layer D (2- to 3-feet bgs), Layer E (3- to 4-feet bgs) and Layer F (4- to 5-feet bgs).

A total of thirty soil borings were advanced in systematic random locations (triangular grid pattern in DU1 and rectangular grid pattern in DU2 through DU5) throughout each of the five DU areas. Soil borings were obtained through use of direct-push rig equipped with core samplers. Pre-cleaned stainless steel trowels were used to extract a continuous wedge of soil for each of the corresponding depth layer DUs. A total of thirty primary MI soil samples were collected from the project site. In addition to the primary soil samples, two field replicate MI samples were collected from DU1 (Layer A), DU2 (Layer B), and DU3 (Layer C) for quality control purposes.

Prior to handling any soil, ETC personnel donned a new pair of disposable gloves (latex/vinyl/nitrile). In order to prevent cross contamination between depth layers, separate sampling tools and gloves were used for each depth layer DU. Soil increments were consolidated in a new, 1-gallon Ziploc® bag (i.e., one bag per MI sample). Each bag was labeled with the project name, sample identification, and the date/time of sample collection. The samples were kept in a sample cooler with ice pending delivery to the contracted laboratory.

6.7 Sample Analysis and Analytical Results

A total of thirty-six MI samples (thirty primary and six replicate samples) were hand delivered to the TestAmerica Laboratories (TA) sample receiving center in Honolulu, Hawaii with completed chain of custody documentation. ETC instructed TA to process the MI soil samples in accordance with the DOH HEER TGM, which includes air-drying, sieving, and obtaining representative subsamples using either an appropriate mechanical splitter or through multi-increment protocols. ETC instructed TA to analyze the processed samples for TPH-O via EPA Method 8015 modified and total concentrations of the metals antimony, arsenic, barium, cadmium, chromium, lead, and zinc via EPA Method 6010 or equivalent on a 10- to 15-day turn-around-time. The chain-of-custody and final laboratory package is included as an attachment to this report.

6.8 Decontamination

All re-usable sample collection equipment (i.e., trowels and drill bits) were decontaminated with a brush and Alconox™ solution and triple rinsing with potable water. Sample containers were new and kept in their original packaging to avoid contamination prior to use.

6.9 Investigation-Derived Waste (IDW)

Investigation-Derived Waste (IDW) included disposable personal protective equipment (PPE), disposable sampling equipment, decontamination fluids, and any other material that may have come into contact with potentially contaminated materials. IDW generated on-site were disposed as solid waste. The relatively low volume of decontamination fluids was allowed to evaporate within the project site.

6.10 Quality Control Samples

Field quality control samples are used as a check on laboratory results and equipment decontamination procedures. For this project, two field replicate MI surface soil samples were collected from a single depth layer within DU1, DU2, and DU3 (resulting in a total of six field replicate MI samples). The field replicates were collected in the same manner as the primary sample, as if a total of three MI surface soil samples were collected from the same depth layer DU.

Field replicate samples were labeled such that they would be indistinguishable to the laboratory from primary samples collected during the investigation. Field replicate samples were analyzed for the same analyses as the primary samples.

7.0 FINDINGS AND DISCUSSION

Field investigation activities were performed to quantify mean contaminant concentrations in surface and subsurface soils within the project site. A total of thirty primary multi-increment soil samples and six field replicate multi-increment soil samples were collected as part of this investigation.

7.1 Deviations from the Site Investigation Work Plan

While there were no significant deviations in the actual field sample collection activities from the June 2018 SI-WP, there were issues with sample handling within the laboratory. Following confirmation of sample receipt, TestAmerica reported that sample 1955.DU5.B (DU-5, 0.5- to 1.0-foot depth layer) was lost, therefore no data was obtained for this DU depth layer. After reviewing the analytical data report for the project, ETC determined that the implications of the missing data were not significant. Review of data for samples from the depth layers above and below 1955.DU5.B, as well as data from the 0.5- to 1.0-foot depth layer in DU-4, did not suggest that significant analyte concentrations would be present in sample 1955.DU5.B.

7.2 Physical Observations

Physical observations of the soil were made during boring advancement. In general, soil at the project site was comprised of reddish-brown silty clay and rock or a coral-sand mixture between 0.75- to 1.5-feet bgs, reddish-brown silty clay to a depth of approximately 1.5- to 3-feet bgs and high plasticity brown clay to a depth of 3- to 5-feet bgs. The remaining soils resembled a coralline/sandy mixture. No visual or olfactory indications of petroleum contamination were observed in the soil. Additionally, with the exception of boring 8 located on the northeast portion of DU-5, no visual evidence of ash, glass, or debris were observed in the soil. In DU-5 boring 8, ETC observed glass fragments mixed with gravel within the 4- to 5-foot depth layer.

7.3 Analytical Results

The final laboratory report was received via electronic mail on August 30, 2018. The analytical results are summarized in the table below and the laboratory report has been attached Appendix II.

Table 3 - Analytical Results

Sample ID	TPH-O	Antimony	Arsenic	Barium	Cadmium	Chromium	Lead	Zinc
2003.DU1.A	640	3.2 J	2.8 J	290	0.37 J	130	56	110
2003.DU1.B	280	4.0 J	4.0 J	520	1.8 J	150	120	240
2003.DU1.C	80	4.4 J	3.6 J	610	<i>nd<0.094</i>	190	49	240
2003.DU1.D	17	4.3 J	4.0 J	710	<i>nd<0.092</i>	200	16	150
2003.DU1.E	15	3.7 J	4.0 J	640	<i>nd<0.096</i>	180	14	140
2003.DU1.F	<i>nd<6.8</i>	2.9 J	4.3 J	890	0.19 J	120	10	100
1955.DU2.A	3,300 H	0.85 J	1.8 J	32	0.34 J	50	140	53
1955.DU2.B	1,500 H	1.9 J	3.4 J	120	0.48 J	83	61	84
1955.DU2.C	360 H	3.4 J	2.7 J	330	0.56 J	150	69	200
1955.DU2.D	510 H	4.1 J	2.8 J	390	0.86 J	150	290	310
1955.DU2.E	260 H	4.5 J	4.1 J	480	1.3 J	140	110	700
1955.DU2.F	850 H	4.9 J	3.2 J	430	0.83 J	140	69	290
1955.DU3.A	600 H	1.6 J	1.5 J	40	<i>nd<0.098</i>	86	15	55
1955.DU3.B	200 H	1.7 J	1.1 J	100	0.15 J	76	14	86
1955.DU3.C	110 H	2.0 J	0.94 J	190	0.10 J	80	18	150
1955.DU3.D	67 H	2.2 J	1.6 J	270	<i>nd<0.090</i>	100	30	120
1955.DU3.E	72 H	2.7 J	2.1 J	290	0.21 J	120	34	140
1955.DU3.F	190 H	3.4 J	2.9 J	420	<i>nd<0.089</i>	170	45	200
1955.DU4.A	330	<i>nd<0.48</i>	1.9 J	110	<i>nd<0.090</i>	100	29	150
1955.DU4.B	100	0.92 J	2.1 J	310	<i>nd<0.095</i>	190	26	350
1955.DU4.C	36	0.76 J	2.5 J	450	<i>nd<0.092</i>	240	17	170
1955.DU4.D	38	0.59 J	2.1 J	390	<i>nd<0.087</i>	200	16	130
1955.DU4.E	110	1.7 J	3.2 J	450	<i>nd<0.078</i>	250	37	190
1955.DU4.F	660	2.7 J	4.9 J	570	0.19 J	210	190	420
1955.DU5.A	500	0.70 J	5.1	110	0.71 J	130	36	88
1955.DU5.B	NA	NA	NA	NA	NA	NA	NA	NA
1955.DU5.C	86	1.1 J	3.1 J	340	<i>nd<0.094</i>	220	30	150
1955.DU5.D	39	0.84 J	2.6 J	450	<i>nd<0.078</i>	240	23	180
1955.DU5.E	540	0.86 J	4.6 J	620	0.32 J	240	99	420
1955.DU5.F	2,200	<i>nd<0.51</i>	6.5	670	2.4	160	260	1,100
2005.DU1.G ¹	750	<i>nd<0.47</i>	3.3 J	340	<i>nd<0.087</i>	170	140	140
2005.DU1.H ¹	830	1.5 J	3.8 J	380	0.44 J	190	150	190
1955.DU2.G ²	960 H	1.2 J	4.3 J	190	0.88 J	140	140	200
1955.DU2.H ²	1,400 H	0.88 J	3.4 J	130	0.53 J	96	83	96
1955.DU3.G ³	68 H	<i>nd<0.49</i>	1.3 J	260	<i>nd<0.091</i>	100	19	120
1955.DU3.H ³	63 H	<i>nd<0.41</i>	1.3 J	210	<i>nd<0.077</i>	98	19	120
DOH EAL	500	6.3	24	1000	14	1100	200	1000
DOH CI EAL	2500	82	95	2500	72	1100	800	2500

Notes: All results in mg/kg.
All values represent a mean concentration.
DOH EAL = Default DOH EALs for unrestricted land use in areas where groundwater is not a current or potential drinking water source and where the nearest surface water body is located greater than 150-meters from the site.
DOH CI EAL = DOH EALs for commercial/industrial land use in areas where groundwater is not a current or potential drinking water source and where the nearest surface water body is located greater than 150-meters from the site.
J = approximate value, result less than reporting limit but greater than or equal to the method detection limit
H = sample was prepped or analyzed beyond the specified holding time
nd = not detected at the method detection limit
1 = Samples 2005.DU1.G and 2005.DU1.H are field replicates of 2005.DU1.A.
2 = Samples 1955.DU2.G and 1955.DU2.H are field replicates of 1955.DU2.B.
3 = Samples 1955.DU3.G and 1955.DU3.H are field replicates of 1955.DU3.C.

