

**PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT
(PEA-E) REPORT**

**Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, California**

Prepared for

**Los Angeles Unified School District
Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor
Los Angeles, California 90017**

December 20, 2019

Project No. 029RC1-191395

Prepared by



1631 East Saint Andrew Place, Santa Ana, CA 92705 | t 714.919.6500 | f 949.988.3514

Submitted to:

Los Angeles Unified School District
333 South Beaudry Avenue, 21st Floor
Los Angeles, California 90017
213.241.3199

Submitted by:

Montrose Environmental
1631 East Saint Andrew Place
Santa Ana, CA 92705
t 714.919.6500



Chris Guesnon, PG, CHG
Senior Geologist

Dane Nygaard
Senior Manager

PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page i
December 20, 2019

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
2.0 SITE DESCRIPTION	1
2.1 Site Name and Address	1
2.2 Site Topography and Proximity to Surface Water Bodies	1
3.0 GEOLOGY AND HYDROGEOLOGY.....	2
3.1 Geology	2
3.2 Hydrogeology	2
4.0 BACKGROUND.....	2
4.1 Historical Site Use	2
4.2 Current Site Use	3
4.3 Surrounding Land Uses	3
4.4 Prior Site Investigations	3
4.4.1 Phase I ESA.....	3
4.4.2 Geotechnical Investigation	3
5.0 APPARENT PROBLEM	3
6.0 ENVIRONMENTAL SETTING	4
7.0 CONCEPTUAL SITE MODEL	4
7.1 Factors Related to Soil Pathways.....	4
7.2 Factors Related to Water Pathways	4
7.3 Factors Related to Air Pathways.....	4
7.4 Environmental Screening Levels	5
8.0 SOIL SAMPLING ACTIVITIES	5
8.1 Summary of Activities	5
8.1.1 Pre-Field Activities.....	5
8.1.2 Work Notice.....	6
8.1.3 Site Clearance and Geophysical Survey.....	6
8.1.4 Shallow Soil Sampling	6
8.1.5 Soil Sample Collection	7
8.1.6 Soil Sample Analyses	7
8.1.7 Investigation Derived Waste	9
9.0 FIELD VARIANCES	9
10.0 SUMMARY OF ANALYTICAL RESULTS	9
10.1 Screening Levels	10
10.2 Lead Results.....	10
10.3 Arsenic Results	10
10.4 OCP Results.....	11
10.5 PCB Results	11
10.6 CAM Metal Results	11
11.0 QUALITY ASSURANCE/QUALITY CONTROL	11
12.0 HUMAN HEALTH AND ECOLOGICAL SCREENING EVALUATION	12
12.1 Human Health Screening Evaluation.....	12
12.2 Ecological Screening Evaluation	13
13.0 AREAS OF IMPACTED SOIL.....	13
14.0 PUBLIC PARTICIPATION	13

PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page ii
December 20, 2019

15.0 CONCLUSIONS AND RECOMMENDATIONS	14
15.1 Conclusions.....	14
15.2 Recommendations.....	14
16.0 REFERENCES.....	15

LIST OF ATTACHMENTS

FIGURES

- | | |
|---|---|
| 1 | Site Location Map |
| 2 | Site Plan with Boring Locations |
| 3 | Site Plan Showing Lead and Arsenic Impacted Areas |
| 4 | Site Plan with Proposed Excavation Areas |

TABLES

- | | |
|---|--|
| 1 | Sampling Strategy Plan |
| 2 | Summary of Shallow Soil Sample Lead and Arsenic Results |
| 3 | Summary of Shallow Soil STLC and TCLP Results |
| 4 | Summary of PEA Soil Analytical Results |
| 5 | Summary of PEA Stepout Boring Soil Analytical Results |
| 6 | Summary of Soil Characterization Analytical Results |
| 7 | Summary of Additional Soil Characterization Analytical Results |
| 8 | Estimated Volumes of Impacted Soil |

APPENDICES

- | | |
|---|----------------------------|
| A | PEA-E Scoping Document |
| B | Public Notification Letter |
| C | Laboratory Analytical Data |
| D | Waste Manifest |

PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page iii
December 20, 2019

LIST OF ACRONYMS

amsl	above mean sea level
APN	assessors parcel number
bgs	below ground surface
Cal EPA	California Environmental Protection Agency
Cal Haz	Non-RCRA (California-regulated) hazardous waste
CAM	California Assessment Manual
CEQA	California Environmental Quality Act
COC	contaminant of concern
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
ESL	environmental screening level
EZRI	Earthquake Zone of Required Investigation
HASP	health and safety plan
HERO	Office of Human and Ecological Risk Office
LAUSD	Los Angeles Unified School District
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NIFZ	Newport-Inglewood Fault Zone
Non-haz	non-hazardous disposal
OCP	organochlorine pesticide
OEHS	Office of Environmental Health and Safety
PCB	polychlorinated biphenyls
PEA-E	preliminary environmental assessment equivalent
Phase I	Phase I Site Assessment Report
QA/QC	quality assurance/quality control
REC	recognized environmental condition
RAW	Removal Action Workplan
RSL	regional screening levels
RWQCB	Regional Water Quality Control Board
STLC	soluble threshold limit concentration
SVOC	semi-volatile organic compounds
TPH	total petroleum hydrocarbons
TTLC	total threshold limit concentration
TCLP	toxicity characteristic leaching procedure
USA	Underground Service Alert
USGS	United States Geological Survey
USCS	Unified Soil Classification System
VOCs	volatile organic compounds

PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page 1
December 20, 2019

1.0 INTRODUCTION

ES Engineering Services, LLC, doing business as Montrose Environmental (Montrose), has prepared this Preliminary Environmental Assessment Equivalent (PEA-E) Report on behalf of the Los Angeles Unified School District (LAUSD) for Shenandoah Street Elementary School located at 2450 Shenandoah Street, Los Angeles, California (site - **Figures 1 and 2**). The proposed improvement project at the Shenandoah Street Elementary School includes the removal of multiple portable buildings, demolition and landscaping of the asphalt and concrete areas near the portables and a new classroom building.

This PEA-E has been completed to investigate recognized environmental conditions (RECs) identified in a Phase I Environmental Site Assessment (Phase I ESA) completed by Montrose in August 2017 (ES, 2017) prior to school improvements and renovations. The PEA-E investigation was conducted in accordance with the work scope described in the *PEA-E Scoping Document* by Montrose, dated August 22, 2017 (**Appendix A**) and modified based on revised construction plans, and in accordance with the guidelines of the California Environmental Protection Agency (Cal EPA) and Department of Toxic Substances Control (DTSC), *PEA-E Guidance Manual* (January 1994, Interim Final – Revised October 2013).

2.0 SITE DESCRIPTION

2.1 Site Name and Address

The Shenandoah Street Elementary is an elementary school with Assessor's Parcel Numbers (APNs) 4301-018-900 and 4301-017-904, as designated by the Los Angeles County Office of the Assessor. The site is a rectangular-shaped property consisting of approximately 7.87 acres. The current campus has two permanent buildings, approximate 13 semi-permanent classroom buildings, 7 portable classroom buildings, a lunch pavilion, three separate playgrounds and a grass area. The site was previously used for agricultural purposes prior to 1928. Additional buildings and remodels were performed up until 1977 when it reached its current configuration.

2.2 Site Topography and Proximity to Surface Water Bodies

The site is located near the boundary of the Santa Monica Basin and the Central Basin between the Baldwin Hills and Beverly Hills. The topography of the area is relatively flat and gently slopes from an elevation of approximately 117 feet above mean sea level (amsl) in the northwest, to approximately 107 feet amsl in the southeast. The Ballona Creek, a concrete-lined channel, is the nearest surface water body and located approximately 0.60 miles to the southeast (USGS, 2012).



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page 2
December 20, 2019

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Geology

The site is located approximately 6.25 miles northeast of the Pacific Ocean within the city of Los Angeles, along the boundary of the Central and Santa Monica Basins. The northern part of the Newport-Inglewood Fault Zone (NIFZ) creates a boundary between the Central and Santa Monica Basins. The NIFZ is inferred to be located approximately near the southwest corner of the subject property, as shown on the *Earthquake Zones of Required Investigation, Beverly Hills Quadrangle* (EZRI, 2017) map dated July 2017. The West Pico and the Inglewood Faults are also shown on the EZRI to intersect nearby the subject site.

The Cheviot Hills, located approximately 1 mile west of the subject site, are undergoing active folding due to extension of the NIFZ. A series of north-northwest trending east facing escarpments, known as the West Beverly Hills Lineament, separate the older alluvium of the Cheviot Hills to the west and the younger alluvial plain to the east. The Beverly Hills and Cheviot oil fields are located throughout the Cheviot Hills and Century City.

The Baldwin Hills are located approximately 1.5 miles south of the site and are defined by the NIFZ, which can be traced along the east side of the hills as an escarpment. The NIFZ within the Baldwin Hills has caused structural traps formed by additional faulting parallel and perpendicular to the Newport-Inglewood fault, including the Inglewood Oil Field. Surface drainage of the Baldwin Hills generally flows south and west, into six retention basins which in turn drain into the Los Angeles County storm drainage network including Ballona Creek or Centinela Creek.

3.2 Hydrogeology

The site is located in the Central Basin of the Los Angeles-San Gabriel Hydrologic Unit (RWQCB, 1994). The basin is bounded on the north by the La Brea high, and the northeast and east by less permeable Tertiary rocks. In the site vicinity, alluvium underlain by the regionally extensive Bellflower Aquiclude, and Upper Pleistocene older dune sands and terrace deposits of the Lakewood Formation (DWR, 1961) underlies the site. According to the DWR, the main productive freshwater-bearing sediments are contained within the alluvium and the Lakewood Formation. The recent site investigations indicate that the surficial soils consist primarily of silty sand to a depth of 3 feet below ground surface (bgs), the maximum depth explored.

4.0 BACKGROUND

4.1 Historical Site Use

The earliest documentation of Shenandoah Elementary School was included on a Sanborn Fire Company map from 1927. None of the original buildings developed during the 1920's remain today. The oldest existing building on site dates back to the year 1940 and the other two permanent buildings on campus were built in the 1970's. The campus has been extensively redeveloped through the construction and demolition of numerous buildings, and currently contains three permanent and 20 portable buildings and structures.



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

Page 3
December 20, 2019

The location of Shenandoah Street Elementary School and surrounding area is presented in **Figure 1**, and the current layout of the school buildings and outdoor areas, soil boring locations, and proposed new building footprint is presented on **Figure 2**.

4.2 Current Site Use

The site serves students from Kindergarten (K) through the 5th grade. The campus served approximately 413 students for the 2017-2018 enrollment year. The site is comprised of 23 buildings, including 3 permanent and 20 portable buildings, with a total of 47 classrooms at the site. The site also includes hardscape playground areas, existing utilities, and bus drop off areas on South Shenandoah Street, which is in front of the main entrance to the school. There is an Early Education Center (EEC) located on the southwest corner of the campus that will not be part of the comprehensive modernization project.

4.3 Surrounding Land Uses

The overall area surrounding the school consists primarily of single-family residences to the east, west and south. Multi-family residences are located directly north of the subject property. The EEC, located on the southwest corner of the campus, is not part of the comprehensive modernization project and is considered a surrounding land use.

4.4 Prior Site Investigations

4.4.1 Phase I ESA

Montrose (formerly ES Engineering Services) completed a Phase I ESA dated August 8, 2017 (Montrose, 2017) that identified RECs and potential RECs as a result of historical agriculture use, former residential buildings, former school buildings, and current school buildings on the school site. A PEA was recommended to evaluate and investigate the identified RECs and determine whether soil has been impacted due to the historical use of the subject property (see **Figure 2**). The PEA Scoping Document was approved by the LAUSD on May 27, 2016 and is presented in **Appendix A**. The environmental concerns identified in the Phase I ESA are presented in **Section 4.0** (Apparent Problem).

4.4.2 Geotechnical Investigation

Converse Consultants completed a *Preliminary Soils Report* dated May 18, 2017 (Converse, 2017) for the proposed comprehensive modernization project at Shenandoah Street Elementary School. Four (4) exploratory borings and three (3) cone penetration tests (CPT) were advanced to assess the geotechnical conditions for the proposed school construction. Undocumented fills, ranging from 4 to 5 feet in thickness were encountered in the borings. The fill encountered consisted primarily of silty sand, sand, silty clay, and clay.

5.0 APPARENT PROBLEM

Based on the findings of the Phase I ESA (Montrose, 2017), the PEA field investigation is intended to evaluate the following:



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

- Potential lead, arsenic and OCPs in shallow soil surrounding onsite buildings as a result of the age of the buildings and the potential use of OCPs and arsenates to control termites and other pests.
- Potential arsenic, lead and OCPs below pavement areas as a result of historical weed control or the import of fill soil.
- Potential PCBs from surface leaks from the three pad mounted transformers.
- Potential contamination released into the subsurface soil from the clarifier located in the boiler room.

6.0 ENVIRONMENTAL SETTING

A description of the site's general environmental setting (topography, geology, hydrogeology) is presented in **Section 2** of this PEA-E Report. This information was used to assess the potential exposure pathways for the chemicals of potential concern identified in this PEA-E Report.

7.0 CONCEPTUAL SITE MODEL

The Shenandoah Street Elementary School is an active school site and all soil in the proposed comprehensive modernization area are paved with asphalt or concrete. All exposure pathways are currently closed for this Site. During the construction activities for the comprehensive modernization, the pavement will be removed and excavation and grading activities will occur. The exposed soil may present a potential exposure pathway. The soil, water and air exposure pathways are discussed in the following sections.

7.1 Factors Related to Soil Pathways

The site is generally flat and at grades similar to neighboring properties. The shallow subsurface soils (surface to 3 feet bgs) at the site were observed to primarily consist of combinations of silts and sands. Access to the site is restricted through perimeter chain link fencing and security gates. The current site is predominately developed with pavement, with some grass and planter areas.

7.2 Factors Related to Water Pathways

Two wells listed on the United States Geological Society website (USGS40000139910 and USGS40000139949) are located within 1 mile from the subject property approximately 4,009 feet and 4,879 feet to the east-southeast, respectively. Based on the depth to groundwater, nature of the identified COCs, distance to nearest groundwater well and limited vertical extent of the soil impacts, the potential for a release at the site to impact groundwater is minimal and therefore not considered to represent a complete exposure pathway.

7.3 Factors Related to Air Pathways

Based on the current site development (e.g., asphalt and concrete paving and school buildings and structures), potential emissions from soil are considered to be insignificant under current conditions. There is no documentation of a release of hazardous substances to the atmosphere. Future site development activities would result in the removal of asphalt and concrete paving



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

and certain buildings and structures that could increase the potential for fugitive dust generation. Potential sources of a hazardous substances release to the atmosphere are limited to fugitive dust from surface soils. Therefore, the potential for releases of hazardous substances from the site to the atmosphere is considered *de minimis*.

7.4 Environmental Screening Levels

The screening level currently used for arsenic at LAUSD school sites is 12 milligrams per kilogram (mg/kg), which is the DTSC's upper bound estimate (95th percentile) for background concentrations in Southern California (DTSC, 2008). The LAUSD currently uses the DTSC Recommended Screening Levels (SL) for lead concentrations in residential soil (80 mg/kg) when considering lead concentrations in soil for additional assessment. OCPs were compared to the most recent available United States Environmental Protection Agency (EPA) Region 9 Regional Screening Levels (RSLs) (EPA, 2015). These concentrations are consistent with those provided by the DTSC Office of Human and Ecological Risk (HERO) in *HERO HHRA Note Number: 3* (DTSC, 2016).

8.0 SOIL SAMPLING ACTIVITIES

Montrose conducted soil sampling and analysis to assess whether past activities within and immediately adjacent to the project area resulted in environmental impairments.

The initial PEA sampling was focused to the north portion of the site to complete the PEA equivalent investigation near the portable classroom structures. Thirty-two (32) borings (SB-1 through SB-32) were advanced for shallow soil sampling purposes throughout the site. Based on the sampling results, 15 step out borings were advanced to further assess concentrations of lead. A total of 83 discrete soil samples were collected from the 47 total soil borings advanced in the PEA assessment sampling area.