As indicated in Table 3, TPH-O, lead, and zinc concentrations exceed default DOH EALs for unrestricted land use. The TPH-O concentration in sample 1955.DU2.A of 3,300 mg/kg is the only instance where an analyte concentration also exceeds its DOH EAL for commercial/industrial land use.

7.4 Data Quality

In addition to the lost sample discussed in Section 7.1 above, TestAmerica also reported that sixteen of the samples were analyzed outside of the recommended fourteen day holding time for TPH-O (extracted on the fifteenth day following sample collection). Considering that all other sample handling and management procedures were met and that the presence of TPH-O in the site soils are likely due to historic petroleum releases, ETC does not believe that missing the recommended holding time by one day would significantly impact the reported TPH-O concentrations for these samples.

Field replicate samples were collected for the 0- to 0.5-foot depth layer in DU1, the 0.5- to 1.0-foot depth layer in DU2, and the 1- to 2-foot depth layer in DU3. Relative standard deviations (RSDs) were calculated using data from the primary sample and the two field replicates for each of the three sets of data. As a general statement, RSDs for analytes with detected concentrations were typically below 35%.

The RSDs for lead in the 0- to 0.5-foot depth layer and the 0.5- to 1.0-foot depth layer were 44.76% and 43.07% respectively. The RSD for zinc in the 0.5- to 1.0-foot depth layer was 50.36%. It is suspected that the heterogeneity in the surface/near surface soils (different fill types, varying fill layer thicknesses) are the likely cause for the slightly elevated RSDs. Since RSDs indicate relatively fair precision in the sample collection methodology, laboratory data can be used as reported.

7.5 Conclusions and Recommendations

This site investigation was performed to quantify mean contaminant concentrations in soil across the project site to depths of 5 feet bgs. Two Principal Study Questions (PSQs) were formulated to guide the investigation:

- Do lead concentrations in multi-increment soil samples in the identified decision units exceed the default EAL of 200 mg/kg for the project site?
- Do the data collected during the investigation suggest that the source of lead contamination within Factory Street originates from the project site?

The data obtained from the investigation were sufficient to answer both PSQs. Review of the data indicated that TPH-O concentrations in ten of the thirty decision unit depth layers exceed the default DOH EAL of 500 mg/kg, lead concentrations in two of the thirty decision unit depth layers exceed the default DOH EAL of 200 mg/kg, and zinc concentrations in one of the thirty decision unit depth layers exceeds the default DOH EAL of 1000 mg/kg. Since data indicate that contaminant concentrations exceed default DOH EALs, corrective actions need to be considered to mitigate potential exposure pathways and any overburden soil resulting from construction activities (if applicable) may require special handling and/or disposal.

To answer the second PSQ, lead concentrations quantified within the site soils are significantly lower (by one to two orders of magnitude) than the concentrations previously identified within Factory Street. Based on evaluation of the lead concentrations, coupled with visual observations of the soil during sample collection, it is highly unlikely that the source of lead contamination within Factory Street originates from the 1955 North King Street and 2003 North King Street properties.

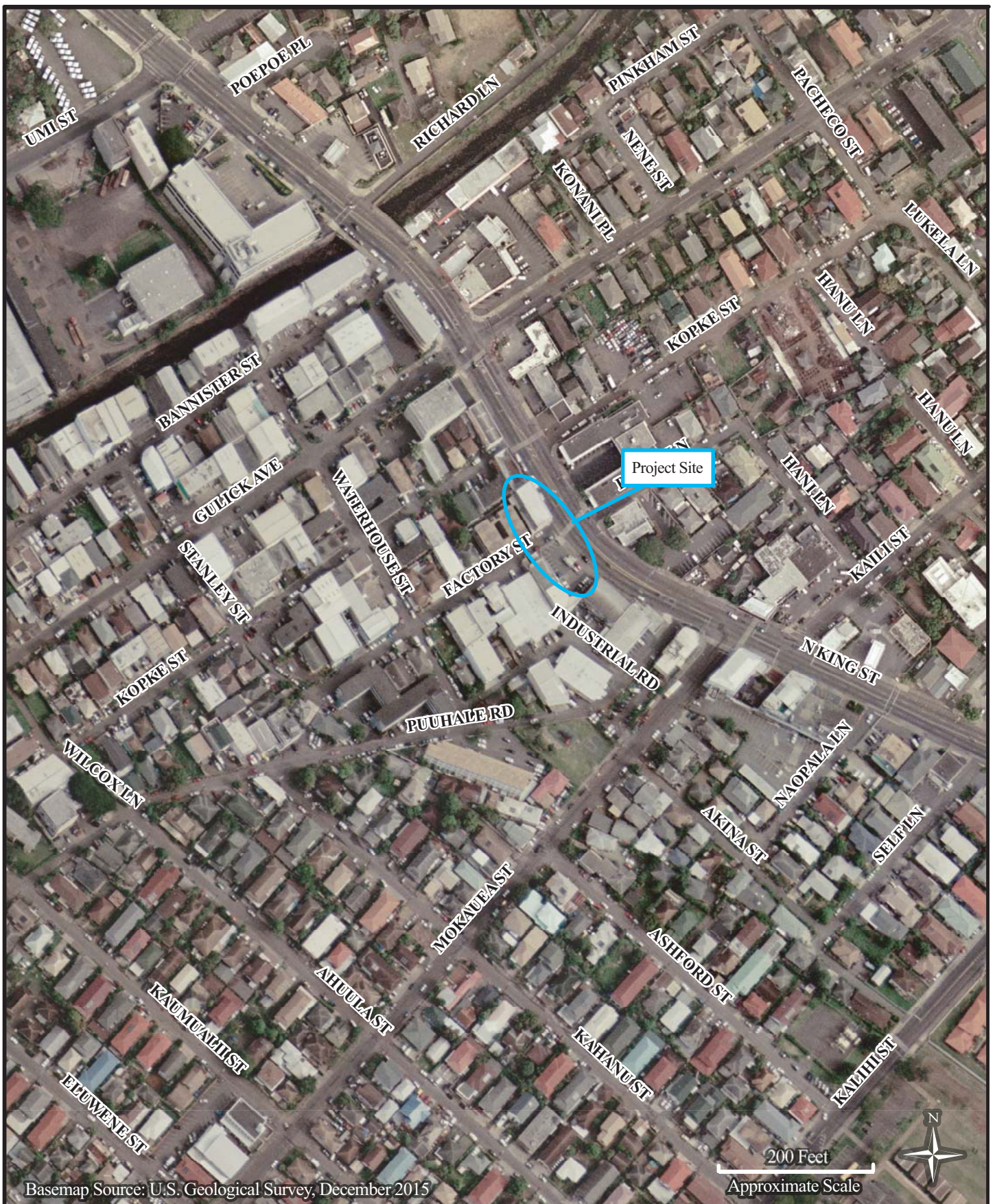
In order to address TPH-O, lead, and zinc concentrations in site soils, ETC recommends that an Environmental Hazard Evaluation (EHE) and an Environmental Hazard Management Plan (EHMP) be prepared for the project site. The EHE and EHMP should address the existing contaminants on the project site, taking into consideration current/future land use, potential exposure pathways, and receptors of concern.

8.0 REFERENCES

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Appendix I

Figures



Project No. 17-2009

August 2018

Figure 1 - Site Location Map

Site Investigation Report
Factory Street Properties
Honolulu, Oahu, Hawaii

TMK: [1] 1-2-001: Parcel 066 (Portion) &
[1] 1-2-011: Parcel 011 (Portion)



Project No. 17-2009

August 2018

Figure 2 - Aerial Site Map

Site Investigation Report
Factory Street Properties
Honolulu, Oahu, Hawaii

TMK: [1] 1-2-001: Parcel 066 (Portion) &
[1] 1-2-011: Parcel 011 (Portion)

Appendix II
Laboratory Report and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-79517-1

Client Project/Site: Factory Street Properties

For:

EnviroServices & Training Center, LLC
505 Ward Avenue
Suite 202
Honolulu, Hawaii 96814

Attn: Mr. Damon Hamura



Authorized for release by:
8/30/2018 2:00:25 PM

Sheri Fama, Project Manager I
(949)261-1022
sherifama@testamericainc.com

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results through

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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	5
Client Sample Results	6
QC Sample Results	41
Chronicle	46
Certification Summary	55
Sample Summary	56
Chain of Custody	57
Receipt Checklists	61



Case Narrative

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Job ID: 580-79517-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-79517-1

Comments

1955.DU.B (580-79514-26) could not be analyzed due to lab oversight, client was notified.