As a result of comprehensive modernization design for the school site, additional sampling was conducted (Soil Characterization Sampling). The additional sampling included fifty-two (52) primary borings (SB-33 through SB-84) in the southern portion of the school property. Based on the sampling results, 63 step out borings were advanced to further assess concentrations of lead and/or arsenic concentrations. A total of 302 soil samples were collected from the 115 total soil borings advanced in the soil characterization sampling area.

The Summary of Activities are provided in **Section 8.1**, below. The soil sample analytical results for lead and arsenic are provided in **Sections 10.2** and **10.3**, respectively. The soil sample analytical results are also summarized in **Tables 2 through 6** and the boring and sampling locations are presented on **Figure 2**.

8.1 Summary of Activities

8.1.1 Pre-Field Activities

A comprehensive health and safety plan (HASP) was prepared for the PEA-E field investigation activities conducted at the site. The intent of the HASP was to include protocols to be followed



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

during investigation activities and to ensure the health and safety of on-site project employees, subcontractors, visitors, and the public during all site work. The HASP identified policy, procedures, and systems to be followed by project personnel, and was required to be followed and signed by Montrose employees, subcontractors, vendors, visitors, and agency representatives at the site. A copy of the HASP was readily available during field activities and all site workers were required to review and sign the Montrose HASP before conducting work at the site.

8.1.2 Work Notice

Prior to the initiation of field investigation activities, a *PEA-E Work Notice* was prepared in English and Spanish to advise the public of the upcoming PEA-E field investigation, the schedule of environmental field work, and contact information for questions and comments. The Work Notice was distributed as follows on October 4, 2018:

- 1) 120 copies were provided to LAUSD for placement in the Shenandoah Elementary School main office;
- 2) Approximately 50 copies of the Work Notice were hand delivered to residents and businesses in the immediate vicinity of the site; and
- 3) Laminated copies of the Work Notice were posted on fencing along the school perimeter. A copy of the PEA-E Work Notice is included in **Appendix B**.

8.1.3 Site Clearance and Geophysical Survey

Clearance of utilities and other underground obstacles was conducted prior to initiating any subsurface investigation activities. Underground Service Alert (USA) was notified a minimum of two business days prior to commencing intrusive work at the site, and the proposed boring locations were marked in the field with chalk or chalk-based paint according to USA requirements. The USA tickets were maintained for the duration of the field investigation.

Prior to each of the soil sampling events, a geophysical survey utilizing electromagnetic and ground penetrating radar to locate the underground utility lines and subsurface features and structures was conducted prior to the initiation of intrusive investigation activities.

8.1.4 Shallow Soil Sampling

All soil borings were located in asphalt-covered areas and required coring prior to sampling. Once the locations were cleared and cored, soil samples were collected using a hand auger. The initial PEA-E investigation activities were conducted on November 19 and 20, 2018 and included collection of shallow soil samples at a total of 32 locations to assess the area of portable classroom buildings slated for removal. Thirty-one of the 32 sample locations were sampled to a depth of 1.5 feet bgs, with sample collection at 0.0 to 0.5 feet bgs and 1.0 to 1.5 feet bgs. Soil boring SB-29 was sampled at a depth of 2.5 to 3.0 feet bgs.

Based on results of the initial investigation, step-out borings were conducted on February 18, 2019 to further assess the lateral extent of soil lead impacts identified in initial borings SB-1, SB-3, SB-5, SB-7, SB-15 and SB-30.



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

An additional assessment was conducted on April 16 and 17, 2019 to assess the area of a proposed new classroom building, a drop off and pickup ramp, building entry, garden and play areas. Based on results of the April 2019 investigation, step-out borings were conducted on June 18 and 19, 2019 to further assess the lateral extent of lead and arsenic impacts identified in borings SB-33, SB-37, SB-39, SB-42, SB-44, SB-47, SB-48, SB-50 through SB-55 and SB-57. Additional step-out assessment activities were completed on August 30, 2019, to further assess the lateral extent of arsenic impacts near borings SB-37, SB-42, SB-50, SB-53, SB-55 and SB-57. Finally, based on the results of the August 30 assessment, assessments were conducted on September 21 and November 2, 2019 to assess impacts near soil samples SB-37C3, SB-37D2 and SB-50A2 and the southern parking lots.

8.1.5 Soil Sample Collection

The shallow soil sampling was conducted using hand auger sampling equipment. The hand auger was advanced to predetermined sample depths and then the soil samples were collected and transferred to 8-ounce glass jars. After labelling and documentation, the soil matrix samples were stored in a chilled ice chest until they were transported to the laboratory. Hand auger and sampling equipment was decontaminated in the field prior to each sample collection.

The soil borings were logged in accordance with the Unified Soil Classification System (USCS). After logging the soil, the sample collected for analysis was capped and then placed into a cooler chilled to 4 degrees Celsius for transport to the laboratory.

Waste materials generated during the investigation were placed into a labeled, Department of Transportation (DOT) approved, 55-gallon steel drum for temporary storage prior to disposal. Decontamination fluids generated during the investigation were placed in a labeled, DOT approved 55-gallon steel drum for temporary storage prior to disposal. Waste manifests are provided in **Appendix D**.

All soil samples were submitted under proper chain of custody protocols to Enthalpy Analytical LLC (Enthalpy), a California State-certified analytical laboratory, for analysis. The soil samples collected during the initial phases of assessment were analyzed for arsenic by EPA Method 6020, OCP's by EPA Method 8081A and CAM 17 Metals by EPA Method 6010B. Select samples were also analyzed for PCBs by EPA Method 8082. The laboratory was requested to analyze duplicate soil samples, at a frequency of approximately 10 percent of all soil samples collected. Based on the results of the initial soil sampling, step-out borings were collected for lead or arsenic analyses, as appropriate. See **Figure 2** for the soil sampling locations; **Table 6** presents a summary of all samples collected and corresponding analytical results. The laboratory analytical reports and chain-of-custody documentation for all of the samples submitted for analysis to date are presented in **Appendix D**. Analytical results are discussed below.

8.1.6 Soil Sample Analyses

The following samples (including field QC samples) were collected and analyzed during the field investigations:



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

PEA Sampling

- A total of 31 discrete soil samples and 5 duplicate soil samples were analyzed for CAM 17 Metals by EPA Method 6010B;
- A total of 30 discrete soil samples and 6 duplicate soil samples were analyzed for OCPs by EPA Method 8081A;
- A total of 5 discrete soil samples and 1 duplicate soil sample were analyzed for PCBs by EPA Method 8082;
- A total of 31 discrete soil samples and 5 duplicate soil samples were analyzed for arsenic only by EPA Method 6020B;
- A total of 36 discrete soil samples and 5 duplicate soil samples were analyzed for lead only by EPA Method 6010B;
- One soil sample with detected lead impacts was ran for STLC and/or TCLP for disposal classification.

Soil Characterization Sampling

- A total of 68 discrete soil samples and 7 duplicate soil samples were analyzed for CAM 17 Metals by EPA Method 6010B;
- A total of 68 discrete soil samples and 7 duplicate soil samples were analyzed for OCPs by EPA Method 8081A;
- A total of 10 discrete soil samples and 1 duplicate soil sample were analyzed for PCBs by EPA Method 8082;
- A total of 241 discrete soil samples and 17 duplicate soil samples were analyzed for arsenic by EPA Method 6020.
- A total of 3 discrete soil samples were analyzed for diesel and oil-range petroleum hydrocarbons (C13-22 and C23-44) by EPA Method 8015M;
- A total of 3 discrete soil samples were analyzed for gasoline-range petroleum hydrocarbons (C6-12) by EPA Method 8015B;
- A total of 3 discrete soil samples, 2 equipment blanks and 1 composite soil sample were analyzed for VOCs by EPA Method 8260B;
- A total of 3 discrete soil samples, 2 equipment blanks and 1 composite soil sample were analyzed for SVOCs by EPA Method 8270B
- One soil sample with detected lead impacts was ran for STLC and/or TCLP for disposal classification.
- A total of 27 soil sample with detected arsenic impacts was ran for STLC and/or TCLP for disposal classification.

A total of 9 field equipment blanks were collected during the shallow soil boring investigation across the site, and were analyzed for TPH carbon chain using EPA Method 8015, VOCs using EPA Method 8260B, arsenic and lead using EPA Method 6010B, OCPs using EPA Method 8081A, and PCBs using EPA Method 8082.

Results of laboratory analysis of soil samples collected during the PEA-E investigation are summarized in **Tables 2 through 6**. Chain of custody protocol was followed for all samples selected for laboratory analysis. The chain of custody form accompanied the samples from the



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

sampling locality to the laboratory, providing a continuous record of possession prior to analysis. Copies of the laboratory analytical reports and chain of custody records are included in **Appendix D**.

Detections noted in the tables with a “J” (J-flagged) indicate that the analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit (reported value is estimated).

Based on the soil sample analytical results, soluble threshold limit concentration (STLC) and Toxicity Characteristic Leaching Procedure (TCLP) analyses were performed on soil samples requiring the additional analyses, as discussed below.

8.1.7 Investigation Derived Waste

Two 55-gallon drums of soil cuttings and one 55-gallon drum of equipment decontamination water were generated during the field sampling activities. One representative soil sample was collected from each drum and composited for profile analysis (Soil Sample Composite). The results from the equipment blank sampling were used for disposal profile of the decontamination drum. The composited sample (Soil drum) and water sample (Decon drum) were analyzed for total lead, total arsenic and STLC Lead by EPA Method 6010B, OCPs by EPA Method 8081, PCBs by EPA Method 8082, VOCs by EPA Method 8260B, semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons as carbon chain (TPH-cc) by EPA Method 8015M and CAM 17 Metals by EPA Method 6010B. The laboratory analytical report and chain-of-custody documentation is provided in **Appendix C**; copies of the waste manifests are included in **Appendix D**.

9.0 FIELD VARIANCES

The field investigation outlined herein was conducted as initially scoped by LAUSD, with the following variances:

- The originally proposed PEA assessment activities included 47 shallow soil borings in the northern portion of the site to assess arsenic, lead, OCP and PCB concentrations. Due to the necessity to investigate work areas added to the overall plan in the southern portion of the site, an additional 115 borings were added (total of 162 borings).
- Select soil boring locations were moved slightly from their originally proposed locations to avoid subsurface utilities or to take advantage of nearby planters or grassy areas (rather than coring concrete sidewalks and walkways).
- Borings were moved slightly from their originally proposed locations near the portable classrooms to assist with assessment in this area.
- Because of utilities and barriers noted in the vicinity of the portable classrooms near the playground, several borings were moved slightly and several borings were omitted.

10.0 SUMMARY OF ANALYTICAL RESULTS

Results of laboratory analysis of soil samples collected during the PEA-E investigation are summarized below and presented in **Tables 2 through 6**.



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

10.1 Screening Levels

Where appropriate, the results are compared with regulatory limits for the chemicals and compounds identified in the applicable media.

- Arsenic soil samples were screened utilizing the accepted background concentration of 12 milligrams per kilogram (mg/kg);
- Lead soil samples were compared to the residential land use DTSC Screening Level published in the DTSC's Office of Human and Ecological Risk Office (HERO) Note 3;
- PCBs were screened utilizing the RSLs for Residential Land Use (value varies by PCB constituent);
- OCPs were screened utilizing the RSLs for Residential Land Use (value varies by OCP constituent).

Based on the soil sample analytical results, soil exceeding the DTSC screening level for lead (80 mg/kg), and/or the background concentration for arsenic (12 mg/kg), are displayed on **Figure 3**.

10.2 Lead Results

Lead was detected in each sample analyzed, at concentrations ranging from 1.70 mg/kg (SB-14-0.5') to 212 mg/kg in boring SB-1-0.5. Lead was detected exceeding the soil screening level of 80 mg/kg in soil samples collected from borings SB-1, SB-3, SB-5, SB-7, SB-15, SB-30 and SB-42 at a depth of 0.5 feet bgs. Based on a review of the laboratory analytical data, step-down samples were analyzed at approximately 0.5 to 1 foot intervals until a depth interval was reached where the concentrations were less than screening levels or refusal was encountered. Lateral step-out sampling was conducted for borings SB-1, SB-3, SB-5, SB-7, SB-15, SB-30 and SB-42 (designated as A, B, C and D), until the detected concentrations of lead were less than the screening level. In some cases, stepout borings were limited by the site boundary, a building foundation, limited access, or a subsurface utility obstruction. The shallow soil sampling for lead achieved the lateral and vertical delineation for the site. A summary of the shallow soil sample lead and arsenic results is presented in **Table 2**.

Soil samples SB-1-0.5, SB-1A-0.5, SB-3-0.5, SB-5-0.5 (Dup), SB-7-0.5, SB-15-0.5, SB-30-0.5 and SB-42-0.5 were additionally analyzed for STLC to determine waste disposal criteria for the lead impacted material. The STLC laboratory analytical results for soil samples SB-1-0.5, SB-1A-0.5, SB-5-0.5 (Dup) and SB-7-0.5 were above the STLC threshold of 5 mg/L, indicating that the lead-impacted soil in those boring areas is not acceptable for non-hazardous disposal; those samples were additionally analyzed for TCLP. The TCLP results indicate the soil samples are below the threshold of 5 mg/L, and that the lead-impacted soil in those boring areas is acceptable for Non-RCRA (California-regulated) hazardous waste for disposal. A summary of the shallow soil STLC and TCLP results is included in **Table 3**.

10.3 Arsenic Results

Arsenic was detected in each sample analyzed for that COC, at concentrations ranging from 0.448 mg/kg (SB-42-0.5') to 633 mg/kg in boring SB-50B-0.5. Arsenic exceeding the soil screening level of 12 mg/kg was detected in 56 soil borings. Based on a review of the laboratory



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

analytical data, step-down samples were analyzed at approximately 0.5 to 1 foot intervals until a depth interval was reached where the concentrations were less than screening levels or refusal was encountered.

Lateral step-out sampling for arsenic was conducted for borings SB-33, SB-37, SB-39, SB-42, SB-44, SB-47, SB-48, SB-50 through SB-55 and SB-57, until the detected concentrations of arsenic were less than the screening level. In some cases, stepout borings were limited by the site boundary, a building foundation, limited access, or a subsurface utility obstruction. The shallow soil sampling for arsenic achieved the lateral and vertical delineation for the site (**Table 2**).

Based on the initial analyses indicating exceedances for arsenic, soil samples from borings SB-37, SB-37C, SB-37C2, SB-37D2, SB-42A, SB-42D2, SB-47C, SB-50, SB-50B, SB-50B2, SB-50D, SB-51, SB-51B, SB-51C, SB-51D, SB-52, SB-53, SB-53D, SB-53D2, SB-54, SB-55, SB-55B, SB-55B2, SB-55C, SB-55C2, SB-57B, SB-57B2, SB-65, SB-66, SB-67, SB-69, SB-70, SB-71, SB-73, SB-75, SB-76 and SB-84 were additionally analyzed for STLC to determine waste disposal criteria for the arsenic impacted material. The STLC laboratory analytical results for soil samples SB-37C2-0.5, SB-47C-0.5, SB-50B-0.5, SB-50B2-0.5, SB-51-0.5, SB-51B-0.5, SB-51C-0.5, SB-52-0.5, SB-53-0.5 (Dup), SB-53D-0.5, SB-53D2-0.5, SB-54-0.5, SB-55C2-0.5, SB-57B-0.5, SB-65-1.0, SB-66-1.0, SB-67-1.0, SB-69-0.5, SB-70-0.5 and SB-84-0.5 were above the STLC threshold of 5 mg/L, indicating that the arsenic-impacted soil in those boring areas is not acceptable for non-hazardous disposal. Additional analysis for TCLP was completed for those samples and the results indicate the soil samples are below the threshold of 5 mg/L. Therefore, the lead-impacted soil in borings SB-37C2, SB-47C, SB-50B, SB-50B2, SB-51, SB-51B, SB-51C, SB-52, SB-53, SB-53D, SB-53D2, SB-54, SB-55C2, SB-57B, SB-65, SB-66, SB-67, SB-69, SB-70 and SB-84 are acceptable for Non-RCRA (California-regulated) hazardous waste for disposal (**Table 3**).

10.4 OCP Results

Based on a review of the analytical results of the composite and discreet soil samples collected during the shallow soil sampling program, OCPs were not detected above their respective screening levels. The OCP analytical results are presented in **Tables 4** and **6**.

10.5 PCB Results

No PCBs were detected above laboratory reporting limits during this investigation (**Tables 4** and **6**).