Receipt

The samples were received on 8/11/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 0.8° C, 0.8° C, 1.4° C, 1.5° C, 1.5° C and 1.9° C.

Receipt Exceptions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8015B: The %D of surrogate (o-Terphenyl) for CCV associated with batch 580-282261 was outside the higher control limits. All associated sample surrogate fell within acceptance criteria; therefore, the data have been reported. (CCV 580-282261/13)

Method(s) 8015B: Surrogate recovery for the following sample was outside control limits: 1955.DU2.A (580-79517-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2003.DU1.B (580-79517-2), 2003.DU1.C (580-79517-3), 2003.DU1.D (580-79517-4), 2003.DU1.E (580-79517-5), 1955.DU2.A (580-79517-7), 1955.DU2.B (580-79517-8), 1955.DU2.E (580-79517-11), 1955.DU2.F (580-79517-12), 1955.DU3.A (580-79517-13), 1955.DU3.B (580-79517-14), 1955.DU3.C (580-79517-15), 1955.DU3.D (580-79517-16), 1955.DU3.E (580-79517-17) and 1955.DU3.F (580-79517-18).

Method(s) 8015B: Surrogate recovery for the following samples were outside control limits: 1955.DU5.F (580-79517-30) and 1955.DU2.G (580-79517-33). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015B: The following samples were diluted to bring the concentration of target analytes within the calibration range: 1955.DU4.A (580-79517-19), 1955.DU5.F (580-79517-30), 1955.DU2.G (580-79517-33), 1955.DU2.H (580-79517-34), (580-79517-A-19-C MS) and (580-79517-A-19-D MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 1955.DU4.B (580-79517-20), 1955.DU4.C (580-79517-21), 1955.DU4.D (580-79517-22), 1955.DU4.E (580-79517-23), 1955.DU5.C (580-79517-27), 1955.DU5.D (580-79517-28), 1955.DU5.F (580-79517-30), 1955.DU2.G (580-79517-33), 1955.DU2.H (580-79517-34), 1955.DU3.G (580-79517-35), 1955.DU3.H (580-79517-36) and (CCV 580-282256/13).

Method(s) 8015B: The following samples were analyzed outside of analytical holding time. :1955.DU2.G (580-79517-33), 1955.DU2.H (580-79517-34), 1955.DU3.G (580-79517-35) and 1955.DU3.H (580-79517-36).

Method(s) 8015B: The following samples were diluted due to the nature of the sample matrix: 2003.DU1.A (580-79517-1), 1955.DU2.A (580-79517-7), 1955.DU2.B (580-79517-8), 1955.DU2.F (580-79517-12), 1955.DU3.A (580-79517-13), (580-79517-A-1-C MS) and (580-79517-A-1-D MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8015B: The following samples were diluted to bring the concentration of target analytes within the calibration range: 1955.DU4.F (580-79517-24), 1955.DU5.A (580-79517-25), 1955.DU5.E (580-79517-29), 2005.DU1.G (580-79517-31) and 2005.DU1.H (580-79517-32). Elevated reporting limits (RLs) are provided.

Method(s) 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 1955.DU4.F (580-79517-24), 1955.DU5.A (580-79517-25), 1955.DU5.E (580-79517-29), 2005.DU1.G (580-79517-31) and 2005.DU1.H (580-79517-32).

Case Narrative

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Job ID: 580-79517-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Method(s) 8015B: The following samples were diluted due to the nature of the sample matrix: 1955.DU2.C (580-79517-9) and 1955.DU2.D (580-79517-10). Elevated reporting limits (RLs) are provided.

Method(s) 8015B: The following samples were prepared outside of preparation holding time: 1955.DU2.A (580-79517-7), 1955.DU2.B (580-79517-8), 1955.DU2.C (580-79517-9), 1955.DU2.D (580-79517-10), 1955.DU2.E (580-79517-11), 1955.DU2.F (580-79517-12), 1955.DU3.A (580-79517-13), 1955.DU3.B (580-79517-14), 1955.DU3.C (580-79517-15), 1955.DU3.D (580-79517-16), 1955.DU3.E (580-79517-17) and 1955.DU3.F (580-79517-18).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
F4	MS/MSD RPD exceeds control limits due to sample size difference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.A

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-1

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	640		49	20	mg/Kg	-	08/22/18 09:29	08/23/18 12:54	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	80		61 - 120				08/22/18 09:29	08/23/18 12:54	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8	J F1	6.0	0.49	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Barium	290	F1	1.0	0.16	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Antimony	3.2	J F1	6.0	0.52	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Cadmium	0.37	J	2.0	0.098	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Chromium	130		2.6	0.19	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Lead	56		3.0	0.44	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4
Zinc	110		8.0	1.9	mg/Kg	-	08/22/18 15:28	08/23/18 16:48	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.B

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-2

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	280		16	6.5	mg/Kg	-	08/22/18 09:29	08/23/18 14:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		61 - 120				08/22/18 09:29	08/23/18 14:01	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	J	5.7	0.47	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Barium	520		0.95	0.15	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Antimony	4.0	J	5.7	0.50	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Cadmium	1.8	J	1.9	0.093	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Chromium	150		2.5	0.18	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Lead	120		2.8	0.42	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4
Zinc	240		7.6	1.8	mg/Kg	-	08/22/18 15:28	08/24/18 07:38	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.C

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-3

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	80		16	6.7	mg/Kg	-	08/22/18 09:29	08/23/18 14:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		61 - 120				08/22/18 09:29	08/23/18 14:23	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6	J	5.8	0.48	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Barium	610		0.96	0.15	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Antimony	4.4	J	5.8	0.51	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Cadmium	ND		1.9	0.094	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Chromium	190		2.5	0.18	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Lead	49		2.9	0.43	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4
Zinc	240		7.7	1.8	mg/Kg	-	08/22/18 15:28	08/23/18 17:17	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.D

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-4

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	17		17	6.8	mg/Kg		08/22/18 09:29	08/23/18 14:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		61 - 120				08/22/18 09:29	08/23/18 14:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	J	5.6	0.46	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Barium	710		0.94	0.15	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Antimony	4.3	J	5.6	0.49	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Cadmium	ND		1.9	0.092	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Chromium	200		2.4	0.17	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Lead	16		2.8	0.42	mg/Kg		08/22/18 15:28	08/23/18 17:21	4
Zinc	150		7.5	1.8	mg/Kg		08/22/18 15:28	08/23/18 17:21	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.E

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-5

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	15		15	6.4	mg/Kg	-	08/22/18 09:29	08/23/18 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		61 - 120				08/22/18 09:29	08/23/18 15:29	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	J	5.9	0.48	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Barium	640		0.98	0.15	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Antimony	3.7	J	5.9	0.51	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Cadmium	ND		2.0	0.096	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Chromium	180		2.5	0.18	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Lead	14		2.9	0.43	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4
Zinc	140		7.8	1.9	mg/Kg	-	08/22/18 15:28	08/23/18 17:25	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.F

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-6

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	ND		17	6.8	mg/Kg		08/22/18 09:29	08/23/18 15:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		61 - 120				08/22/18 09:29	08/23/18 15:51	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.3	J	5.5	0.45	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Barium	890		0.91	0.14	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Antimony	2.9	J	5.5	0.48	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Cadmium	0.19	J	1.8	0.089	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Chromium	120		2.4	0.17	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Lead	10		2.7	0.41	mg/Kg		08/22/18 15:28	08/23/18 17:28	4
Zinc	100		7.3	1.7	mg/Kg		08/22/18 15:28	08/23/18 17:28	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.A

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-7

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	3300	H	810	330	mg/Kg	-	08/22/18 09:29	08/23/18 16:13	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	43	X	61 - 120				08/22/18 09:29	08/23/18 16:13	50

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8	J	5.8	0.48	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Barium	32		0.97	0.15	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Antimony	0.85	J	5.8	0.51	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Cadmium	0.34	J	1.9	0.095	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Chromium	50		2.5	0.18	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Lead	140		2.9	0.43	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4
Zinc	53		7.7	1.8	mg/Kg	-	08/22/18 15:28	08/23/18 17:32	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.B