10.6 CAM Metal Results

The results of the CAM metals analysis are presented in **Tables 4** and **6**. The individual constituents were detected above laboratory detection limits, with the exception of silver and thallium. However, none of the metals detected were above their respective residential screening level, with the exception of the lead concentrations discussed above.

11.0 QUALITY ASSURANCE/QUALITY CONTROL

The following quality assurance/quality control (QA/QC) procedures were used during this investigation to ensure data integrity:



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

- Field quality control measures included the use of clean, disposable nitrile gloves while collecting and handling individual soil samples, decontamination of all non-disposable sampling equipment before and after each use, and adherence to strict sample collection, labeling, and preservation procedures during sample collection.
- Duplicate soil samples were collected and analyzed at a minimum frequency of 10 percent of the primary samples to evaluate statistical precision. The duplicate soil samples were analyzed for the same parameters as the primary samples and the analytical results are presented in the data tables with the primary samples results for comparison.
- Field equipment blanks were collected and analyzed at the completion of the field work to evaluate possible cross contamination during sample collection. The field equipment blanks were analyzed for the same parameters as the primary samples and the analytical results are presented at the end of each data table.
- All samples were transferred to the laboratory in accordance with chain of custody procedures, and were subject to the laboratory's standard QA/QC procedures, including the use of method blanks, surrogate recoveries, matrix spike samples, laboratory control samples, and duplicate samples.
- All samples collected during the investigation were preserved and analyzed within the specified holding times for the individual analyses.
- Appropriate laboratory detection limits were employed for each chemical constituent to allow comparison to applicable screening levels.

Upon completion of the investigation, all data were reviewed to confirm that they met the data quality objectives for precision, accuracy, representativeness, completeness, and comparability. Based on review of the data collected during this investigation, it is the opinion of Montrose that all data collected meets the data quality objectives for this investigation.

12.0 HUMAN HEALTH AND ECOLOGICAL SCREENING EVALUATION

12.1 Human Health Screening Evaluation

The PEA-E screening evaluation for human health effects involves comparing detected concentrations to established screening levels developed by DTSC and EPA, identifying chemicals of potential concern, evaluating exposure via a conceptual site model, and then estimating human health risks and non-carcinogenic hazard indices for all chemicals of potential concern. The screening levels were developed to incorporate health risks and hazard estimates associated with human exposure, so concentrations detected above these screening levels are deemed to pose an unacceptable health risk for residential exposure. The human health screening evaluation is performed assuming an unrestricted future residential land-use scenario, which is more health protective than the use of the site as a school.

The only detected concentrations above an EPA or DTSC screening levels for this PEA-E investigation were lead and arsenic. Lead was detected in 8 boring locations at concentrations exceeding the 80 mg/kg screening level (maximum concentration of 212 mg/kg). Arsenic was detected in 61 boring locations at concentrations exceeding the naturally occurring background levels at LAUSD school sites of 12 mg/kg (maximum concentration of 633 mg/kg).



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

12.2 Ecological Screening Evaluation

The site and its immediate surroundings have been developed by either residential or commercial activity for decades. Natural wildlife habitat does not exist within 1 mile of the site, and most of the natural organisms on the site and in the vicinity have been replaced with those typical of urban areas where small patches or edges of disturbed soil persist, typically occupied by hardy, exotic plant species. No sensitive native plant species were observed or expected to occur within the site. For these reasons, a formal ecological risk assessment was not conducted for the site.

13.0 AREAS OF IMPACTED SOIL

Based on the results of the shallow soil sampling, the site has been determined to be impacted by lead and arsenic above soil screening levels. Based on the analytical results, the vertical extent of the impact is generally limited to the upper 1 foot of soils, with the exception of areas SB-37 and SB-50, where the vertical extent of impact extends to a depth of approximately 2-feet bgs. The lateral extent of arsenic impacts have been identified (**Figure 3**).

Additional characterization determined that approximately 922 cubic yards of lead and/or arsenic impacted soils would be classified as a Non-RCRA (California-regulated) hazardous waste disposal, and approximately 2,185 cubic yards will be disposed of as non-hazardous waste. The areas of lead and/or arsenic impacted soils proposed for excavation are presented in **Figure 4** and are estimated in **Table 4**.

Assuming that all soils containing lead or arsenic at concentrations above residential screening levels are successfully excavated and removed from the site, the remaining concentrations of lead and/or arsenic will be well below their respective residential screening levels and should be acceptable for use as foundation soil for the construction of the new classroom building, the drop off and pickup ramp, building entry, garden and play areas.

14.0 PUBLIC PARTICIPATION

Prior to any PEA field activities, a single-page work notice was produced in English and Spanish (double-sided) to provide members of the community with information regarding the PEA-E investigation including the scope of work, project schedule, and who to contact regarding additional information. This work notice flyer was handed out to all elementary school staff, mailed to all parents of students, handed out to all line-of-sight properties, and posted on the fenceline along the property boundaries. A copy of the work notice is provided in **Appendix B**.

A Notice of Public Comment Period for Preliminary Environmental Assessment will be published in local newspapers in both English and Spanish prior to the public review period. In addition, this notice will be sent to teachers, staff, parents of the students, and the local community prior to the public review period (**Appendix B**).

A 30 public review of the Draft PEA Report will be conducted in the first quarter of 2020. As part of the 30 day public review, hard copies of the Draft PEA Report will be available for review at the Shenandoah Elementary School Main Office (2450 S. Shenandoah Street, Los Angeles,



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

CA), at the LAUSD Office of Environmental Health and Safety (OEHS), 21st Floor (333 S. Beaudry Boulevard, Los Angeles, CA), and at the Robertson Branch Library (1719 South Robertson Boulevard, Los Angeles, CA). The Draft PEA Report will also be available for review on LAUSD's OEHS Website (<https://achieve.lausd.net/siteassessment>).

A public meeting for the PEA will be conducted at the Shenandoah Elementary School Auditorium during the 30 day public review period. The public meeting is to present the results of the PEA and to answer any questions from the community.

15.0 CONCLUSIONS AND RECOMMENDATIONS

15.1 Conclusions

Based on the soil sampling conducted during the PEA and soil characterization activities, the following conclusions are made:

- Soil samples were collected throughout the site at various depths and analyzed for arsenic and/or lead by EPA Method 6010, OCP's by EPA Method 8081, PCBs by EPA 8082 and CAM 17 Metals by EPA Method 6010B. Select samples were also analyzed for PCBs by EPA Method 8082. While several analytes were found at levels in excess of laboratory detection limits, only lead and arsenic were identified in soil samples in excess of residential screening levels.
- OCPs were not detected above their respective screening levels.
- PCBs were not detected.
- Seventy-seven areas with shallow soil impacted by lead and/or arsenic in excess of residential screening levels were identified throughout the campus. The shallow soil sampling for lead and arsenic in soil was able to achieve lateral and vertical definition of areas of impact at the site.
- The impacted soil areas have been characterized for disposal as Non-RCRA (California-regulated) hazardous waste and as Non-Hazardous waste.
- The total estimated amount of impacted soil at the site is estimated to be approximately 3,417 cubic yards.

15.2 Recommendations

Montrose provides the following recommendations based on the results of this assessment:

- Based on the results of the additional soil sampling and health risk screening, Montrose does not recommend additional investigation for the identified COCs.
- Based on the findings that shallow soil below pavement is impacted with arsenic above 12 mg/kg and lead above 80 mg/kg, and that there is an estimated arsenic/lead impacted soil volume of 3,417 cubic yards, a Removal Action Workplan (RAW) should be completed for the removal and disposal of the impacted soil.
- The excavation and soil removal activities should be completed under LAUSD's Office of Environmental Health and Safety (OEHS) oversight.



PRELIMINARY ENVIRONMENTAL ASSESSMENT EQUIVALENT (PEA-E) REPORT

Shenandoah Street Elementary School
Los Angeles, California

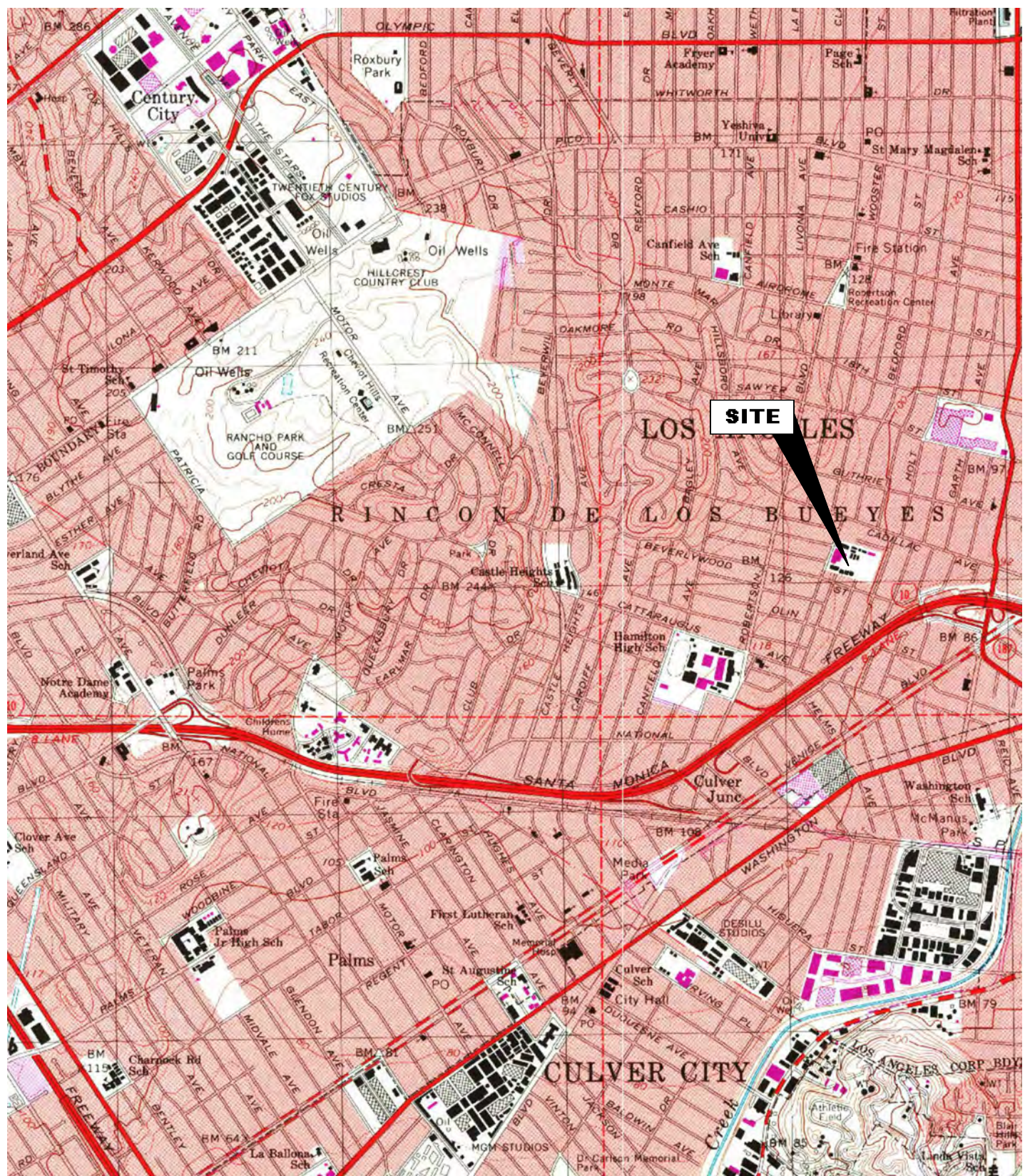
Page 15
December 20, 2019

16.0 REFERENCES

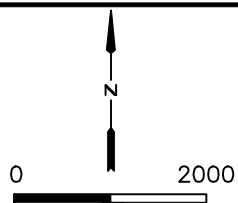
- California Department of Water Resources (DWR), 2004 Bulletin 118, Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin, February 2004
- California Department of Water Resources, 1961, Bulletin No. 104, Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Groundwater Geology, Reprinted April 1998.
- California Regional Water Quality Control Board, Los Angeles Region (4), 1994, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, June 13.
- California Department of Water Resources, 1961, Bulletin No. 104, Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Groundwater Geology, Reprinted April 1998.
- California Regional Water Quality Control Board, Los Angeles Region (4), 1994, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, June 13, 1994.
- Converse Consultants (Converse), Preliminary Soils Report, Proposed Comprehensive Modernization Project No. 10368165, Shenandoah Elementary School, May 18, 2017.
- DTSC, 2006. California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC). Interim Guidance for Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9.
- DTSC, 2013. Preliminary Endangerment Assessment Guidance Manual (January 1994, Interim Final – Revised October 2013), October.
- DTSC, 2014. DTSC, Office of Human and Ecological Risk (HERO), HERO Human Health Risk Assessment (HHRA) Note Number: 3, Issue Date July 14, 2014.
- Los Angeles County Department of Public Works, 2017, Groundwater Well Information, Hydrologic Record Division, July. <http://dpw.lacounty.gov/general/wells>.
- Los Angeles County Department of Public Works, Hydrologic Department, 2002, Information Request Transmittal, July 18, 2002.
- Montrose Environmental, Phase 1 Environmental Site Assessment, Shenandoah Elementary School, 2450 Shenandoah Street, Los Angeles, California, August 2017.
- United States Geological Survey, 1966, Beverly Hills Quadrangle, 7.5-Minute Series (Topographic), photorevised 1981.
- United States Geological Survey, 2012, 7.5-Minute Series Topographic Map: Beverly Hills Quadrangle, Scale 1:24,000, Photo-revised.
- http://gmw.conservation.ca.gov/SHP/EZIM/Reports/FER/259/FER_259_Report_20180111.pdf



FIGURES



Map Information:
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
34°2'18.6252"N 118°23'2.85"W



APPROX. SCALE: 1" = 2000'

FIGURE 1

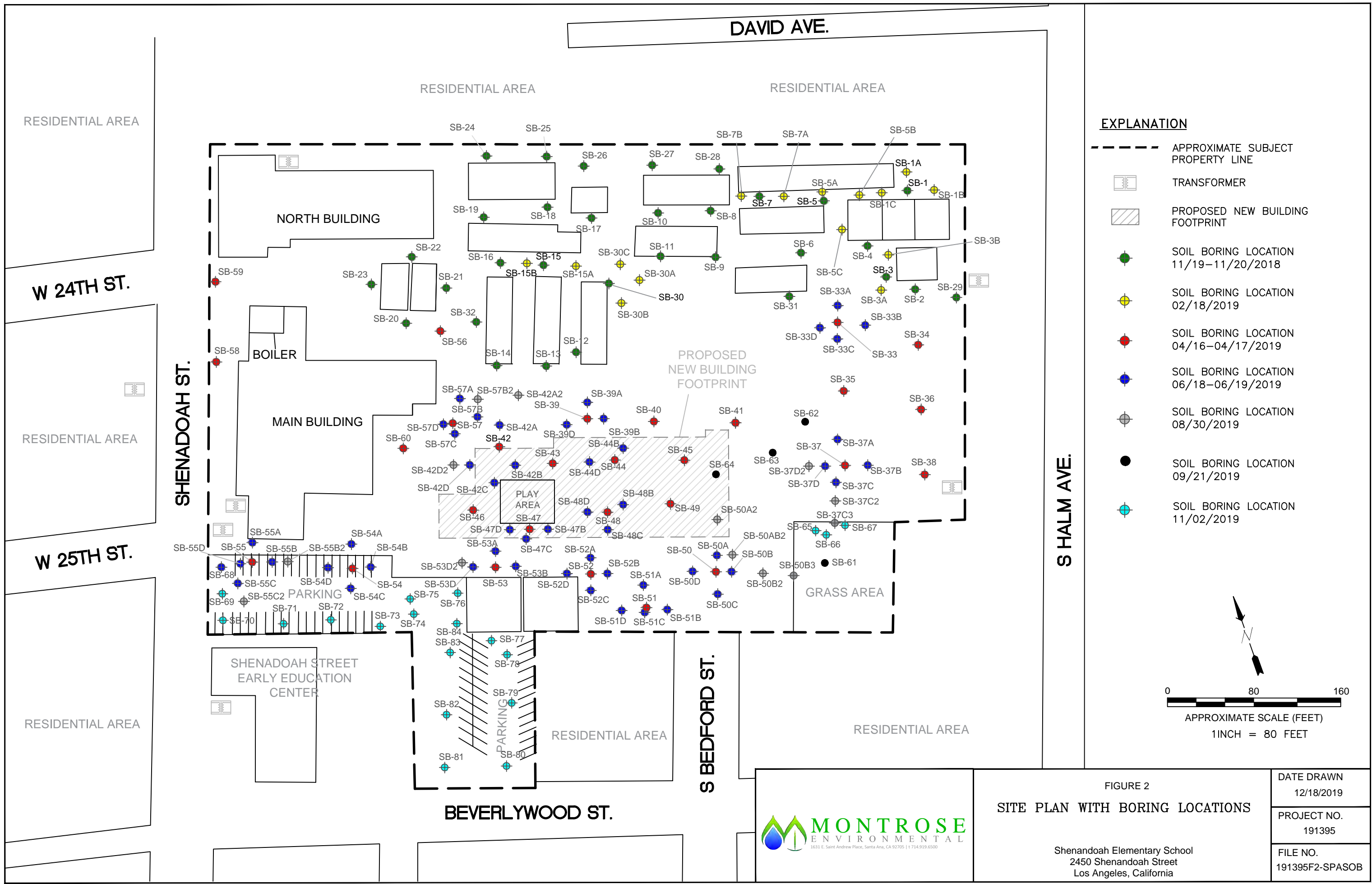
SITE LOCATION MAP

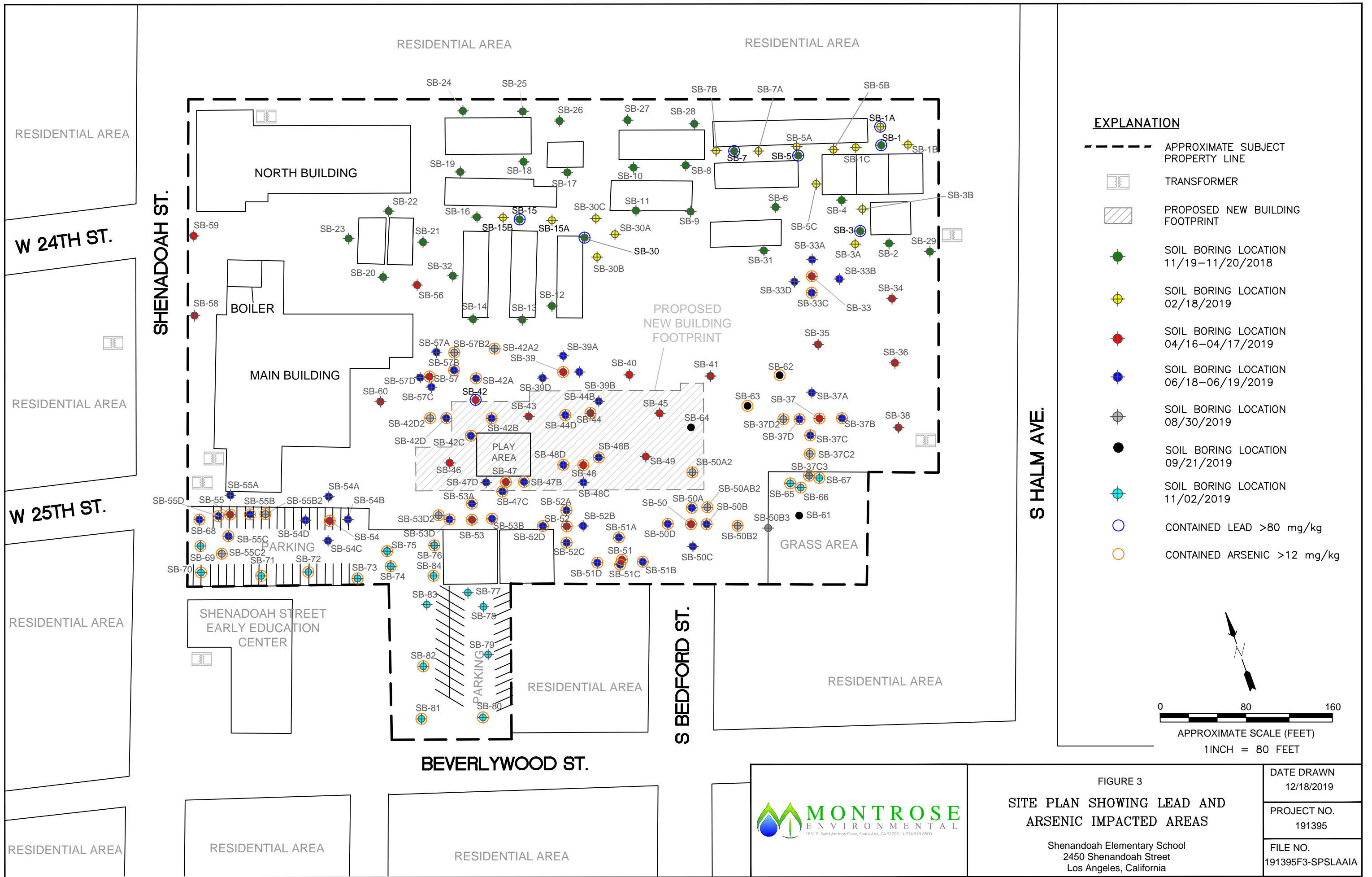
Shenandoah Elementary
School
2450 Shenandoah Street
Los Angeles, California

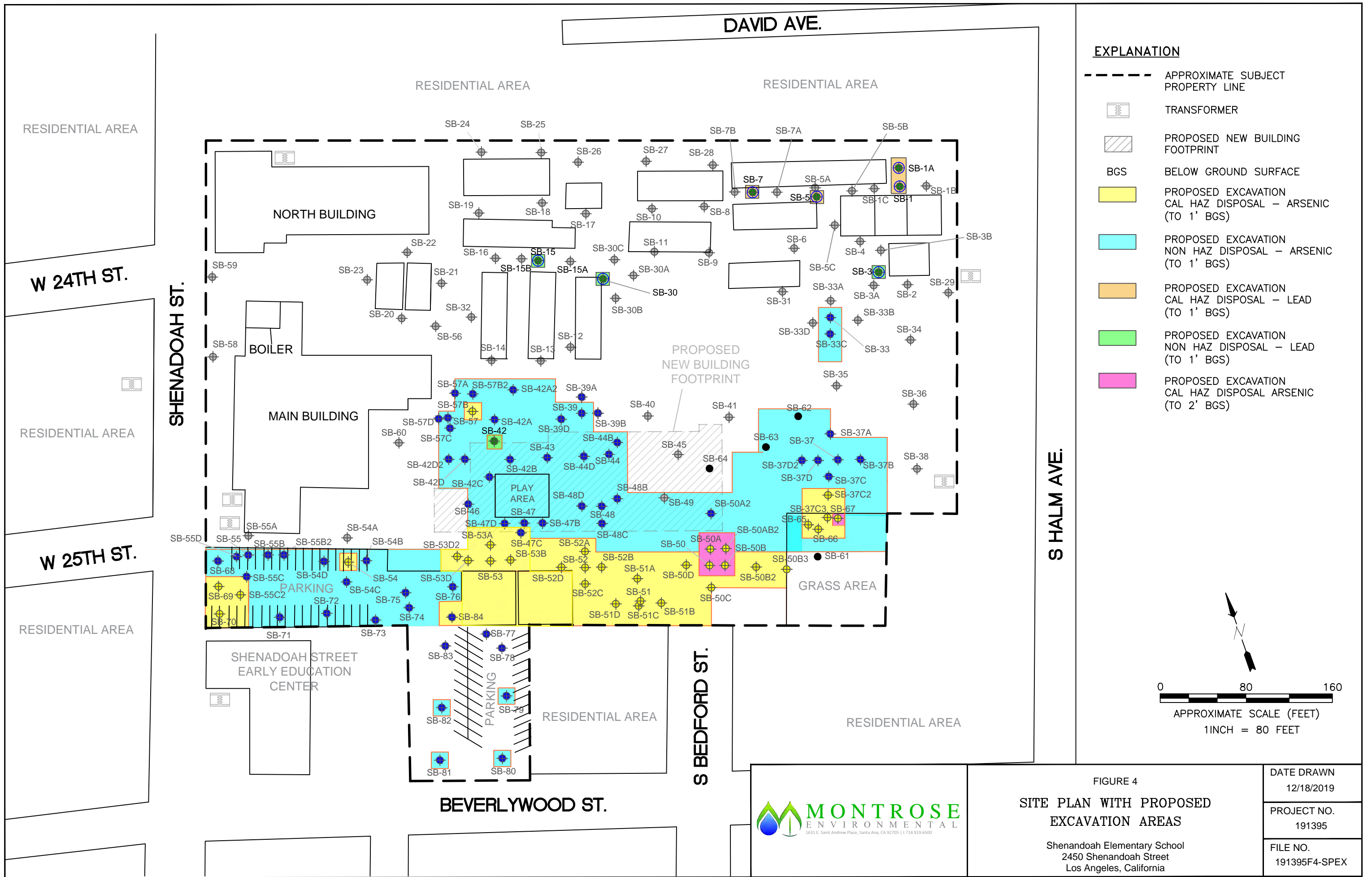
DATE DRAWN
10/01/2019

PROJECT NO.
191395

FILE NO.
191395F1-SLM







TABLES

Table 1
Sampling Strategy Plan
Shenandoah Street Elementary School
Los Angeles, CA

Assessment Area	Sample Location	Sample Dates	Sample Depth (ft bgs)	Proposed Analyses	Sample Location Rationale
North Portion of School Site	SB-1 through SB-32	November 19 and 20, 2018	0-0.5, 1-1.5, 2-2.5	Arsenic, Metals, OCPs, PCBs (10% of samples)	Evaluate potential impacts in shallow soil from lead based paint, arsenic, OCPs and PCBs near the portable buildings.
	Horizontal Stepouts	February 18, 2019	0-0.5, 1-1.5	Lead	
South Portion of School Site	SB-33 through SB-60	April 16 and 17, 2019	0-0.5, 1-1.5, 2-2.5	Arsenic, Metals, OCPs, PCBs (10% of samples), TPH, VOCs	Evaluate fill soils and potential shallow soil contamination from herbicide and pesticide below pavement.
	Horizontal Stepouts	June 18 and 19, 2019	0-0.5, 1-1.5, 2-2.5	Arsenic and Lead	
	Horizontal Stepouts	August 30, 2019	0-0.5, 1-1.5, 2-2.5	Arsenic and Lead	
	SB-61 through SB-64	September 21, 2019	0-0.5, 1-1.5, 2-2.5	Arsenic	
	SB-65 through SB-84	November 2, 2019	0-0.5, 0.5-1, 1-1.5	Arsenic	
NOTES: Metals: Title 22 Metals by EPA Method 6010B / 7471A OCPs: Organochlorine Pesticides by EPA Method 8081A PCBs: Polychlorinated Biphenyls by EPA Method 8082 VOCs: Volatile Organic Compounds by EPA Method 8260B / 5035 TPH: Total Petroleum Hydrocarbons by EPA Method 8015M ft bgs: Feet below ground surface					



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
Site Screening Levels			80*	12**
SB-1-0.5	0.5	11/20/2018	212	3.72 ^[2]
SB-1-1.5	1.5	11/20/2018	8.62	--
SB-1A-0.5	0.5	2/18/2019	157	--
SB-1A-1.5	1.5	2/18/2019	49.6	--
SB-1B-0.5	0.5	2/18/2019	6.23	--
SB-1B-1.5	1.5	2/18/2019	5.02	--
SB-1C-0.5	0.5	2/18/2019	9.84	--
SB-1C-1.5	1.5	2/18/2019	3.62	--
SB-2-0.5	0.5	11/20/2018	8.86	4.05 ^[2]
SB-2-1.5	1.5	11/20/2018	--	--
SB-3-0.5	0.5	11/20/2018	88.7	1.624J ^[2]
SB-3-1.5	1.5	11/20/2018	4.54	--
SB-3A-0.5	0.5	11/20/2018	5.08	--
SB-3A-1.5	1.5	11/20/2018	5.79	--
SB-3B-0.5	0.5	11/20/2018	3.82	--
SB-3B-1.5	1.5	11/20/2018	4.28	--
SB-4-0.5	0.5	11/20/2018	17.3	4.65 ^[2]
SB-4-1.5	1.5	11/20/2018	--	--
SB-5-0.5	0.5	11/20/2018	47.9	3.00 ^[2]
SB-5-0.5 (Dup)	0.5	11/20/2018	131	1.932J ^[2]
SB-5-1.5	1.5	11/20/2018	6.62	--
SB-5A-0.5	0.5	2/18/2019	34	--
SB-5A-1.5	1.5	2/18/2019	6.21	--
SB-5B-0.5	0.5	2/18/2019	12.1	--
SB-5B-1.5	1.5	2/18/2019	5.64	--
SB-5C-0.5	0.5	2/18/2019	6.19	--
SB-5C-1.5	1.5	2/18/2019	5.78	--
SB-6-0.5	0.5	11/20/2018	15.0	5.09 ^[2]
SB-6-1.5	1.5	11/20/2018	--	--
SB-7-0.5	0.5	11/20/2018	175	3.14 ^[2]
SB-7-1.5	1.5	11/20/2018	5.53	--
SB-7A-0.5	0.5	2/18/2019	15.6	--
SB-7A-1.5	1.5	2/18/2019	4.36	--
SB-7B-0.5	0.5	2/18/2019	14.2	--
SB-7B-1.5	1.5	2/18/2019	11.2	--
SB-8-0.5	0.5	11/19/2018	6.57	3.57 ^[2]
SB-8-1.5	1.5	11/19/2018	--	--
SB-9-0.5	0.5	11/20/2018	8.34	5.31 ^[2]
SB-9-1.5	1.5	11/20/2018	--	--
SB-10-0.5	0.5	11/19/2018	8.08	7.87 ^[2]
SB-10-1.5	1.5	11/19/2018	--	--
SB-11-0.5	0.5	11/20/2018	5.31	5.01 ^[2]
SB-11-0.5 (Dup)	0.5	11/20/2018	5.64	4.01 ^[2]
SB-11-1.5	1.5	11/20/2018	--	--
SB-12-0.5	0.5	11/19/2018	4.92	4.95 ^[2]



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-12-1.5	1.5	11/19/2018	--	--
SB-13-0.5	0.5	11/19/2018	3.06	5.64 ^[2]
SB-13-1.5	1.5	11/19/2018	--	--
SB-14-0.5	0.5	11/19/2018	1.70	2.15J ^[2]
SB-14-1.5	1.5	11/19/2018	--	--
SB-15-0.5	0.5	11/20/2018	112	5.58J ^[2]
SB-15-1.5	1.5	11/20/2018	5.73	--
SB-15A-0.5	0.5	2/18/2019	5.24	--
SB-15A-1.5	1.5	2/18/2019	3.09	--
SB-15B-0.5	0.5	2/18/2019	6.58	--
SB-15B-1.5	1.5	2/18/2019	3.90	--
SB-16-0.5	0.5	11/20/2018	12.0	5.09 ^[2]
SB-16-0.5 (Dup)	0.5	11/20/2018	9.88	5.18 ^[2]
SB-16-1.5	1.5	11/20/2018	--	--
SB-17-0.5	0.5	11/19/2018	10.3	4.49 ^[2]
SB-17-1.5	1.5	11/19/2018	--	--
SB-18-0.5	0.5	11/19/2018	28.6	6.62 ^[2]
SB-18-1.5	1.5	11/19/2018	--	--
SB-19-0.5	0.5	11/19/2018	6.31	4.54 ^[2]
SB-19-1.5	1.5	11/19/2018	--	--
SB-20-0.5	0.5	11/19/2018	7.16	5.96 ^[2]
SB-20-1.5	1.5	11/19/2018	--	--
SB-21-0.5	0.5	11/19/2018	20.4	5.97 ^[2]
SB-21-1.5	1.5	11/19/2018	--	--
SB-22-0.5	0.5	11/19/2018	8.57	1.940J ^[2]
SB-22-1.5	1.5	11/19/2018	--	--
SB-23-0.5	0.5	11/19/2018	19.1	10.4 ^[2]
SB-23-1.5	1.5	11/19/2018	--	--
SB-24-0.5	0.5	11/20/2018	18.8	6.27 ^[2]
SB-24-1.5	1.5	11/20/2018	--	--
SB-25-0.5	0.5	11/20/2018	29.5	4.61 ^[2]
SB-25-0.5 (Dup)	0.5	11/20/2018	56.9	4.73 ^[2]
SB-25-1.5	1.5	11/20/2018	--	--
SB-26-0.5	0.5	11/19/2018	25.8	5.53 ^[2]
SB-26-1.5	1.5	11/19/2018	--	--
SB-27-0.5	0.5	11/19/2018	7.18	4.26 ^[2]
SB-27-1.5	1.5	11/19/2018	--	--
SB-28-0.5	0.5	11/19/2018	10.1	3.45 ^[2]
SB-28-0.5 (Dup)	0.5	11/19/2018	21.0	3.92 ^[2]
SB-28-1.5	1.5	11/19/2018	--	--
SB-29-3.0	3.0	11/20/2018	--	--
SB-30-0.5	0.5	11/20/2018	94.1	5.23 ^[2]
SB-30-1.5	1.5	11/20/2018	5.17	--
SB-30A-0.5	0.5	2/18/2019	5.04	--
SB-30A-1.5	1.5	2/18/2019	4.62	--
SB-30B-0.5	0.5	2/18/2019	5.04	--
SB-30B-1.5	1.5	2/18/2019	3.65	--