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-8

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	1500	H	160	66	mg/Kg	-	08/22/18 09:29	08/23/18 16:35	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	66		61 - 120				08/22/18 09:29	08/23/18 16:35	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4	J	5.5	0.46	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Barium	120		0.92	0.15	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Antimony	1.9	J	5.5	0.48	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Cadmium	0.48	J	1.8	0.090	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Chromium	83		2.4	0.17	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Lead	61		2.8	0.41	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4
Zinc	84		7.3	1.8	mg/Kg	-	08/22/18 15:28	08/23/18 17:35	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.C

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-9

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	360	H	47	19	mg/Kg	-	08/22/18 09:29	08/24/18 13:57	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		61 - 120				08/22/18 09:29	08/24/18 13:57	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.7	J	5.6	0.46	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Barium	330		0.93	0.15	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Antimony	3.4	J	5.6	0.49	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Cadmium	0.56	J	1.9	0.091	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Chromium	150		2.4	0.17	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Lead	69		2.8	0.41	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4
Zinc	200		7.5	1.8	mg/Kg	-	08/22/18 15:28	08/23/18 17:39	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.D

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-10

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	510	H	48	20	mg/Kg	-	08/22/18 09:29	08/24/18 14:19	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		61 - 120				08/22/18 09:29	08/24/18 14:19	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8	J	5.4	0.45	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Barium	390		0.90	0.14	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Antimony	4.1	J	5.4	0.48	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Cadmium	0.86	J	1.8	0.089	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Chromium	150		2.4	0.17	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Lead	290		2.7	0.40	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4
Zinc	310		7.2	1.7	mg/Kg	-	08/22/18 15:28	08/23/18 17:51	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.E

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-11

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	260	H	17	6.8	mg/Kg	-	08/22/18 09:29	08/23/18 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		61 - 120				08/22/18 09:29	08/23/18 17:41	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.1	J	4.9	0.40	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Barium	480		0.81	0.13	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Antimony	4.5	J	4.9	0.43	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Cadmium	1.3	J	1.6	0.080	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Chromium	140		2.1	0.15	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Lead	110		2.4	0.36	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4
Zinc	700		6.5	1.6	mg/Kg	-	08/22/18 15:31	08/23/18 17:55	4

TestAmerica Seattle

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.F

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-12

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	850	H	48	20	mg/Kg	-	08/22/18 09:29	08/23/18 18:03	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	84		61 - 120				08/22/18 09:29	08/23/18 18:03	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2	J	6.0	0.49	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Barium	430		0.99	0.16	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Antimony	4.9	J	6.0	0.52	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Cadmium	0.83	J	2.0	0.097	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Chromium	140		2.6	0.18	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Lead	69		3.0	0.44	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4
Zinc	290		7.9	1.9	mg/Kg	-	08/22/18 15:31	08/23/18 17:58	4

TestAmerica Seattle

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.A

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-13

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	600	H	160	68	mg/Kg	-	08/22/18 09:29	08/23/18 18:25	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	66		61 - 120				08/22/18 09:29	08/23/18 18:25	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	J	6.0	0.50	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Barium	40		1.0	0.16	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Antimony	1.6	J	6.0	0.53	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Cadmium	ND		2.0	0.098	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Chromium	86		2.6	0.19	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Lead	15		3.0	0.44	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4
Zinc	55		8.0	1.9	mg/Kg	-	08/22/18 15:31	08/23/18 18:02	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.B

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-14

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	200	H	15	6.3	mg/Kg	-	08/22/18 09:29	08/23/18 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	87		61 - 120				08/22/18 09:29	08/23/18 18:47	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1	J	5.4	0.44	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Barium	100		0.89	0.14	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Antimony	1.7	J	5.4	0.47	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Cadmium	0.15	J	1.8	0.088	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Chromium	76		2.3	0.17	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Lead	14		2.7	0.40	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4
Zinc	86		7.2	1.7	mg/Kg	-	08/22/18 15:31	08/23/18 18:06	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.C

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-15

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	110	H	16	6.6	mg/Kg		08/22/18 09:29	08/23/18 19:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	89		61 - 120				08/22/18 09:29	08/23/18 19:31	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.94	J	5.4	0.45	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Barium	190		0.91	0.14	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Antimony	2.0	J	5.4	0.48	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Cadmium	0.10	J	1.8	0.089	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Chromium	80		2.4	0.17	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Lead	18		2.7	0.40	mg/Kg		08/22/18 15:31	08/23/18 18:10	4
Zinc	150		7.3	1.7	mg/Kg		08/22/18 15:31	08/23/18 18:10	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.D

Lab Sample ID: 580-79517-16

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	67	H	16	6.7	mg/Kg	-	08/22/18 09:29	08/23/18 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		61 - 120				08/22/18 09:29	08/23/18 19:53	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6	J	5.5	0.46	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Barium	270		0.92	0.15	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Antimony	2.2	J	5.5	0.48	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Cadmium	ND		1.8	0.090	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Chromium	100		2.4	0.17	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Lead	30		2.8	0.41	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4
Zinc	120		7.4	1.8	mg/Kg	-	08/22/18 15:31	08/23/18 18:13	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.E

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-17

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	72	H	16	6.7	mg/Kg	-	08/22/18 09:29	08/23/18 20:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		61 - 120				08/22/18 09:29	08/23/18 20:15	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	J	5.6	0.46	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Barium	290		0.93	0.15	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Antimony	2.7	J	5.6	0.49	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Cadmium	0.21	J	1.9	0.091	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Chromium	120		2.4	0.17	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Lead	34		2.8	0.41	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4
Zinc	140		7.4	1.8	mg/Kg	-	08/22/18 15:31	08/23/18 18:17	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.F

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-18

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	190	H	16	6.7	mg/Kg	-	08/22/18 09:29	08/23/18 20:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		61 - 120				08/22/18 09:29	08/23/18 20:37	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9	J	5.5	0.45	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Barium	420		0.91	0.14	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Antimony	3.4	J	5.5	0.48	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Cadmium	ND		1.8	0.089	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Chromium	170		2.4	0.17	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Lead	45		2.7	0.40	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4
Zinc	200		7.3	1.7	mg/Kg	-	08/22/18 15:31	08/23/18 18:20	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.A

Lab Sample ID: 580-79517-19

Date Collected: 08/08/18 08:35

Matrix: Solid

Date Received: 08/11/18 09:45

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	330		49	20	mg/Kg	-	08/22/18 09:25	08/23/18 12:32	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		61 - 120				08/22/18 09:25	08/23/18 12:32	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J F1 F2	5.5	0.46	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Barium	110	F2 F1	0.92	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Antimony	ND	F1 F2	5.5	0.48	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Cadmium	ND	F2 F1	1.8	0.090	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Chromium	100		2.4	0.17	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Lead	29	F2 F1	2.8	0.41	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4
Zinc	150	F2	7.4	1.8	mg/Kg	-	08/24/18 08:59	08/27/18 14:46	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.B

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-20

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	100		16	6.6	mg/Kg		08/22/18 09:25	08/23/18 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		61 - 120				08/22/18 09:25	08/23/18 13:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	J	5.8	0.48	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Barium	310		0.97	0.15	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Antimony	0.92	J	5.8	0.51	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Cadmium	ND		1.9	0.095	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Chromium	190		2.5	0.18	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Lead	26		2.9	0.43	mg/Kg		08/24/18 08:59	08/27/18 15:12	4
Zinc	350		7.8	1.9	mg/Kg		08/24/18 08:59	08/27/18 15:12	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.C

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-21

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	36		16	6.6	mg/Kg		08/22/18 09:25	08/23/18 14:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		61 - 120				08/22/18 09:25	08/23/18 14:01	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5	J	5.6	0.47	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Barium	450		0.94	0.15	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Antimony	0.76	J	5.6	0.49	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Cadmium	ND		1.9	0.092	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Chromium	240		2.4	0.17	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Lead	17		2.8	0.42	mg/Kg		08/24/18 08:59	08/27/18 15:15	4
Zinc	170		7.5	1.8	mg/Kg		08/24/18 08:59	08/27/18 15:15	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.D

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-22

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	38		16	6.6	mg/Kg		08/22/18 09:25	08/23/18 14:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		61 - 120				08/22/18 09:25	08/23/18 14:23	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	J	5.3	0.44	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Barium	390		0.89	0.14	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Antimony	0.59	J	5.3	0.47	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Cadmium	ND		1.8	0.087	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Chromium	200		2.3	0.17	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Lead	16		2.7	0.40	mg/Kg		08/24/18 08:59	08/27/18 15:19	4
Zinc	130		7.1	1.7	mg/Kg		08/24/18 08:59	08/27/18 15:19	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.E

Lab Sample ID: 580-79517-23

Date Collected: 08/08/18 08:35

Matrix: Solid

Date Received: 08/11/18 09:45

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	110		16	6.7	mg/Kg	-	08/22/18 09:25	08/23/18 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		61 - 120				08/22/18 09:25	08/23/18 15:06	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2	J	4.8	0.40	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Barium	450		0.80	0.13	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Antimony	1.7	J	4.8	0.42	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Cadmium	ND		1.6	0.078	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Chromium	250		2.1	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Lead	37		2.4	0.35	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4
Zinc	190		6.4	1.5	mg/Kg	-	08/24/18 08:59	08/27/18 15:23	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.F

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-24

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	660		46	19	mg/Kg	-	08/22/18 09:25	08/24/18 19:48	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		61 - 120				08/22/18 09:25	08/24/18 19:48	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.9	J	6.2	0.52	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Barium	570		1.0	0.16	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Antimony	2.7	J	6.2	0.55	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Cadmium	0.19	J	2.1	0.10	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Chromium	210		2.7	0.19	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Lead	190		3.1	0.46	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4
Zinc	420		8.3	2.0	mg/Kg	-	08/24/18 08:59	08/27/18 15:27	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.A

Date Collected: 08/08/18 12:56

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-25

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	500		49	20	mg/Kg	-	08/22/18 09:25	08/24/18 20:10	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		61 - 120				08/22/18 09:25	08/24/18 20:10	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.1		4.7	0.39	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Barium	110		0.78	0.12	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Antimony	0.70	J	4.7	0.41	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Cadmium	0.71	J	1.6	0.077	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Chromium	130		2.0	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Lead	36		2.4	0.35	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4
Zinc	88		6.3	1.5	mg/Kg	-	08/24/18 08:59	08/27/18 15:31	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.C

Date Collected: 08/08/18 12:56

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-27

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	86		16	6.7	mg/Kg		08/22/18 09:25	08/23/18 16:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		61 - 120				08/22/18 09:25	08/23/18 16:13	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1	J	5.8	0.48	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Barium	340		0.96	0.15	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Antimony	1.1	J	5.8	0.50	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Cadmium	ND		1.9	0.094	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Chromium	220		2.5	0.18	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Lead	30		2.9	0.43	mg/Kg		08/24/18 08:59	08/27/18 15:34	4
Zinc	150		7.7	1.8	mg/Kg		08/24/18 08:59	08/27/18 15:34	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.D

Date Collected: 08/08/18 12:56

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-28

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	39		16	6.6	mg/Kg		08/22/18 09:25	08/23/18 16:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		61 - 120				08/22/18 09:25	08/23/18 16:35	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6	J	4.8	0.39	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Barium	450		0.80	0.13	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Antimony	0.84	J	4.8	0.42	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Cadmium	ND		1.6	0.078	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Chromium	240		2.1	0.15	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Lead	23		2.4	0.35	mg/Kg		08/24/18 08:59	08/27/18 15:38	4
Zinc	180		6.4	1.5	mg/Kg		08/24/18 08:59	08/27/18 15:38	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.E

Date Collected: 08/08/18 12:56

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-29

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	540		49	20	mg/Kg		08/22/18 09:25	08/24/18 20:32	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		61 - 120				08/22/18 09:25	08/24/18 20:32	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6	J	5.3	0.43	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Barium	620		0.88	0.14	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Antimony	0.86	J	5.3	0.46	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Cadmium	0.32	J	1.8	0.086	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Chromium	240		2.3	0.16	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Lead	99		2.6	0.39	mg/Kg		08/24/18 08:59	08/27/18 15:42	4
Zinc	420		7.0	1.7	mg/Kg		08/24/18 08:59	08/27/18 15:42	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.F

Date Collected: 08/08/18 12:56

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-30

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	2200		160	67	mg/Kg	-	08/22/18 09:25	08/23/18 17:19	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	55	X	61 - 120				08/22/18 09:25	08/23/18 17:19	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.5		5.8	0.48	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Barium	670		0.97	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Antimony	ND		5.8	0.51	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Cadmium	2.4		1.9	0.095	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Chromium	160		2.5	0.18	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Lead	260		2.9	0.43	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4
Zinc	1100		7.8	1.9	mg/Kg	-	08/24/18 08:59	08/27/18 15:52	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2005.DU1.G

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-31

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	750		46	19	mg/Kg		08/22/18 09:25	08/24/18 20:54	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		61 - 120				08/22/18 09:25	08/24/18 20:54	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	5.3	0.44	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Barium	340		0.88	0.14	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Antimony	ND		5.3	0.47	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Cadmium	ND		1.8	0.087	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Chromium	170		2.3	0.16	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Lead	140		2.7	0.39	mg/Kg		08/24/18 08:59	08/27/18 15:56	4
Zinc	140		7.1	1.7	mg/Kg		08/24/18 08:59	08/27/18 15:56	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2005.DU1.H

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-32

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	830		48	20	mg/Kg		08/22/18 09:25	08/24/18 21:16	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		61 - 120				08/22/18 09:25	08/24/18 21:16	3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.8	J	5.7	0.47	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Barium	380		0.94	0.15	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Antimony	1.5	J	5.7	0.50	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Cadmium	0.44	J	1.9	0.092	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Chromium	190		2.5	0.18	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Lead	150		2.8	0.42	mg/Kg		08/24/18 08:59	08/27/18 16:00	4
Zinc	190		7.5	1.8	mg/Kg		08/24/18 08:59	08/27/18 16:00	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.G

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-33

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	960	H	160	67	mg/Kg	-	08/22/18 09:25	08/23/18 18:25	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	55	X	61 - 120				08/22/18 09:25	08/23/18 18:25	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.3	J	5.3	0.43	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Barium	190		0.88	0.14	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Antimony	1.2	J	5.3	0.46	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Cadmium	0.88	J	1.8	0.086	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Chromium	140		2.3	0.16	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Lead	140		2.6	0.39	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4
Zinc	200		7.0	1.7	mg/Kg	-	08/24/18 08:59	08/27/18 16:03	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.H

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-34

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	1400	H	160	64	mg/Kg	-	08/22/18 09:25	08/23/18 19:09	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	62		61 - 120				08/22/18 09:25	08/23/18 19:09	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4	J	5.5	0.46	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Barium	130		0.92	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Antimony	0.88	J	5.5	0.49	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Cadmium	0.53	J	1.8	0.090	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Chromium	96		2.4	0.17	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Lead	83		2.8	0.41	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4
Zinc	96		7.4	1.8	mg/Kg	-	08/24/18 08:59	08/27/18 16:07	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.G

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-35

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	68	H	16	6.5	mg/Kg	-	08/22/18 09:25	08/23/18 19:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		61 - 120				08/22/18 09:25	08/23/18 19:31	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3	J	5.5	0.46	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Barium	260		0.92	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Antimony	ND		5.5	0.49	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Cadmium	ND		1.8	0.091	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Chromium	100		2.4	0.17	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Lead	19		2.8	0.41	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4
Zinc	120		7.4	1.8	mg/Kg	-	08/24/18 08:59	08/27/18 16:10	4

Client Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.H

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-36

Matrix: Solid

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	63	H	16	6.7	mg/Kg	-	08/22/18 09:25	08/23/18 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		61 - 120				08/22/18 09:25	08/23/18 19:53	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3	J	4.7	0.39	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Barium	210		0.78	0.12	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Antimony	ND		4.7	0.41	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Cadmium	ND		1.6	0.077	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Chromium	98		2.0	0.15	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Lead	19		2.3	0.35	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4
Zinc	120		6.3	1.5	mg/Kg	-	08/24/18 08:59	08/27/18 16:13	4

QC Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 580-282146/1-A

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282146

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	ND		17	6.9	mg/Kg	-	08/22/18 09:25	08/23/18 11:25	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		61 - 120				08/22/18 09:25	08/23/18 11:25	1

Lab Sample ID: LCS 580-282146/2-A

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282146

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
HI Residual Range Organics (>C24-C32)		167	173		mg/Kg	-	104	77 - 142	
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
o-Terphenyl	104		61 - 120						

Lab Sample ID: LCSD 580-282146/3-A

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 282146

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HI Residual Range Organics (>C24-C32)		167	178		mg/Kg	-	107	77 - 142	3	16
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits							
o-Terphenyl	101		61 - 120							

Lab Sample ID: 580-79517-19 MS

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: 1955.DU4.A

Prep Type: Total/NA

Prep Batch: 282146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
HI Residual Range Organics (>C24-C32)	330		158	490		mg/Kg	-	101	77 - 142	
Surrogate	MS %Recovery	MS Qualifier	Limits							
o-Terphenyl	107		61 - 120							

Lab Sample ID: 580-79517-19 MSD

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: 1955.DU4.A

Prep Type: Total/NA

Prep Batch: 282146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HI Residual Range Organics (>C24-C32)	330		159	458		mg/Kg	-	80	77 - 142	7	16

TestAmerica Seattle

QC Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 580-79517-19 MSD

Matrix: Solid

Analysis Batch: 282256

Client Sample ID: 1955.DU4.A

Prep Type: Total/NA

Prep Batch: 282146

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	103		61 - 120

Lab Sample ID: MB 580-282147/1-A

Matrix: Solid

Analysis Batch: 282261

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	ND		17	6.9	mg/Kg		08/22/18 09:29	08/23/18 11:48	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		61 - 120				08/22/18 09:29	08/23/18 11:48	1