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-30C-0.5	0.5	2/18/2019	6.64	--
SB-30C-1.5	1.5	2/18/2019	5.13	--
SB-31-0.5	0.5	11/20/2018	6.26	5.02 ^[2]
SB-31-1.5	1.5	11/20/2018	--	--
SB-32-0.5	0.5	11/20/2018	5.55	6.14 ^[2]
SB-32-1.5	1.5	11/20/2018	--	--
SB-33-0.5	0.5	4/16/2019	11.7	14.4 ^[2]
SB-33-1.5	1.5	4/16/2019	5.32	5.89 ^[2]
SB-33A-0.5	0.5	6/19/2019	--	5.02 ^[2]
SB-33A-1.5	1.5	6/19/2019	--	--
SB-33B-0.5	0.5	6/19/2019	--	6.18 ^[2]
SB-33B-1.5	1.5	6/19/2019	--	--
SB-33C-0.5	0.5	6/19/2019	--	29.2 ^[2]
SB-33C-0.5 (Dup)	0.5	6/19/2019	--	23.5 ^[2]
SB-33C-1.5	1.5	6/19/2019	--	--
SB-33D-0.5	0.5	6/19/2019	--	5.45 ^[2]
SB-33D-1.5	1.5	6/19/2019	--	8.75 ^[2]
SB-34-0.5	0.5	4/16/2019	72.2	4.03 ^[2]
SB-34-1.5	1.5	4/16/2019	4.86	5.30 ^[2]
SB-35-0.5	0.5	4/16/2019	9.61	3.93 ^[2]
SB-35-1.5	1.5	4/16/2019	4.12	5.91 ^[2]
SB-36-0.5	0.5	4/16/2019	6.16	5.44 ^[2]
SB-36-1.5	1.5	4/16/2019	7.70	7.54 ^[2]
SB-37-0.5	0.5	4/16/2019	5.68	5.85 ^[2]
SB-37-1.5	1.5	4/16/2019	12.1	14.8 ^[2]
SB-37A-0.5	0.5	6/19/2019	--	5.44 ^[2]
SB-37A-1.5	1.5	6/19/2019	--	--
SB-37B-0.5	0.5	6/19/2019	--	27.5 ^[2]
SB-37B-0.5 (Dup)	0.5	6/19/2019	--	32.7 ^[2]
SB-37B-1.5	1.5	6/19/2019	--	--
SB-37C-0.5	0.5	6/19/2019	--	89.9 ^[2]
SB-37C-1.5	1.5	6/19/2019	--	7.61 ^[2]
SB-37C2-0.5	0.5	8/30/2019	--	189 ^[2]
SB-37C2-1.5	1.5	8/30/2019	--	38.2 ^[2]
SB-37C3-0.5	0.5	8/30/2019	--	136 ^[2]
SB-37C3-1.5	1.5	8/30/2019	--	45.3 ^[2]
SB-37D-0.5	0.5	6/19/2019	--	31.8 ^[2]
SB-37D-1.5	1.5	6/19/2019	--	7.90 ^[2]
SB-37D2-0.5	0.5	8/30/2019	--	57.4 ^[2]
SB-37D2-0.5 (Dup)	0.5	8/30/2019	--	48.6 ^[2]
SB-37D2-1.5	1.5	8/30/2019	--	35.5 ^[2]
SB-38-0.5	0.5	4/16/2019	47.0	6.60 ^[2]
SB-38-1.5	1.5	4/16/2019	5.25	6.79 ^[2]
SB-39-0.5	0.5	4/17/2019	24.7	21.1 ^[2]
SB-39-0.5 (Dup)	0.5	4/17/2019	12.1	7.98 ^[2]
SB-39-1.5	1.5	4/17/2019	4.60	6.30 ^[2]
SB-39-2.5	2.5	4/17/2019	2.97	9.61 ^[2]



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-39A-0.5	0.5	6/18/2019	--	6.16 ^[2]
SB-39A-1.5	1.5	6/18/2019	--	--
SB-39A-2.5	2.5	6/18/2019	--	--
SB-39B-0.5	0.5	6/18/2019	--	5.70 ^[2]
SB-39B-1.5	1.5	6/18/2019	--	--
SB-39B-2.5	2.5	6/18/2019	--	--
SB-39D-0.5'	0.5	6/18/2019	--	8.26 ^[2]
SB-39D-1.5'	1.5	6/18/2019	--	--
SB-39D-2.5'	2.5	6/18/2019	--	--
SB-40-0.5	0.5	4/17/2019	7.31	5.66 ^[2]
SB-40-1.5	1.5	4/17/2019	3.98	5.17 ^[2]
SB-40-2.5	2.5	4/17/2019	3.62	7.95 ^[2]
SB-41-0.5	0.5	4/16/2019	3.45	5.94 ^[2]
SB-41-1.5	1.5	4/16/2019	4.59	6.76 ^[2]
SB-41-2.5	2.5	4/16/2019	4.02	8.96 ^[2]
SB-42-0.5	0.5	4/17/2019	110	0.448 ^[2]
SB-42-1.5	1.5	4/17/2019	3.86	6.77 ^[2]
SB-42-2.5	2.5	4/17/2019	3.56	9.57 ^[2]
SB-42A-0.5	0.5	6/18/2019	29.0	99.7 ^[2]
SB-42A-1.5	1.5	6/18/2019	--	5.39 ^[2]
SB-42A-2.5	2.5	6/18/2019	--	6.81 ^[2]
SB-42A2-0.5	0.5	8/30/2019	--	43.2 ^[2]
SB-42A2-1.5	1.5	8/30/2019	--	5.37 ^[2]
SB-42B-0.5	0.5	6/18/2019	13.2	19.1 ^[2]
SB-42B-1.5	1.5	6/19/2019	--	--
SB-42B-2.5	2.5	6/19/2019	--	--
SB-42C-0.5	0.5	6/19/2019	12.3	35.6 ^[2]
SB-42C-1.5	1.5	6/19/2019	--	6.96 ^[2]
SB-42C-1.5 (Dup)	1.5	6/19/2019	--	--
SB-42C-2.5	2.5	6/19/2019	--	7.35 ^[2]
SB-42D-0.5	0.5	6/19/2019	39.5	33.8 ^[2]
SB-42D-1.5	1.5	6/19/2019	--	6.72 ^[2]
SB-42D-2.5	2.5	6/19/2019	--	6.66 ^[2]
SB-42D2-0.5	0.5	8/30/2019	--	61.9 ^[2]
SB-42D2-1.5	1.5	8/30/2019	--	7.52 ^[2]
SB-43-0.5	0.5	4/17/2019	5.42	6.15 ^[2]
SB-43-0.5 (Dup)	0.5	4/17/2019	4.82	6.76 ^[2]
SB-43-1.5	1.5	4/17/2019	3.58	6.22 ^[2]
SB-43-2.5	2.5	4/17/2019	3.62	7.31 ^[2]
SB-44-0.5	0.5	4/17/2019	16.5	48.5 ^[2]
SB-44-1.5	1.5	4/17/2019	3.47	6.72 ^[2]
SB-44-2.5	2.5	4/17/2019	4.00	6.75 ^[2]
SB-44B-0.5	0.5	6/18/2019	--	4.67 ^[2]
SB-44B-1.5	1.5	6/18/2019	--	--
SB-44B-1.5 (Dup)	1.5	6/18/2019	--	--
SB-44B-2.5	2.5	6/18/2019	--	--
SB-44D-0.5	0.5	6/18/2019	--	15.9 ^[2]



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-44D-1.5	2.5	6/18/2019	--	6.66 ^[2]
SB-44D-2.5	2.5	6/18/2019	--	7.19 ^[2]
SB-45-0.5	0.5	4/16/2019	15.0	6.02 ^[2]
SB-45-1.5	1.5	4/16/2019	4.60	5.00 ^[2]
SB-45-2.5	2.5	4/16/2019	7.64	9.83 ^[2]
SB-46-0.5	0.5	4/17/2019	35.6	2.48 ^[2]
SB-46-1.5	1.5	4/17/2019	4.78	5.17 ^[2]
SB-46-2.5	2.5	4/17/2019	5.95	8.21 ^[2]
SB-47-0.5	0.5	4/17/2019	15.0	25.9 ^[2]
SB-47-1.5	1.5	4/17/2019	3.38	6.96 ^[2]
SB-47-1.5 (Dup)	1.5	4/17/2019	4.69	6.38 ^[2]
SB-47-2.5	2.5	4/17/2019	6.18	8.97 ^[2]
SB-47B-0.5	0.5	6/18/2019	--	13.2 ^[2]
SB-47B-0.5 (Dup)	0.5	6/18/2019	--	27.0 ^[2]
SB-47B-1.5	1.5	6/18/2019	--	--
SB-47B-2.5	2.5	6/18/2019	--	--
SB-47C-0.5	0.5	6/18/2019	--	131 ^[2]
SB-47C-0.5	0.5	7/23/2019	--	1.45 ^[2]
SB-47C-1.5	1.5	6/18/2019	--	6.28 ^[2]
SB-47C-2.5	2.5	6/18/2019	--	8.30 ^[2]
SB-47D-0.5	0.5	6/18/2019	--	6.18 ^[2]
SB-47D-1.5	1.5	6/18/2019	--	--
SB-47D-2.5	2.5	6/18/2019	--	--
SB-48-0.5	0.5	4/17/2019	11.5	30.6 ^[2]
SB-48-1.5	1.5	4/17/2019	5.2	5.69 ^[2]
SB-48-2.5	2.5	4/17/2019	5.95	7.14 ^[2]
SB-48B-0.5	0.5	6/18/2019	--	15.5 ^[2]
SB-48B-1.5	1.5	8/13/2019	--	7.35 ^[2]
SB-48B-2.5	2.5	6/18/2019	--	6.59 ^[2]
SB-48C-0.5	0.5	6/18/2019	--	5.90 ^[2]
SB-48C-1.5	1.5	6/18/2019	--	--
SB-48C-2.5	2.5	6/18/2019	--	--
SB-48D-0.5	0.5	6/18/2019	--	15.3 ^[2]
SB-48D-1.5	1.5	6/18/2019	--	6.22 ^[2]
SB-48D-2.5	2.5	6/18/2019	--	7.84 ^[2]
SB-49-0.5	0.5	4/17/2019	5.64	6.46 ^[2]
SB-49-1.5	1.5	4/17/2019	4.94	6.30 ^[2]
SB-49-1.5 (Dup)	0.5	4/17/2019	4.15	5.32 ^[2]
SB-49-2.5	2.5	4/17/2019	5.59	8.66 ^[2]
SB-50-0.5	0.5	4/16/2019	21.9	69.0 ^[2]
SB-50-1.5	1.5	4/16/2019	56.4	6.98 ^[2]
SB-50A-0.5	0.5	6/19/2019	--	22.8 ^[2]
SB-50A-1.5	1.5	6/19/2019	--	6.24 ^[2]
SB-50A2-0.5	0.5	8/30/2019	--	9.94 ^[2]
SB-50A2-0.5 (Dup)	0.5	8/30/2019	--	14.1 ^[2]
SB-50A2-1.5	1.5	8/30/2019	--	--
SB-50A2-2.5	1.5	8/30/2019	--	--



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-50AB2-0.5	0.5	8/30/2019	--	6.34 ^[2]
SB-50AB2-1.5	1.5	8/30/2019	--	6.02 ^[2]
SB-50B-0.5	0.5	6/19/2019	--	633 ^[2]
SB-50B-1.5	1.5	6/19/2019	--	56.6 ^[2]
SB-50B2-0.5	0.5	8/30/2019	--	140 ^[2]
SB-50B2-1.5	1.5	8/30/2019	--	5.62 ^[2]
SB-50B3-0.5	0.5	8/30/2019	--	9.12 ^[2]
SB-50B3-1.5	1.5	8/30/2019	--	8.33 ^[2]
SB-50C-0.5	0.5	6/19/2019	--	7.71 ^[2]
SB-50C-1.5	1.5	6/19/2019	--	--
SB-50D-0.5	0.5	6/19/2019	--	69.0 ^[2]
SB-50D-0.5 (Dup)	0.5	6/19/2019	--	32.1 ^[2]
SB-50D-1.5	1.5	6/19/2019	--	6.39 ^[2]
SB-51-0.5	0.5	4/16/2019	11.4	218 ^[2]
SB-51-1.5	1.5	4/16/2019	5.18	10.7 ^[2]
SB-51A-0.5	0.5	6/19/2019	--	26.8 ^[2]
SB-51A-1.5	1.5	6/19/2019	--	--
SB-51B-0.5	0.5	6/19/2019	--	395 ^[2]
SB-51B-1.5	1.5	6/19/2019	--	11.0 ^[2]
SB-51C-0.5	0.5	6/19/2019	--	136 ^[2]
SB-51C-1.5	1.5	6/19/2019	--	8.42 ^[2]
SB-51D-0.5	0.5	6/19/2019	--	92.9 ^[2]
SB-51D-1.5	1.5	6/19/2019	--	8.86 ^[2]
SB-52-0.5	0.5	4/16/2019	40.4	233 ^[2]
SB-52-1.5	1.5	4/16/2019	5.27	6.30 ^[2]
SB-52A-0.5	0.5	6/18/2019	--	15.0 ^[2]
SB-52A-1.5	1.5	6/18/2019	--	--
SB-52B-0.5	0.5	6/18/2019	--	5.52 ^[2]
SB-52B-1.5	1.5	6/18/2019	--	--
SB-52C-0.5	0.5	6/18/2019	--	27.7 ^[2]
SB-52C-1.5	1.5	6/18/2019	--	--
SB-52D-0.5	0.5	6/18/2019	--	23.5 ^[2]
SB-52D-1.5	1.5	6/18/2019	--	--
SB-53-0.5	0.5	4/16/2019	3.08	129 ^[2]
SB-53-0.5 (Dup)	0.5	4/16/2019	44.1	252 ^[2]
SB-53-1.5	1.5	4/16/2019	3.54	6.61 ^[2]
SB-53A-0.5	0.5	6/18/2019	--	54.9 ^[2]
SB-53A-1.5	1.5	6/18/2019	--	--
SB-53B-0.5	0.5	6/18/2019	--	65.3 ^[2]
SB-53B-1.5	1.5	6/18/2019	--	--
SB-53B-1.5 (Dup)	1.5	6/18/2019	--	--
SB-53D-0.5	0.5	6/18/2019	--	136 ^[2]
SB-53D-1.5	1.5	6/18/2019	--	--
SB-53D2-0.5	0.5	8/30/2019	--	118 ^[2]
SB-53D2-1.5	1.5	8/30/2019	--	7.12 ^[2]
SB-54-0.5	0.5	4/16/2019	23.4	124 ^[2]
SB-54-1.5	1.5	4/16/2019	4.93	5.59 ^[2]



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-54A-0.5	0.5	6/19/2019	--	5.35 ^[2]
SB-54A-1.5	1.5	6/19/2019	--	--
SB-54B-0.5	0.5	6/19/2019	--	8.83 ^[2]
SB-54B-1.5	1.5	6/19/2019	--	--
SB-54C-0.5	0.5	6/19/2019	--	5.65 ^[2]
SB-54C-1.5	1.5	6/19/2019	--	--
SB-54D-0.5	0.5	6/19/2019	--	9.40 ^[2]
SB-54D-1.5	1.5	6/19/2019	--	--
SB-55-0.5	0.5	4/16/2019	5.85	59.7 ^[2]
SB-55-1.5	1.5	4/16/2019	4.48	6.90 ^[2]
SB-55-0.5 (Dup)	0.5	4/16/2019	2.40	6.16 ^[2]
SB-55A-0.5	0.5	6/19/2019	--	6.41 ^[2]
SB-55A-1.5	1.5	6/19/2019	--	--
SB-55B-0.5	0.5	6/19/2019	--	87.3 ^[2]
SB-55B-1.5	1.5	6/19/2019	--	8.35 ^[2]
SB-55B2-0.5	0.5	8/30/2019	--	86.4 ^[2]
SB-55B2-1.5	1.5	8/30/2019	--	7.83 ^[2]
SB-55C-0.5	0.5	6/19/2019	--	55.4 ^[2]
SB-55C-1.5	1.5	6/19/2019	--	7.75 ^[2]
SB-55C-1.5 (Dup)	1.5	6/19/2019	--	--
SB-55C2-0.5	0.5	8/30/2019	--	128 ^[2]
SB-55C2-1.5	1.5	8/30/2019	--	17.5 ^[2]
SB-55D-0.5	0.5	6/19/2019	--	21.1 ^[2]
SB-55D-1.5	1.5	6/19/2019	--	6.96 ^[2]
SB-56-0.5	0.5	4/17/2019	6.05	6.45 ^[2]
SB-56-1.5	1.5	4/17/2019	3.59	5.90 ^[2]
SB-56-2.5	2.5	4/17/2019	6.20	7.86 ^[2]
SB-57-0.5	0.5	4/17/2019	7.52	12.5 ^[2]
SB-57-1.5	1.5	4/17/2019	4.49	5.38 ^[2]
SB-57-2.5	2.5	4/17/2019	4.07	8.23 ^[2]
SB-57A-0.5	0.5	6/18/2019	--	6.03 ^[2]
SB-57A-1.5	1.5	6/18/2019	--	--
SB-57A-2.5	2.5	6/18/2019	--	--
SB-57B-0.5	0.5	6/18/2019	--	151 ^[2]
SB-57B-1.5	1.5	6/18/2019	--	5.42 ^[2]
SB-57B-2.5	2.5	6/18/2019	--	--
SB-57B2-0.5	0.5	8/30/2019	--	99.3 ^[2]
SB-57B2-1.5	1.5	8/30/2019	--	5.01 ^[2]
SB-57C-0.5	0.5	6/18/2019	--	6.95 ^[2]
SB-57C-1.5	1.5	6/18/2019	--	--
SB-57C-1.5 (Dup)	1.5	6/18/2019	--	--
SB-57C-2.5	2.5	6/18/2019	--	--
SB-57D-0.5	0.5	6/18/2019	--	6.86 ^[2]
SB-57D-1.5	1.5	6/18/2019	--	--
SB-57D-2.5	2.5	6/18/2019	--	--
SB-58-0.5	0.5	4/16/2019	16.4	7.17 ^[2]
SB-58-1.5	1.5	4/16/2019	16.4	9.06 ^[2]



Table 2
Summary of Shallow Soil Sample Lead and Arsenic Results
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	Depth (ft bgs)	Sample Date	Lead ^[1]	Arsenic ^{[2] [3]}
			mg/kg	
SB-58-2.5	2.5	4/16/2019	4.51	6.36 ^[2]
SB-59-0.5	0.5	4/16/2019	44.1	6.22 ^[2]
SB-59-1.5	1.5	4/16/2019	6.12	6.37 ^[2]
SB-59-2.5	2.5	4/16/2019	4.75	6.83 ^[2]
SB-60-0.5	0.5	4/16/2019	41.1	8.51 ^[2]
SB-60-0.5 (Dup)	0.5	4/16/2019	8.64	8.06 ^[2]
SB-60-1.5	1.5	4/16/2019	--	--
SB-61-0.5	0.5	9/21/2019	--	9.85 ^[3]
SB-61-1.5	1.5	9/21/2019	--	6.64 ^[3]
SB-62-0.5	0.5	9/21/2019	--	14.7 ^[3]
SB-62-1.5	1.5	9/21/2019	--	8.73 ^[3]
SB-63-0.5	0.5	9/21/2019	--	25.8 ^[3]
SB-63-1.5	1.5	9/21/2019	--	8.22 ^[3]
SB-64-0.5	0.5	9/21/2019	--	7.18 ^[3]
SB-64-1.5	1.5	9/21/2019	--	8.81 ^[3]
SB-64-2.5	2.5	9/21/2019	--	9.64 ^[3]
SB-65-0.5	0.5	11/2/2019	--	7.94 ^[3]
SB-65-1.0	1.0	11/2/2019	--	190 ^[3]
SB-65-1.5	1.5	11/2/2019	--	11.8 ^[3]
SB-66-0.5	0.5	11/2/2019	--	33.4 ^[3]
SB-66-1.0	1.0	11/2/2019	--	144 ^[3]
SB-66-1.5	1.5	11/2/2019	--	12.6 ^[3]
SB-67-0.5	0.5	11/2/2019	--	68.8 ^[3]
SB-67-1.0	1.0	11/2/2019	--	271 ^[3]
SB-67-1.5	1.5	11/2/2019	--	74.4 ^[3]
SB-68-0.5	0.5	11/2/2019	--	8.18 ^[3]
SB-68-1.0	1.0	11/2/2019	--	9.45 ^[3]
SB-68-1.5	1.5	11/2/2019	--	8.24 ^[3]
SB-69-0.5	0.5	11/2/2019	--	260 ^[3]
SB-69-1.0	1.0	11/2/2019	--	8.34 ^[3]
SB-69-1.5	1.5	11/2/2019	--	9.13 ^[3]
SB-70-0.5	0.5	11/2/2019	--	115 ^[3]
SB-70-1.0	1.0	11/2/2019	--	6.98 ^[3]
SB-70-1.5	1.5	11/2/2019	--	9.27 ^[3]
SB-71-0.5	0.5	11/2/2019	--	63.0 ^[3]
SB-71-1.0	1.0	11/2/2019	--	8.77 ^[3]
SB-71-1.5	1.5	11/2/2019	--	27.0 ^[3]
SB-72-0.5	0.5	11/2/2019	--	32.1 ^[3]
SB-72-1.0	1.0	11/2/2019	--	13.0 ^[3]
SB-72-1.5	1.5	11/2/2019	--	16.7 ^[3]
SB-73-0.5	0.5	11/2/2019	--	84.2 ^[3]
SB-73-1.0	1.0	11/2/2019	--	9.70 ^[3]
SB-73-1.5	1.5	11/2/2019	--	6.59 ^[3]
SB-74-0.5	0.5	11/2/2019	--	47.1 ^[3]
SB-74-1.0	1.0	11/2/2019	--	8.41 ^[3]
SB-74-1.5	1.5	11/2/2019	--	20.9 ^[3]
SB-75-0.5	0.5	11/2/2019	--	111 ^[3]



Los Angeles, CA

NOTES:

-- = Not Analyzed Highlighted Value = Exceeds Site Screening Levels

mg/kg = milligrams per kilogram

DUP = Duplicate

Highlighted results exceed the respective Site Screening Levels

ND = Indicated constituent not detected at or above the MDL

J = Result is an estimated value between the Reporting Detection Limit (RDL) and the Method Detection Limit (MDL)

80* = Department of Toxic Substances (DTSC) HERO Note 3 Modified Screening Levels for Residential Soil

12** = Southern California Regional Background Concentration for Residential Soil (DTSC)

[1] = Lead by EPA Method 6010B

[2] = Arsenic by EPA Method 6020

[3] = Arsenic by EPA Method 6010B

Table 3
Summary of Shallow Soil STLC and TCLP Results
Shenandoah Street Elementary School
Los Angeles, CA

Sample ID	Lead TTLC	Lead STLC	Lead TCLP	Arsenic TTLC	Arsenic STLC	Arsenic TCLP	Waste Characterization
	(mg/kg)	(mg/L)	(mg/L)	(mg/kg)	(mg/L)	(mg/L)	
Hazardous Waste Limits	1000	5	5	500	5	5	
SB-1-0.5	212	13.8	0.232	--	--	--	California Hazardous
SB-1A-0.5	157	24.0	0.674	--	--	--	California Hazardous
SB-3-0.5	88.7	3.5	--	--	--	--	Non-Hazardous
SB-5-0.5 (Dup)	131	5.95	0.035J	--	--	--	California Hazardous
SB-7-0.5	175	6.72	0.028J	--	--	--	California Hazardous
SB-15-0.5	112	4.25	--	--	--	--	Non-Hazardous
SB-30-0.5	94.1	0.668	--	--	--	--	Non-Hazardous
SB-33-0.5	--	--	--	14.4	--	--	Non-Hazardous
SB-33C-0.5	--	--	--	29.2	--	--	Non-Hazardous
SB-33C-0.5 (Dup)	--	--	--	23.5	--	--	Non-Hazardous
SB-37A-1.5	--	--	--	14.8	--	--	Non-Hazardous
SB-37B-0.5	--	--	--	27.5	--	--	Non-Hazardous
SB-37B-0.5 (Dup)	--	--	--	32.7	--	--	Non-Hazardous
SB-37C-0.5	--	--	--	89.9	4.08	--	Non-Hazardous
SB-37C2-0.5	--	--	--	189	14.2	1.766	California Hazardous
SB-37C3-0.5	--	--	--	136	10.6	2.30	California Hazardous
SB-37D-0.5	--	--	--	31.8	--	--	Non-Hazardous
SB-37D2-0.5	--	--	--	57.4	2.68	--	Non-Hazardous
SB-39-0.5	--	--	--	21.1	--	--	Non-Hazardous
SB-42-0.5	110	0.448	--	--	--	--	Non-Hazardous
SB-42A-0.5	29	--	--	99.7	4.08	--	Non-Hazardous
SB-42B-0.5	--	--	--	19.1	--	--	Non-Hazardous
SB-42C-0.5	--	--	--	35.6	--	--	Non-Hazardous
SB-42D-0.5	39.5	--	--	33.8	--	--	Non-Hazardous
SB-42D2-0.5	--	--	--	61.9	2.99	--	Non-Hazardous
SB-44-0.5	--	--	--	48.5	--	--	Non-Hazardous
SB-44D-0.5	--	--	--	15.9	--	--	Non-Hazardous
SB-47-0.5	--	--	--	25.9	--	--	Non-Hazardous
SB-47B-0.5	--	--	--	13.2	--	--	Non-Hazardous
SB-47B-0.5 (Dup)	--	--	--	27	--	--	Non-Hazardous
SB-47C-0.5	--	--	--	131	6.98	1.45	California Hazardous
SB-48D-0.5	--	--	--	15.3	--	--	Non-Hazardous
SB-50-0.5	21.9	--	--	69.0	2.11	--	Non-Hazardous
SB-50A-0.5	--	--	--	22.8	--	--	Non-Hazardous
SB-50B-0.5	--	--	--	633	9.31	2.11	California Hazardous
SB-50B2-0.5	--	--	--	140	7.78	1.465	California Hazardous
SB-50D-0.5	--	--	--	69.0	2.59	--	Non-Hazardous
SB-50D-0.5 (Dup)	--	--	--	32.1	--	--	Non-Hazardous
SB-51-0.5	11.4	--	--	218	9.96	2.45	California Hazardous
SB-51A-0.5	--	--	--	26.8	--	--	Non-Hazardous
SB-51B-0.5	--	--	--	395	38.10	3.85	California Hazardous



Table 3
Summary of Shallow Soil STLC and TCLP Results
Shenandoah Street Elementary School
Los Angeles, CA

Sample ID	Lead TTLC	Lead STLC	Lead TCLP	Arsenic TTLC	Arsenic STLC	Arsenic TCLP	Waste Characterization
	(mg/kg)	(mg/L)	(mg/L)	(mg/kg)	(mg/L)	(mg/L)	
Hazardous Waste Limits	1000	5	5	500	5	5	
SB-51C-0.5	--	--	--	136	6.00	1.00	California Hazardous
SB-51D-0.5	--	--	--	92.9	4.24	--	Non-Hazardous
SB-52-0.5	40.4	--	--	233	10.40	2.89	California Hazardous
SB-52A-0.5	--	--	--	15.0	--	--	Non-Hazardous
SB-52C-0.5	--	--	--	27.7	--	--	Non-Hazardous
SB-52D-0.5	--	--	--	23.5	--	--	Non-Hazardous
SB-53-0.5	3.08	--	--	129	--	--	Non-Hazardous
SB-53-0.5 (Dup)	44.1	--	--	252	12.9	3.02	California Hazardous
SB-53A-0.5	--	--	--	54.9	--	--	Non-Hazardous
SB-53B-0.5	--	--	--	65.3	--	--	Non-Hazardous
SB-53D-0.5	--	--	--	136	8.99	1.91	California Hazardous
SB-53D2-0.5				118	5.30	0.907	California Hazardous
SB-54-0.5	23.4	--	--	124	5.09	1.04	California Hazardous
SB-55-0.5	5.85	--	--	59.7	2.61	0.06	Non-Hazardous
SB-55B-0.5	--	--	--	87.3	3.76	--	Non-Hazardous
SB-55B2-0.5	--	--	--	86.4	4.08	--	Non-Hazardous
SB-55C-0.5	--	--	--	55.4	2.28	--	Non-Hazardous
SB-55C2-0.5	--	--	--	128	6.67	1.556	Non-Hazardous
SB-55D-0.5	--	--	--	21.1	--	--	Non-Hazardous
SB-57-0.5	--	--	--	12.5	--	--	Non-Hazardous
SB-57B-0.5	--	--	--	151	5.60	0.79	California Hazardous
SB-57B2-0.5	--	--	--	99.3	4.93	--	Non-Hazardous
SB-65-1.0	--	--	--	190	9.43	1.689	California Hazardous
SB-66-0.5	--	--	--	33.4	--	--	Non-Hazardous
SB-66-1.0	--	--	--	144	9.39	1.815	California Hazardous
SB-66-1.5	--	--	--	12.6	--	--	Non-Hazardous
SB-67-0.5	--	--	--	68.8	2.38	--	Non-Hazardous
SB-67-1.0	--	--	--	271	16.10	3.89	California Hazardous
SB-67-1.5	--	--	--	74.4	2.70	--	Non-Hazardous
SB-69-0.5	--	--	--	260	6.67	1.157	California Hazardous
SB-70-0.5	--	--	--	115	6.22	1.405	California Hazardous
SB-71-0.5	--	--	--	63	2.51	--	Non-Hazardous
SB-71-1.5	--	--	--	27	--	--	Non-Hazardous
SB-72-0.5	--	--	--	32.1	--	--	Non-Hazardous
SB-72-1.0	--	--	--	13	--	--	Non-Hazardous
SB-72-1.5	--	--	--	16.7	--	--	Non-Hazardous
SB-73-0.5	--	--	--	84.2	3.58	--	Non-Hazardous
SB-74-0.5	--	--	--	47.1	--	--	Non-Hazardous
SB-74-1.5	--	--	--	20.9	--	--	Non-Hazardous
SB-75-0.5	--	--	--	111	4.60	0.850	Non-Hazardous
SB-76-0.5	--	--	--	53.9	2.42	--	Non-Hazardous



Table 3
Summary of Shallow Soil STLC and TCLP Results
Shenandoah Street Elementary School
Los Angeles, CA

Sample ID	Lead TTLC	Lead STLC	Lead TCLP	Arsenic TTLC	Arsenic STLC	Arsenic TCLP	Waste Characterization
	(mg/kg)	(mg/L)	(mg/L)	(mg/kg)	(mg/L)	(mg/L)	
Hazardous Waste Limits	1000	5	5	500	5	5	
SB-80-0.5	--	--	--	13.4	--	--	Non-Hazardous
SB-81-0.5	--	--	--	18.7	--	--	Non-Hazardous
SB-81-1.0	--	--	--	19.8	--	--	Non-Hazardous
SB-82-0.5	--	--	--	12.1	--	--	Non-Hazardous
SB-84-0.5	--	--	--	153	8.52	1.497	California Hazardous
SB-84-1.0	--	--	--	71.6	3.88	--	Non-Hazardous
NOTES: -- = Not Analyzed STLC = Soluble Threshold Limit Concentration TTLC = Total Treshold Limit Concentration TCLP = Toxicity Characteristic Leaching Procedure J=concentration is an estimated value between the MDL and the RDL mg/L = milligrams per liter mg/kg = milligrams per kilogram							