Lab Sample ID: LCS 580-282147/2-A

Matrix: Solid

Analysis Batch: 282261

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HI Residual Range Organics (>C24-C32)	167	159		mg/Kg		96	77 - 142
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o-Terphenyl	94		61 - 120				

Lab Sample ID: LCSD 580-282147/3-A

Matrix: Solid

Analysis Batch: 282261

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 282147

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HI Residual Range Organics (>C24-C32)	167	176		mg/Kg		106	77 - 142	10	16
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
o-Terphenyl	110		61 - 120						

Lab Sample ID: 580-79517-1 MS

Matrix: Solid

Analysis Batch: 282261

Client Sample ID: 2003.DU1.A

Prep Type: Total/NA

Prep Batch: 282147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HI Residual Range Organics (>C24-C32)	640		164	874		mg/Kg		141	77 - 142
Surrogate	MS %Recovery	MS Qualifier	Limits						
o-Terphenyl	95		61 - 120						

TestAmerica Seattle

QC Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 580-79517-1 MSD

Matrix: Solid

Analysis Batch: 282261

Client Sample ID: 2003.DU1.A

Prep Type: Total/NA

Prep Batch: 282147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HI Residual Range Organics (>C24-C32)	640		159	824	4	mg/Kg		114	77 - 142	6	16
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o-Terphenyl	86		61 - 120								

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-282209/21-A

Matrix: Solid

Analysis Batch: 282349

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282209

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.5	0.12	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Barium	ND		0.25	0.040	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Antimony	ND		1.5	0.13	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Cadmium	ND		0.50	0.025	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Chromium	ND		0.65	0.047	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Lead	ND		0.75	0.11	mg/Kg		08/22/18 15:31	08/23/18 16:39	1
Zinc	ND		2.0	0.48	mg/Kg		08/22/18 15:31	08/23/18 16:39	1

Lab Sample ID: LCS 580-282209/22-A

Matrix: Solid

Analysis Batch: 282349

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282209

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits			
Arsenic	100	95.3		mg/Kg		95	80 - 120			
Barium	100	99.9		mg/Kg		100	80 - 120			
Antimony	75.0	70.1		mg/Kg		93	80 - 120			
Cadmium	2.50	2.38		mg/Kg		95	80 - 120			
Chromium	10.0	10.1		mg/Kg		101	80 - 120			
Lead	25.0	24.2		mg/Kg		97	80 - 120			
Zinc	100	94.8		mg/Kg		95	80 - 120			

Lab Sample ID: LCSD 580-282209/23-A

Matrix: Solid

Analysis Batch: 282349

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 282209

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	100	95.7		mg/Kg		96	80 - 120	0	20
Barium	100	98.9		mg/Kg		99	80 - 120	1	20
Antimony	75.0	70.6		mg/Kg		94	80 - 120	1	20
Cadmium	2.50	2.41		mg/Kg		96	80 - 120	1	20
Chromium	10.0	10.0		mg/Kg		100	80 - 120	1	20
Lead	25.0	24.4		mg/Kg		98	80 - 120	1	20
Zinc	100	95.1		mg/Kg		95	80 - 120	0	20

TestAmerica Seattle

QC Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 580-79517-1 MS

Matrix: Solid

Analysis Batch: 282349

Client Sample ID: 2003.DU1.A

Prep Type: Total/NA

Prep Batch: 282209

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.8	J F1	101	80.9	F1	mg/Kg		77	80 - 120
Barium	290	F1	101	382		mg/Kg		88	80 - 120
Antimony	3.2	J F1	76.1	37.9	F1	mg/Kg		46	80 - 120
Cadmium	0.37	J	2.54	2.93		mg/Kg		101	80 - 120
Chromium	130		10.1	117	4	mg/Kg		-91	80 - 120
Lead	56		25.4	80.9		mg/Kg		98	80 - 120
Zinc	110		101	197		mg/Kg		88	80 - 120

Lab Sample ID: 580-79517-1 MSD

Matrix: Solid

Analysis Batch: 282349

Client Sample ID: 2003.DU1.A

Prep Type: Total/NA

Prep Batch: 282209

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	2.8	J F1	96.1	76.1	F1	mg/Kg		76	80 - 120	6	20
Barium	290	F1	96.1	358	F1	mg/Kg		68	80 - 120	6	20
Antimony	3.2	J F1	72.1	35.5	F1	mg/Kg		45	80 - 120	6	20
Cadmium	0.37	J	2.40	2.81		mg/Kg		101	80 - 120	4	20
Chromium	130		9.61	112	4	mg/Kg		-143	80 - 120	4	20
Lead	56		24.0	77.9		mg/Kg		91	80 - 120	4	20
Zinc	110		96.1	190		mg/Kg		85	80 - 120	4	20

Lab Sample ID: MB 580-282359/20-A

Matrix: Solid

Analysis Batch: 282607

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282359

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.5	0.12	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Barium	ND		0.25	0.040	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Antimony	ND		1.5	0.13	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Cadmium	ND		0.50	0.025	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Chromium	ND		0.65	0.047	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Lead	ND		0.75	0.11	mg/Kg		08/24/18 08:59	08/27/18 14:37	1
Zinc	ND		2.0	0.48	mg/Kg		08/24/18 08:59	08/27/18 14:37	1

Lab Sample ID: LCS 580-282359/21-A

Matrix: Solid

Analysis Batch: 282607

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282359

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	100	102		mg/Kg		102	80 - 120
Barium	100	105		mg/Kg		105	80 - 120
Antimony	75.0	76.4		mg/Kg		102	80 - 120
Cadmium	2.50	2.60		mg/Kg		104	80 - 120
Chromium	10.0	10.9		mg/Kg		109	80 - 120
Lead	25.0	26.2		mg/Kg		105	80 - 120
Zinc	100	102		mg/Kg		102	80 - 120

TestAmerica Seattle

QC Sample Results

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 580-282359/22-A

Matrix: Solid

Analysis Batch: 282607

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 282359

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	100	100		mg/Kg		100	80 - 120	2	20
Barium	100	104		mg/Kg		104	80 - 120	1	20
Antimony	75.0	74.2		mg/Kg		99	80 - 120	3	20
Cadmium	2.50	2.54		mg/Kg		102	80 - 120	2	20
Chromium	10.0	10.7		mg/Kg		107	80 - 120	2	20
Lead	25.0	25.6		mg/Kg		102	80 - 120	2	20
Zinc	100	100		mg/Kg		100	80 - 120	2	20

Lab Sample ID: 580-79517-19 MS

Matrix: Solid

Analysis Batch: 282607

Client Sample ID: 1955.DU4.A

Prep Type: Total/NA

Prep Batch: 282359

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.9	J F1 F2	84.1	68.7	F1	mg/Kg		79	80 - 120		
Barium	110	F2 F1	84.1	191		mg/Kg		102	80 - 120		
Antimony	ND	F1 F2	63.1	29.4	F1	mg/Kg		47	80 - 120		
Cadmium	ND	F2 F1	2.10	1.90		mg/Kg		90	80 - 120		
Chromium	100		8.41	115	4	mg/Kg		138	80 - 120		
Lead	29	F2 F1	21.0	49.4		mg/Kg		96	80 - 120		
Zinc	150	F2	84.1	226		mg/Kg		93	80 - 120		

Lab Sample ID: 580-79517-19 MSD

Matrix: Solid

Analysis Batch: 282607

Client Sample ID: 1955.DU4.A

Prep Type: Total/NA

Prep Batch: 282359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.9	J F1 F2	192	214	F4	mg/Kg		111	80 - 120	103	20
Barium	110	F2 F1	192	347	F1 F4	mg/Kg		126	80 - 120	58	20
Antimony	ND	F1 F2	95.8	71.7	F1 F4	mg/Kg		75	80 - 120	84	20
Cadmium	ND	F2 F1	4.79	5.89	F1 F4	mg/Kg		123	80 - 120	102	20
Chromium	100		19.2	129	4	mg/Kg		134	80 - 120	12	20
Lead	29	F2 F1	47.9	88.6	F1 F4	mg/Kg		124	80 - 120	57	20
Zinc	150	F2	192	377	F4	mg/Kg		119	80 - 120	50	20

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.A

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282261	08/23/18 12:54	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 16:48	SPP	TAL SEA

Client Sample ID: 2003.DU1.B

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 14:01	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282356	08/24/18 07:38	SPP	TAL SEA

Client Sample ID: 2003.DU1.C

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 14:23	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:17	SPP	TAL SEA

Client Sample ID: 2003.DU1.D

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 14:45	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:21	SPP	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 2003.DU1.E

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 15:29	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:25	SPP	TAL SEA

Client Sample ID: 2003.DU1.F

Date Collected: 08/09/18 09:15

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 15:51	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:28	SPP	TAL SEA

Client Sample ID: 1955.DU2.A

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		50	282261	08/23/18 16:13	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:32	SPP	TAL SEA

Client Sample ID: 1955.DU2.B

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		10	282261	08/23/18 16:35	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:35	SPP	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.C

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282361	08/24/18 13:57	AEK	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:39	SPP	TAL SEA

Client Sample ID: 1955.DU2.D

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282361	08/24/18 14:19	AEK	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:28	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:51	SPP	TAL SEA

Client Sample ID: 1955.DU2.E

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 17:41	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:55	SPP	TAL SEA

Client Sample ID: 1955.DU2.F

Date Collected: 08/07/18 08:50

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282261	08/23/18 18:03	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 17:58	SPP	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.A

Lab Sample ID: 580-79517-13

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		10	282261	08/23/18 18:25	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:02	SPP	TAL SEA

Client Sample ID: 1955.DU3.B

Lab Sample ID: 580-79517-14

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 18:47	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:06	SPP	TAL SEA

Client Sample ID: 1955.DU3.C

Lab Sample ID: 580-79517-15

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 19:31	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:10	SPP	TAL SEA

Client Sample ID: 1955.DU3.D

Lab Sample ID: 580-79517-16

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 19:53	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:13	SPP	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU3.E

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 20:15	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:17	SPP	TAL SEA

Client Sample ID: 1955.DU3.F

Date Collected: 08/07/18 12:45

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282147	08/22/18 09:29	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282261	08/23/18 20:37	W1T	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282209	08/22/18 15:31	T1H	TAL SEA
Total/NA	Analysis	6010B		4	282349	08/23/18 18:20	SPP	TAL SEA

Client Sample ID: 1955.DU4.A

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282256	08/23/18 12:32	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 14:46	HJM	TAL SEA

Client Sample ID: 1955.DU4.B

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 13:39	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:12	HJM	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU4.C

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 14:01	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:15	HJM	TAL SEA

Client Sample ID: 1955.DU4.D

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 14:23	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:19	HJM	TAL SEA

Client Sample ID: 1955.DU4.E

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 15:06	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:23	HJM	TAL SEA

Client Sample ID: 1955.DU4.F

Date Collected: 08/08/18 08:35

Date Received: 08/11/18 09:45

Lab Sample ID: 580-79517-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282353	08/24/18 19:48	TL1	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:27	HJM	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.A

Lab Sample ID: 580-79517-25

Date Collected: 08/08/18 12:56

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282353	08/24/18 20:10	TL1	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:31	HJM	TAL SEA

Client Sample ID: 1955.DU5.C

Lab Sample ID: 580-79517-27

Date Collected: 08/08/18 12:56

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 16:13	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:34	HJM	TAL SEA

Client Sample ID: 1955.DU5.D

Lab Sample ID: 580-79517-28

Date Collected: 08/08/18 12:56

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 16:35	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:38	HJM	TAL SEA

Client Sample ID: 1955.DU5.E

Lab Sample ID: 580-79517-29

Date Collected: 08/08/18 12:56

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282353	08/24/18 20:32	TL1	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:42	HJM	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU5.F

Lab Sample ID: 580-79517-30

Date Collected: 08/08/18 12:56

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		10	282256	08/23/18 17:19	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:52	HJM	TAL SEA

Client Sample ID: 2005.DU1.G

Lab Sample ID: 580-79517-31

Date Collected: 08/09/18 09:15

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282353	08/24/18 20:54	TL1	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 15:56	HJM	TAL SEA

Client Sample ID: 2005.DU1.H

Lab Sample ID: 580-79517-32

Date Collected: 08/09/18 09:15

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		3	282353	08/24/18 21:16	TL1	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 16:00	HJM	TAL SEA

Client Sample ID: 1955.DU2.G

Lab Sample ID: 580-79517-33

Date Collected: 08/07/18 08:50

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		10	282256	08/23/18 18:25	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 16:03	HJM	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Client Sample ID: 1955.DU2.H

Lab Sample ID: 580-79517-34

Date Collected: 08/07/18 08:50

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		10	282256	08/23/18 19:09	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 16:07	HJM	TAL SEA

Client Sample ID: 1955.DU3.G

Lab Sample ID: 580-79517-35

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 19:31	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 16:10	HJM	TAL SEA

Client Sample ID: 1955.DU3.H

Lab Sample ID: 580-79517-36

Date Collected: 08/07/18 12:45

Matrix: Solid

Date Received: 08/11/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3550B			282146	08/22/18 09:25	SPS	TAL SEA
Total/NA	Analysis	8015B		1	282256	08/23/18 19:53	T1W	TAL SEA
Total/NA	ISM Prep	Increment, prep			281450	08/13/18 14:32	HJM	TAL SEA
Total/NA	Prep	3050B			282359	08/24/18 08:59	JKM	TAL SEA
Total/NA	Analysis	6010B		4	282607	08/27/18 16:13	HJM	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

Accreditation/Certification Summary

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	11-05-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-19

Laboratory: TestAmerica Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Hawaii	State Program	9	N/A	01-29-19

Sample Summary

Client: EnviroServices & Training Center, LLC
Project/Site: Factory Street Properties

TestAmerica Job ID: 580-79517-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-79517-1	2003.DU1.A	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-2	2003.DU1.B	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-3	2003.DU1.C	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-4	2003.DU1.D	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-5	2003.DU1.E	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-6	2003.DU1.F	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-7	1955.DU2.A	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-8	1955.DU2.B	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-9	1955.DU2.C	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-10	1955.DU2.D	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-11	1955.DU2.E	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-12	1955.DU2.F	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-13	1955.DU3.A	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-14	1955.DU3.B	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-15	1955.DU3.C	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-16	1955.DU3.D	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-17	1955.DU3.E	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-18	1955.DU3.F	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-19	1955.DU4.A	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-20	1955.DU4.B	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-21	1955.DU4.C	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-22	1955.DU4.D	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-23	1955.DU4.E	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-24	1955.DU4.F	Solid	08/08/18 08:35	08/11/18 09:45
580-79517-25	1955.DU5.A	Solid	08/08/18 12:56	08/11/18 09:45
580-79517-27	1955.DU5.C	Solid	08/08/18 12:56	08/11/18 09:45
580-79517-28	1955.DU5.D	Solid	08/08/18 12:56	08/11/18 09:45
580-79517-29	1955.DU5.E	Solid	08/08/18 12:56	08/11/18 09:45
580-79517-30	1955.DU5.F	Solid	08/08/18 12:56	08/11/18 09:45
580-79517-31	2005.DU1.G	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-32	2005.DU1.H	Solid	08/09/18 09:15	08/11/18 09:45
580-79517-33	1955.DU2.G	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-34	1955.DU2.H	Solid	08/07/18 08:50	08/11/18 09:45
580-79517-35	1955.DU3.G	Solid	08/07/18 12:45	08/11/18 09:45
580-79517-36	1955.DU3.H	Solid	08/07/18 12:45	08/11/18 09:45

Loc: 580
79517

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☐ DOD QSM Required?

☒ Report to MDL with J Flag values?

Chain of Custody / Analysis Request Form

Report to: <u>Eva Kakone</u>			Project identification										Indicate analyses requested					
Company name <u>Enviro Services + Training Center LLC</u>			Job name <u>Factory Street Properties</u>										Therm. ID: <u>A2</u> Cor: <u>1.9</u> ° Unc: <u>1.8</u> ° Cooler Dsc: <u>hrs Blue</u> FedEx: <u>P.O.</u> Packing: <u>Other</u> UPS: _____ Cust. Seal: Yes <u>X</u> No _____ Lab Cour: _____ <input checked="" type="checkbox"/> Wet Packs/Dry Ice/None Other: _____					
Address <u>505 Ward Ave, Ste. 202</u>			Job number <u>17-2009</u>															
City State ZIP <u>Honolulu HI 96814</u>			PO number															
Phone <u>808-839-7222</u>			Contact email address <u>EvaKakone@gotobeta.com</u>															
Fax <u>808-839-4455</u>			Date results needed <u>STAT</u>										Therm. ID: <u>A2</u> Cor: <u>1.5</u> ° Unc: <u>1.4</u> ° Cooler Dsc: <u>hrs Blue</u> FedEx: <u>P.O.</u> Packing: <u>Other</u> UPS: _____ Cust. Seal: Yes <u>X</u> No _____ Lab Cour: _____ <input checked="" type="checkbox"/> Wet Packs/Dry Ice/None Other: _____					
Sampler <u>EK</u>			# samples in shipment <u>36</u>										Therm. ID: <u>A2</u> Cor: <u>1.5</u> ° Unc: <u>1.4</u> ° Cooler Dsc: <u>hrs Blue</u> FedEx: <u>P.O.</u> Packing: <u>Other</u> UPS: _____ Cust. Seal: Yes <u>X</u> No _____ Lab Cour: _____ <input checked="" type="checkbox"/> Wet Packs/Dry Ice/None Other: _____					
Item no.	Client sample ID	Multi Incremental Composite	Grab	Matrix								Preservation method	Sampling		No. of containers	TPH - O (8015) Seven Metals (As, Sb, Ba, Cd, Cr, Pb, Zn) (6010)		
				Water	Soil	Wastewater	Drinking water	Liquid	Solid	Oil	Other		Date	Time				
1	2003.DUI.A	X		X								ICE	8/9/18	0915	1	X	X	
2	2003.DUI.B	X		X									8/9/18	0915	1	X	X	
3	2003.DUI.C	X		X									8/9/18	0915	1	X	X	
4	2003.DUI.D	X		X									8/9/18	0915	1	X	X	
5	2003.DUI.E	X		X									8/9/18	0915	1	X	X	
6	2003.DUI.F	X		X									8/9/18	0915	1	X	X	
7	1955.DU2.A	X		X									8/7/18	0850	1	X	X	
8	1955.DU2.B	X		X									8/7/18	0850	1	X	X	
9	1955.DU2.C	X		X									8/7/18	0850	1	X	X	
10	1955.DU2.D	X		X									8/7/18	0850	1	X	X	