Highlighted Value = Exceeds Hazardous Waste Limits



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-1		SB-2			SB-3		SB-4		SB-5			Residential Screening Levels		
				SB-1-0.5'	SB-1-1.5'	SB-2-0.5'	SB-2-0.5' (DUP)	SB-2-1.5'	SB-3-0.5'	SB-3-1.5'	SB-4-0.5'	SB-4-1.5'	SB-5-0.5'	SB-5-0.5' (Dup.)	SB-5-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.25 J	--	2.18 J	--	--	1.05 J	--	<0.37	--	0.67 J	0.95 J	--	NE	31	--
	Arsenic	6010B	mg/kg	4.91	--	4.38	--	--	1.45	--	6.03	--	3.33	3.56	--	12*	12*	12*
	Barium	6010B	mg/kg	123	--	60.3	--	--	118	--	123	--	104	90.8	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	--	<0.17	--	--	<0.17	--	<0.17	--	<0.17	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.34	--	0.58	--	--	1.12	--	1.64	--	1.58	2.00	--	2,100	71	--
	Chromium	6010B	mg/kg	28.5	--	7.32	--	--	31.3	--	28.1	--	31.1	34.6	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	11.3	--	4.79	--	--	12.1	--	10.4	--	11.4	12.4	--	NE	23	--
	Copper	6010B	mg/kg	17.9	--	8.28	--	--	14.0	--	17.8	--	16.0	23.5	--	NE	3,100	--
	Lead	6010B	mg/kg	212	8.62	8.86	--	--	88.7	4.54	17.3	--	47.9	131	6.62	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	13.8	--	--	--	--	3.50	--	--	--	5.95	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	0.232	--	--	--	--	--	--	--	--	0.035 J	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	2.19	--	1.01	--	--	0.73 J	--	0.93 J	--	0.49 J	<0.13	--	NE	390	--
	Nickel	6010B	mg/kg	17.6	--	8.40	--	--	17.9	--	19.6	--	19.0	17.8	--	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	--	2.50 J	--	--	<0.72	--	<0.72	--	<0.72	<0.72	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	--	<0.13	--	--	<0.13	--	<0.13	--	<0.13	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	2.24 J	--	2.26 J	--	--	1.06 J	--	<0.42	--	<0.42	0.80 J	--	NE	0.78	--
	Vanadium	6010B	mg/kg	48.7	--	24.4	--	--	53.8	--	50.2	--	53.0	53.3	--	390	390	--
	Zinc	6010B	mg/kg	108	--	22.6	--	--	58.0	--	58.0	--	62.2	88.0	--	NE	23,000	--
Arsenic		6020	mg/kg	3.72	--	4.05	--	--	1.624 J	--	4.65	--	3.00	1.932 J	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	--	<0.039	--	--	<0.039	--	<0.039	--	<0.039	0.04 J	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCs)	4,4'-DDD	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.00015	<0.000078	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.000097	<0.000078	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.00018	--	<0.000089	--	--	<0.000091	--	<0.000091	--	<0.00033	<0.000088	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.00021	--	<0.000099	--	--	<0.0001	--	<0.0001	--	<0.000087	<0.000088	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	<0.00037	--	0.00021 J	--	--	<0.00018	--	<0.00018	--	<0.00014	<0.00018	--			
	Aldrin	8081A	mg/kg	<0.00012	--	0.00011 J	--	--	<0.000062	--	<0.000062	--	0.00016 J	<0.00006	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.00013	--	<0.000064	--	--	<0.000065	--	<0.000065	--	<0.00011	<0.000063	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.0082	--	<0.0039	--	--	<0.004	--	<0.004	--	<0.0039	<0.0039	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.00015	<0.000078	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.000086	<0.000078	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.00011	<0.000078	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.00012	<0.000078	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.00015	--	<0.000073	--	--	<0.000075	--	<0.000075	--	<0.00017	<0.000073	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.00014	--	0.00046 J	--	--	<0.000067	--	<0.000067	--	<0.0002	0.0002 J	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0012	--	<0.00058	--	--	<0.0006	--	<0.0006	--	<0.00067	<0.00058	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	<0.00023	--	0.00019 J	--	--	<0.00011	--	<0.00011	--	<0.00013	<0.00011	--			
	Heptachlor	8081A	mg/kg	<0.00016	--	<0.000079	--	--	<0.000081	--	<0.000081	--	<0.00012	<0.000078	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.00016	--	<0.000076	--	--	<0.000078	--	<0.000078	--	<0.000083	0.000083 J	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.00017	--	<0.00008	--	--	<0.000081	--	<0.000082	--	<0.00012	<0.000079	--	NE	0.57	RL
Polychlorinated Biphenyls (PCBs)	Methoxychlor	8081A	mg/kg	<0.0031	--	<0.0015	--	--	<0.0015	--	<0.0015	--	<0.0026	<0.0015	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.027	--	<0.013	--	--	<0.013	--	<0.013	--	<0.011	<0.013	--	NE	0.49	RL
	PCB-1016	8082	mg/kg	--	--	<0.0045	<0.0044	--	--	--	--	--	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	<0.0078	<0.0076	--	--	--	--	--	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	<0.0038	<0.0037	--	--	--	--	--	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	<0.004	<0.0039	--	--	--	--	--	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	<0.0017	<0.0016	--	--	--	--	--	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	<0.0034	<0.0033	--	--	--	--	--	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	<0.0033	<0.0032	--	--	--	--	--	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	<0.0021	<0.0021	--	--	--	--	--	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	<0.0041	<0.004	--	--	--	--	--	--	--	--	NE	NE	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-6		SB-7		SB-8		SB-9		SB-10		Residential Screening Levels		
				SB-6-0.5'	SB-6-1.5'	SB-7-0.5'	SB-7-1.5'	SB-8-0.5'	SB-8-1.5'	SB-9-0.5'	SB-9-1.5'	SB-10-0.5'	SB-10-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.94 J	--	2.74 J	--	2.60 J	--	2.13 J	--	<0.37	--	NE	31	--
	Arsenic	6010B	mg/kg	5.30	--	4.82	--	4.86	--	5.80	--	5.00	--	12*	12*	12*
	Barium	6010B	mg/kg	120	--	141	--	111	--	101	--	107	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	--	<0.17	--	<0.17	--	<0.17	--	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.88	--	1.41	--	1.63	--	1.73	--	1.58	--	2,100	71	--
	Chromium	6010B	mg/kg	24.4	--	25.7	--	23.6	--	25.7	--	24.8	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	9.91	--	10.1	--	9.35	--	8.89	--	9.63	--	NE	23	--
	Copper	6010B	mg/kg	20.2	--	18.8	--	18.2	--	16.5	--	17.1	--	NE	3,100	--
	Lead	6010B	mg/kg	15.0	--	175	5.53	6.57	--	8.34	--	8.08	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	6.72	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	0.028 J	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	1.32	--	1.02	--	1.00	--	0.97 J	--	1.02	--	NE	390	--
	Nickel	6010B	mg/kg	31.2	--	18.2	--	17.5	--	18.7	--	18.2	--	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	--	1.72 J	--	1.40 J	--	<0.72	--	<0.72	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	--	<0.13	--	<0.13	--	<0.13	--	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	<0.42	--	<0.42	--	<0.42	--	<0.42	--	<0.42	--	NE	0.78	--
	Vanadium	6010B	mg/kg	43.9	--	44.9	--	41.6	--	41.9	--	41.2	--	390	390	--
	Zinc	6010B	mg/kg	66.5	--	146	--	48.9	--	48.2	--	47.9	--	NE	23,000	--
Arsenic		6020	mg/kg	5.09	--	3.14 J	--	3.57	--	5.31	--	7.87	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	--	0.13 J	--	<0.039	--	<0.039	--	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	0.00013 J	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.000081	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.000091	--	0.00057 J	--	<0.000092	--	<0.00009	--	<0.00009	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.000091	--	<0.0001	--	<0.0001	--	<0.0001	--	<0.0001	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	<0.00018	--	<0.00018	--	<0.00018	--	<0.00018	--	<0.00018	--	NE	0.039	RL
	Aldrin	8081A	mg/kg	<0.000062	--	<0.00006	--	<0.000063	--	<0.000061	--	<0.000061	--	NE	0.30	RL
	b-BHC	8081A	mg/kg	<0.000065	--	<0.000064	--	<0.000066	--	<0.000064	--	0.00012 J	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.004	--	<0.0039	--	<0.0041	--	<0.004	--	<0.004	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.000081	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.000081	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.000081	--	0.00021 J	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.000081	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.000075	--	<0.000073	--	0.00027 J	--	<0.000074	--	<0.000074	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.000067	--	<0.000066	--	<0.000068	--	<0.000066	--	<0.000066	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0006	--	<0.00058	--	<0.0006	--	<0.00059	--	<0.00059	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	<0.00011	--	<0.00011	--	0.00014 J	--	0.00017 J	--	<0.00011	--	NE	0.13	RL
	Heptachlor	8081A	mg/kg	<0.000081	--	<0.000079	--	<0.000082	--	<0.00008	--	<0.000079	--	NE	0.070	RL
	Heptachlor epoxide	8081A	mg/kg	<0.000078	--	<0.000076	--	<0.000079	--	<0.000077	--	<0.000077	--	NE	0.57	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.000082	--	<0.00008	--	<0.000083	--	<0.000081	--	<0.00008	--	NE	320	RL
	Methoxychlor	8081A	mg/kg	<0.0015	--	<0.0015	--	<0.0016	--	<0.0015	--	<0.0015	--	NE	0.49	RL
	Toxaphene	8081A	mg/kg	<0.013	--	<0.013	--	<0.014	--	<0.013	--	<0.013	--	NE	NE	RL
Polychlorinated Biphenyls (PCBs)	PCB-1016	8082	mg/kg	--	--	<0.0043	--	--	--	--	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	<0.0076	--	--	--	--	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	<0.0037	--	--	--	--	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	<0.0038	--	--	--	--	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	<0.0016	--	--	--	--	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	<0.0033	--	--	--	--	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	<0.0032	--	--	--	--	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	<0.0021	--	--	--	--	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	<0.0039	--	--	--	--	--	--	--	NE	NE	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-11			SB-12		SB-13		SB-14		SB-15		Residential Screening Levels		
				SB-11-0.5'	SB-11-0.5 (Dup.)	SB-11-1.5'	SB-12-0.5'	SB-12-1.5'	SB-13-0.5'	SB-13-1.5'	SB-14-0.5'	SB-14-1.5'	SB-15-0.5'	SB-15-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.57 J	<0.37	--	1.05 J	--	1.44 J	--	2.03 J	--	0.81 J	--	NE	31	--
	Arsenic	6010B	mg/kg	6.63	4.53	--	--	--	--	--	--	--	6.46	--	12*	12*	12*
	Barium	6010B	mg/kg	114	127	--	98.8	--	127	--	222	--	123	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	--	<0.17	--	<0.17	--	<0.17	--	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.78	1.71	--	1.49	--	1.70	--	0.44 J	--	1.65	--	2,100	71	--
	Chromium	6010B	mg/kg	24.6	26.3	--	23.2	--	21.4	--	7.91	--	26.6	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	9.00	10.4	--	9.14	--	10.4	--	10.7	--	9.56	--	NE	23	--
	Copper	6010B	mg/kg	18.2	18.2	--	16.6	--	15.9	--	14.8	--	20.7	--	NE	3,100	--
	Lead	6010B	mg/kg	5.31	5.64	--	4.92	--	3.06	--	1.70	--	112	5.73	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	4.25	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.98 J	0.77 J	--	<0.13	--	<0.13	--	<0.13	--	1.02	--	NE	390	--
	Nickel	6010B	mg/kg	18.6	18.3	--	19.0	--	18.4	--	8.01	--	20.9	--	15,000	1,500	--
	Selenium	6010B	mg/kg	1.14 J	<0.72	--	<0.72	--	<0.72	--	<0.72	--	<0.72	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	--	<0.13	--	<0.13	--	<0.13	--	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	<0.42	<0.42	--	<0.42	--	<0.42	--	<0.42	--	<0.42	--	NE	0.78	--
	Vanadium	6010B	mg/kg	40.7	46.2	--	39.1	--	40.6	--	20.9	--	45.2	--	390	390	--
	Zinc	6010B	mg/kg	50.1	51.1	--	49.3	--	59.2	--	42.4	--	83.6	--	NE	23,000	--
Arsenic		6020	mg/kg	5.01	4.01	--	4.95	--	5.64	--	2.15 J	--	5.58 J	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	<0.039	--	0.10 J	--	<0.039	--	<0.039	--	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCs)	4,4'-DDD	8081A	mg/kg	<0.00008	<0.00015	--	<0.0021	--	<0.0021	--	<0.0021	--	0.00039 J	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.00008	<0.000098	--	<0.002	--	<0.002	--	<0.002	--	<0.00039	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.00009	<0.00033	--	<0.002	--	<0.002	--	<0.002	--	<0.00044	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0001	<0.000088	--	<0.0016	--	<0.0016	--	<0.0016	--	<0.00044	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	<0.00018	<0.00014	--	--	--	--	--	--	--	<0.00088	--			
	Aldrin	8081A	mg/kg	<0.000061	<0.000092	--	<0.0015	--	<0.0015	--	<0.0015	--	<0.0003	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.000065	<0.00011	--	<0.0015	--	<0.0015	--	<0.0015	--	<0.00032	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.004	<0.0039	--	<0.035	--	<0.035	--	<0.035	--	<0.02	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.00008	<0.00015	--	<0.0012	--	<0.0012	--	<0.0012	--	<0.00039	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.00008	<0.000087	--	<0.0021	--	<0.0021	--	<0.0021	--	<0.00039	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.00008	<0.00011	--	<0.0012	--	<0.0012	--	<0.0012	--	<0.00039	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.00008	<0.00012	--	<0.0028	--	<0.0028	--	<0.0028	--	<0.00039	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.000074	<0.00018	--	<0.0034	--	<0.0034	--	<0.0034	--	<0.00036	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.000066	<0.0002	--	<0.0027	--	<0.0027	--	<0.0027	--	<0.00032	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.00059	<0.00068	--	<0.0021	--	<0.0021	--	<0.0021	--	<0.0029	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	<0.0041	--	<0.0041	--	<0.0041	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	<0.00011	<0.00014	--	--	--	--	--	--	--	<0.00054	--			
	Heptachlor	8081A	mg/kg	<0.00008	<0.00012	--	<0.0013	--	<0.0013	--	<0.0013	--	<0.00039	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.000077	<0.000084	--	<0.0023	--	<0.0023	--	<0.0023	--	<0.00038	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.000081	<0.00012	--	<0.002	--	<0.002	--	<0.002	--	<0.0004	--	NE	0.57	RL
Polychlorinated Biphenyls (PCBs)	Methoxychlor	8081A	mg/kg	<0.0015	<0.0026	--	<0.0092	--	<0.0092	--	<0.0092	--	<0.0075	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.013	<0.011	--	<0.054	--	<0.054	--	<0.054	--	<0.065	--	NE	0.49	RL
	PCB-1016	8082	mg/kg	--	--	--	--	--	--	--	<0.003	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	--	--	--	<0.014	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	--	--	--	<0.0095	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	--	--	--	<0.014	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	--	--	--	<0.019	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	--	--	--	<0.020	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	--	--	--	<0.0069	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	--	--	--	<0.017	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	--	--	--	<0.0086	--	--	--	NE	NE	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-16			SB-17		SB-18		SB-19		SB-20		Residential Screening Levels		
				SB-16-0.5'	SB-16-0.5' (Dup.)	SB-16-1.5'	SB-17-0.5'	SB-17-1.5'	SB-18-0.5'	SB-18-1.5'	SB-19-0.5'	SB-19-1.5'	SB-20-0.5'	SB-20-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.34 J	1.00 J	--	1.09 J	--	1.38 J	--	0.55 J	--	0.66 J	--	NE	31	--
	Arsenic	6010B	mg/kg	6.94	5.66	--	4.98	--	8.25	--	5.91	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	116	104	--	120	--	102	--	109	--	110	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	--	<0.17	--	<0.17	--	<0.17	--	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.84	1.55	--	1.68	--	1.56	--	1.74	--	1.52	--	2,100	71	--