Released by (print / sign) <u>Eva Kakone</u>	Date / time released <u>8/9/18, 1105</u>	Delivery method <u>Hand</u>	Received by (print / sign) <u>Eric Yuta</u>	Company / Agency affiliation <u>TA-HON</u>	Received <u>8/9/18 1405</u>
<u>Eric Yuta</u>	<u>8/10/18 1208</u>	<u>FedEx</u>	<u>B. Gail</u>	<u>B. Gail</u>	<u>8-11-18 0945</u>

Comments: Received on ice 4.6c/4.6c 1R-13

Therm. ID: A2 Cor: 0.8 ° Unc: 0.7 °

Cooler Dsc: hrs Blue

Packing: Other

Cust. Seal: Yes X No _____

☒ Wet Packs/Dry Ice/None

FedEx: P.O.

UPS: _____

Lab Cour: _____

Other: _____

Please check one:

- ☒ Dispose by lab
☐ Return to client
☐ Archive (fee may apply)



Chain of Custody / Analysis Request Form

Report to: Eva Kakone		Project identification		Indicate analyses requested	
Company name: Enviro Services + Training Center LLC		Job name: Factory Street Properties		TPH-O (8015) Seven Metals (As, Sb, Bi, Ba, Cd, Cr, Pb, Zn) (6010)	
Address: 505 Ward Ave, Ste. 202		Job number: 17-2009			
City: Honolulu State: HI ZIP: 96814		PO number:			
Phone: 808-839-7222 Fax: 808-839-4455		Contact email address: Ekakone@gowetc.com Damon@gowetc.com			
Sampler: EK # samples in shipment: 36		Date results needed: STAT			

Item no.	Client sample ID	Multi Incremental	Composite	Grab	Matrix							Preservation method	Sampling		No. of containers	TPH-O	Seven Me	Cr, Pb, ...						Laboratory ID no.
					Water	Soil	Wastewater	Drinking water	Liquid	Solid	Oil		Other	Date										
1	1955. DU2. E	X			X						ICE	8/7/18	0850	1	X	X								
2	1955. DU2. F	X			X						↓	8/7/18	0850	1	X	X								
3	1955. DU3. A	X			X							8/7/18	1245	1	X	X								
4	1955. DU3. B	X			X							8/7/18	1245	1	X	X								
5	1955. DU3. C	X			X							8/7/18	1245	1	X	X								
6	1955. DU3. D	X			X							8/7/18	1245	1	X	X								
7	1955. DU3. E	X			X							8/7/18	1245	1	X	X								
8	1955. DU3. F	X			X							8/7/18	1245	1	X	X								
9	1955. DU4. A	X			X							8/8/18	0835	1	X	X								
10	1955. DU4. B	X			X							8/8/18	0835	1	X	X								

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Eva Kakone <i>EK</i>	8/9/18 11405	Hand	Eric Yates <i>EY</i>	TA-HSN	8/9/18 11405	on ice
Eric Yates <i>EY</i>	8/10/18 1208	Fed Ex	B. Gell B. Gell	SEA TA	8/11/18 0945	

Comments: **Received on ice 4.3C/4.5C 1R-93**

Please check one:
☒ Dispose by lab
☐ Return to client
☐ Archive (fee may apply)

Chain of Custody / Analysis Request Form

Report to: <u>Eva Kakone</u>			Project identification			Indicate analyses requested														
Company name: <u>Enviro Services + Training Center LLC</u>			Job name: <u>Factory Street Properties</u>			<div style="display: flex; justify-content: space-between;"> <div> TPH - O (8015) Seven Metals (As, Sb, Bi, Cd, Cr, Pb, Zn) (6010) </div> </div>														
Address: <u>505 Ward Ave, Ste. 202</u>			Job number: <u>17-2009</u>																	
City: <u>Honolulu</u> State: <u>HI</u> ZIP: <u>96814</u>			PO number:																	
Phone: <u>808-839-7222</u> Fax: <u>808-839-4455</u>			Contact email address: <u>EKakone@gowetc.com</u>																	
Sampler: <u>EK</u> # samples in shipment: <u>36</u>			Date results needed: <u>STAT</u>			Contact email address: <u>Damon@gowetc.com</u>														
Item no.	Client sample ID	Multi Incremental Composite	Grab	Matrix							Preservation method	Sampling		No. of containers	Laboratory ID no.					
				Water	Soil	Wastewater	Drinking water	Liquid	Solid	Oil		Other	Date			Time				
1	1955.DU4.C	X		X							ICE	8/8/18	0835	1	X	X				
2	1955.DU4.D	X		X								8/8/18	0835	1	X	X				
3	1955.DU4.E	X		X								8/8/18	0835	1	X	X				
4	1955.DU4.F	X		X								8/8/18	0835	1	X	X				
5	1955.DU5.A	X		X								8/8/18	1256	1	X	X				
6	1955.DU5.B	X		X								8/8/18	1256	1	X	X				
7	1955.DU5.C	X		X								8/8/18	1256	1	X	X				
8	1955.DU5.D	X		X								8/8/18	1256	1	X	X				
9	1955.DU5.E	X		X								8/8/18	1256	1	X	X				
10	1955.DU5.F	X		X							↓	8/8/18	1256	1	X	X				

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
<u>Eva Kakone</u>	<u>8/9/18 11405</u>	<u>Hand</u>	<u>Eric Yates</u>	<u>TA-Hon</u>	<u>8/9/18 11405</u>	
<u>Eric Yates</u>	<u>8/14/18 11208</u>	<u>Fed Ex</u>	<u>B. Gall</u>	<u>SEA TA</u>	<u>8-11-18 10745</u>	

Comments: Received on ice 4.3C/4.3C 11R-93

Please check one:
☒ Dispose by lab
☐ Return to client
☐ Archive (fee may apply)



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☐ DOD QSM Required?☒ Report to MDL with J Flag values?

Chain of Custody / Analysis Request Form

Report to: Eva Kakone			Project identification										Indicate analyses requested									
Company name Enviro Services + Training Center LLC			Job name Factory Street Properties																			
Address 505 Ward Ave, Ste 202			Job number 17-2009																			
City Honolulu State HI ZIP 96814			PO number																			
Phone 808-839-7222 Fax 808-839-4455			Contact email address EKakone@gowetc.com Damon@gowetc.com																			
Sampler EK # samples in shipment 36			Date results needed STAT																			
Item no.	Client sample ID	Multi Incremental	Composite	Grab	Matrix							Preservation method	Sampling		No. of containers	Laboratory ID no.						
					Water	Soil	Wastewater	Drinking water	Liquid	Solid	Oil		Other	Date			Time					
1	2005. DVI. G	X			X							ICE	8/9/18	0915	1	X	X					
2	2005. DVI. H	X			X								8/9/18	0915	1	X	X					
3	1955. DV2. G	X			X								8/7/18	0850	1	X	X					
4	1955. DV2. H	X			X								8/7/18	0850	1	X	X					
5	1955. DV3. G	X			X								8/7/18	1245	1	X	X					
6	1955. DV3. H	X			X							↓	8/7/18	1245	1	X	X					
7																						
8																						
9																						
10																						

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Eva Kakone <i>EK</i>	8/9/18 11405	Hand	Eric Yoda <i>EY</i>	TA-Hon	8/9/18 11405	
Eric Yoda <i>EY</i>	8/10/18 1243	FedEx	B. Gail <i>B. Gail</i>	SEA 70	8/10/18 0945	

Comments:

Received on ICE 4.3C/4.3C 1R-93

Please check one:

- ☒ Dispose by lab
☐ Return to client
☐ Archive (fee may apply)

Login Sample Receipt Checklist

Client: EnviroServices & Training Center, LLC

Job Number: 580-79517-1

Login Number: 79517

List Number: 1

Creator: Gall, Brandon A

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	