	Chromium	6010B	mg/kg	23.0	22.3	--	24.1	--	22.0	--	22.4	--	25.2	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	9.21	9.09	--	10.2	--	8.72	--	9.57	--	9.30	--	NE	23	--
	Copper	6010B	mg/kg	18.6	17.4	--	19.3	--	17.9	--	17.2	--	17.5	--	NE	3,100	--
	Lead	6010B	mg/kg	12.0	9.88	--	10.3	--	28.6	--	6.31	--	7.16	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.97 J	0.80 J	--	1.23	--	0.99 J	--	0.92 J	--	<0.17	--	NE	390	--
	Nickel	6010B	mg/kg	22.1	18.4	--	18.9	--	17.4	--	18.8	--	21.2	--	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	--	<0.72	--	<0.72	--	<0.72	--	1.28 J	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	--	<0.13	--	<0.13	--	<0.13	--	<0.17	--	390	390	--
	Thallium	6010B	mg/kg	<0.42	<0.42	--	<0.42	--	<0.42	--	<0.42	--	<0.42	--	NE	0.78	--
	Vanadium	6010B	mg/kg	41.9	40.4	--	42.5	--	35.8	--	39.0	--	43.8	--	390	390	--
	Zinc	6010B	mg/kg	56.0	53.6	--	56.2	--	79.7	--	49.7	--	58.5	--	NE	23,000	--
Arsenic		6020	mg/kg	5.09	5.18	--	4.49	--	6.62	--	4.54	--	5.96	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	<0.039	--	<0.039	--	<0.039	--	<0.039	--	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.000078	<0.00008	--	<0.00015	--	<0.000079	--	<0.000079	--	<0.0105	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.000078	<0.00008	--	<0.0001	--	<0.000079	--	<0.000079	--	<0.01	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.000088	<0.00009	--	<0.00034	--	<0.000089	--	<0.000089	--	<0.01	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.000098	<0.000089	--	<0.000091	--	<0.000099	--	<0.000088	--	<0.008	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	<0.00017	<0.00018	--	<0.00015	--	<0.00018	--	<0.00018	--	--	--			
	Aldrin	8081A	mg/kg	<0.000059	<0.000061	--	<0.000095	--	<0.00006	--	<0.00006	--	<0.0075	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.000063	<0.000065	--	<0.00012	--	<0.000064	--	<0.000064	--	<0.0075	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.0039	<0.004	--	<0.004	--	<0.0039	--	<0.0039	--	<0.175	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.000078	<0.00008	--	<0.00016	--	<0.000079	--	<0.000079	--	<0.006	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.000078	<0.00008	--	<0.000089	--	<0.000079	--	<0.000079	--	<0.0105	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.000078	<0.00008	--	<0.00011	--	<0.000079	--	<0.000079	--	<0.006	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.000078	<0.00008	--	<0.00012	--	<0.000079	--	<0.000079	--	<0.014	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.000072	<0.000074	--	<0.00018	--	0.00035 J	--	<0.000073	--	<0.017	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.000065	0.00016 J	--	<0.00021	--	<0.000065	--	<0.000066	--	<0.0135	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.00057	<0.00059	--	<0.0007	--	<0.00058	--	<0.00058	--	<0.0105	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	--	--	--	--	--	<0.0205	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	0.00023 J	<0.00011	--	<0.00014	--	<0.00011	--	0.00021 J	--	--	--			
	Heptachlor	8081A	mg/kg	<0.000078	<0.00008	--	<0.00012	--	<0.000079	--	<0.000079	--	<0.0065	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.000075	<0.000077	--	<0.000086	--	<0.000076	--	<0.000076	--	<0.0115	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.000079	<0.000081	--	<0.00013	--	<0.00008	--	<0.00008	--	<0.01	--	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0015	<0.0015	--	<0.0027	--	<0.0015	--	<0.0015	--	<0.046	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.013	<0.013	--	<0.012	--	<0.013	--	<0.013	--	<0.27	--	NE	0.49	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-21		SB-22		SB-23		SB-24		SB-25			Residential Screening Levels		
				SB-21-0.5'	SB-21-1.5'	SB-22-0.5'	SB-22-1.5'	SB-23-0.5'	SB-23-1.5'	SB-24-0.5'	SB-24-1.5'	SB-25-0.5'	SB-25-0.5' (Dup.)	SB-25-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.92 J	--	2.08 J	--	1.75 J	--	1.26 J	--	1.62 J	0.40 J	--	NE	31	--
	Arsenic	6010B	mg/kg	6.11	--	1.71	--	--	--	8.06	--	5.90	3.20	--	12*	12*	12*
	Barium	6010B	mg/kg	95.8	--	75.3	--	102	--	128	--	528	145	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	--	<0.17	--	<0.17	--	<0.17	--	<0.17	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.24	--	0.77	--	1.42	--	1.64	--	1.63	1.32	--	2,100	71	--
	Chromium	6010B	mg/kg	21.6	--	19.3	--	23.6	--	31.2	--	33.2	29.4	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	8.07	--	9.33	--	9.28	--	11.3	--	10.9	9.71	--	NE	23	--
	Copper	6010B	mg/kg	16.3	--	13.6	--	16.8	--	19.5	--	22.7	21.0	--	NE	3,100	--
	Lead	6010B	mg/kg	20.4	--	8.57	--	19.1	--	18.8	--	29.5	56.9	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	1.10	--	0.47 J	--	<0.13	--	1.27	--	0.74 J	0.42 J	--	NE	390	--
	Nickel	6010B	mg/kg	16.4	--	16.7	--	18.2	--	22.1	--	22.0	16.9	--	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	--	0.90 J	--	1.48 J	--	<0.72	--	0.77 J	<0.72	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	--	<0.13	--	<0.13	--	<0.13	--	<0.13	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	<0.42	--	<0.42	--	<0.42	--	<0.42	--	<0.42	<0.42	--	NE	0.78	--
	Vanadium	6010B	mg/kg	40.0	--	34.2	--	41.0	--	53.7	--	50.6	43.8	--	390	390	--
	Zinc	6010B	mg/kg	112	--	41.1	--	90.4	--	70.9	--	63.0	98.1	--	NE	23,000	--
Arsenic		6020	mg/kg	5.97	--	1.940 J	--	10.4	--	6.27	--	4.61	4.73	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	--	0.08 J	--	<0.039	--	<0.039	--	<0.039	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	0.0036 J	--	<0.000079	--	<0.0021	--	<0.00008	--	<0.000078	<0.000079	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	0.0021 J	--	<0.000079	--	<0.002	--	<0.00008	--	<0.000078	<0.000079	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	0.0049 J	--	<0.000089	--	<0.002	--	<0.00009	--	<0.000088	<0.000089	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0005	--	<0.000099	--	<0.0016	--	<0.0001	--	<0.000087	<0.0001	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	0.007 J	--	0.007 J	--	--	--	<0.00018	--	<0.00018	<0.00018	--			
	Aldrin	8081A	mg/kg	<0.0003	--	<0.00006	--	<0.0015	--	<0.000061	--	<0.00006	<0.000061	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.00032	--	<0.000064	--	<0.0015	--	<0.000064	--	<0.000063	<0.000064	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	0.071 J	--	<0.0039	--	0.130	--	<0.004	--	<0.0039	<0.004	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0004	--	<0.000079	--	<0.0012	--	<0.00008	--	<0.000078	<0.000079	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0004	--	<0.000079	--	<0.0021	--	<0.00008	--	<0.000078	<0.000079	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0004	--	<0.000079	--	<0.0012	--	<0.00008	--	<0.000078	<0.000079	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0004	--	<0.000079	--	<0.0028	--	<0.00008	--	<0.000078	<0.000079	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.00037	--	<0.000073	--	<0.0034	--	<0.000074	--	0.000074 J	<0.000074	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.00033	--	0.00072 J	--	<0.0027	--	<0.000066	--	<0.000065	<0.000066	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0029	--	<0.00058	--	<0.0021	--	<0.00059	--	<0.00058	<0.00059	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	<0.0041	--	--	--	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	0.0084 J	--	0.0066 J	--	--	--	<0.00011	--	<0.00011	<0.00011	--			
	Heptachlor	8081A	mg/kg	<0.0004	--	<0.000079	--	<0.0013	--	<0.00008	--	<0.000078	<0.000079	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.00038	--	<0.000076	--	<0.0023	--	<0.000077	--	<0.000075	<0.000077	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.0004	--	<0.00008	--	<0.002	--	<0.00008	--	<0.000079	<0.00008	--	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0076	--	<0.0015	--	<0.0092	--	<0.0015	--	<0.0015	<0.0015	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.066	--	<0.013	--	<0.054	--	<0.013	--	<0.013	<0.013	--	NE	0.49	RL
Polychlorinated Biphenyls (PCBs)	PCB-1016	8082	mg/kg	--	--	--	--	<0.003	--	--	--	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	<0.014	--	--	--	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	<0.0095	--	--	--	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	<0.014	--	--	--	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	<0.019	--	--	--	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	<0.020	--	--	--	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	<0.0069	--	--	--	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	<0.017	--	--	--	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	<0.0086	--	--	--	--	--	--	NE	NE	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-26		SB-27		SB-28			SB-29	SB-30		Residential Screening Levels		
				SB-26-0.5'	SB-26-1.5'	SB-27-0.5'	SB-27-1.5'	SB-28-0.5'	SB-28-0.5' (Dup.)	SB-28-1.5'	SB-29-3'	SB-30-0.5'	SB-30-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.65 J	--	0.95 J	--	1.56 J	1.78 J	--	--	0.86 J	--	NE	31	--
	Arsenic	6010B	mg/kg	7.28	--	3.30	--	4.82	4.89	--	--	8.46	--	12*	12*	12*
	Barium	6010B	mg/kg	108	--	97.4	--	97.7	108	--	--	110	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	--	<0.17	--	<0.17	<0.17	--	--	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.78	--	1.43	--	1.53	1.37	--	--	1.82	--	2,100	71	--
	Chromium	6010B	mg/kg	22.8	--	19.0	--	29.9	30.8	--	--	25.8	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	9.31	--	9.18	--	10.8	11.7	--	--	9.27	--	NE	23	--
	Copper	6010B	mg/kg	27.0	--	16.6	--	22.5	21.1	--	--	22.6	--	NE	3,100	--
	Lead	6010B	mg/kg	25.8	--	7.18	--	10.1	21.0	--	--	94.1	5.17	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	0.668	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	2.23	--	1.82	--	1.19	0.99 J	--	--	1.21	--	NE	390	--
	Nickel	6010B	mg/kg	17.6	--	14.8	--	18.7	18.3	--	--	20.6	--	15,000	1,500	--
	Selenium	6010B	mg/kg	1.19 J	--	<0.72	--	<0.72	1.84 J	--	--	1.22 J	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	--	<0.13	--	<0.13	<0.13	--	--	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	1.76 J	--	2.62 J	--	<0.42	0.67 J	--	--	1.09 J	--	NE	0.78	--
	Vanadium	6010B	mg/kg	41.3	--	35.8	--	47.0	52.0	--	--	43.4	--	390	390	--
	Zinc	6010B	mg/kg	104	--	41.8	--	79.9	88.3	--	--	116	--	NE	23,000	--
Arsenic		6020	mg/kg	5.53	--	4.26	--	3.45	3.92	--	--	5.23	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	--	<0.039	--	<0.039	<0.039	--	--	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.000079	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	0.00047 J	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	0.0015 J	--	<0.00009	--	<0.000089	0.0025 J	--	--	<0.000089	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0001	--	<0.0001	--	<0.0001	<0.00051	--	--	<0.000089	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	0.00024 J	--	0.00028 J	--	0.00019 J	0.0026 J	--	--	<0.00018	--			
	Aldrin	8081A	mg/kg	<0.000061	--	<0.000061	--	<0.000061	<0.00031	--	--	0.00023 J	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.000064	--	<0.000064	--	<0.000064	<0.00032	--	--	<0.000064	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.004	--	<0.004	--	<0.004	<0.02	--	--	<0.004	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.000079	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.000079	--	0.00012 J	--	<0.000079	0.0018 J	--	--	<0.000079	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.000079	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.000079	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.000073	--	<0.000074	--	<0.000074	<0.00037	--	--	0.00013 J	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.000066	--	<0.000066	--	<0.000066	<0.00033	--	--	<0.000066	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.00058	--	<0.00059	--	<0.00058	<0.003	--	--	<0.00058	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	0.00015 J	--	0.0003 J	--	0.00018 J	0.0033 J	--	--	0.00031 J	--			
	Heptachlor	8081A	mg/kg	<0.000079	--	<0.00008	--	<0.000079	<0.0004	--	--	<0.000079	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.000076	--	<0.000077	--	<0.000077	<0.00039	--	--	<0.000076	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.00008	--	<0.000081	--	<0.00008	<0.00041	--	--	<0.00008	--	NE	0.57	RL
Polychlorinated Biphenyls (PCBs)	Methoxychlor	8081A	mg/kg	<0.0015	--	<0.0015	--	<0.0015	<0.0076	--	--	<0.0015	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.013	--	<0.013	--	<0.013	<0.067	--	--	<0.013	--	NE	0.49	RL
	PCB-1016	8082	mg/kg	--	--	--	--	--	--	--	<0.0044	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	--	--	--	<0.0076	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	--	--	--	<0.0037	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	--	--	--	<0.0039	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	--	--	--	<0.0016	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	--	--	--	<0.0033	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	--	--	--	<0.0032	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	--	--	--	<0.0021	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	--	--	--	<0.004	--	--	NE	NE	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-31		SB-32		Residential Screening Levels		
				SB-31-0.5'	SB-31-1.5'	SB-32-0.5'	SB-32-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.96 J	--	0.56 J	--	NE	31	--
	Arsenic	6010B	mg/kg	4.66	--	5.60	--	12*	12*	12*
	Barium	6010B	mg/kg	128	--	102	--	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	--	<0.17	--	1,600	160	--
	Cadmium	6010B	mg/kg	1.69	--	1.59	--	2,100	71	--
	Chromium	6010B	mg/kg	19.7	--	22.0	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	9.46	--	8.79	--	NE	23	--
	Copper	6010B	mg/kg	16.1	--	17.4	--	NE	3,100	--
	Lead	6010B	mg/kg	6.26	--	5.55	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	1.18	--	1.15	--	NE	390	--
	Nickel	6010B	mg/kg	16.5	--	17.4	--	15,000	1,500	--
	Selenium	6010B	mg/kg	1.31 J	--	3.11	--	NE	390	--
	Silver	6010B	mg/kg	<0.13	--	<0.13	--	390	390	--
	Thallium	6010B	mg/kg	<0.42	--	<0.42	--	NE	0.78	--
	Vanadium	6010B	mg/kg	37.7	--	37.1	--	390	390	--
	Zinc	6010B	mg/kg	47.5	--	46.0	--	NE	23,000	--
Arsenic		6020	mg/kg	5.02	--	6.14	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	<0.039	--	<0.039	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	NE	0.30	0.30
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.00009	--	<0.000088	--	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0001	--	<0.000099	--	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	<0.00018	--	<0.00018	--			
	Aldrin	8081A	mg/kg	<0.000061	--	<0.00006	--	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.000064	--	<0.000063	--	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.004	--	<0.0039	--	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.000074	--	<0.000073	--	NE	NE	RL
	Endrin	8081A	mg/kg	<0.000066	--	<0.000065	--	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.00059	--	<0.00058	--	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	--	--	--	--	NE	NE	RL
	g-Chlordane	8081A	mg/kg	<0.00011	--	0.00013 J	--			
	Heptachlor	8081A	mg/kg	<0.000079	--	<0.000078	--	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.000077	--	<0.000076	--	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.00008	--	<0.000079	--	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0015	--	<0.0015	--	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.013	--	<0.013	--	NE	0.49	RL



Table 4
Summary of PEA Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
 2450 Shenandoah Street
 Los Angeles, CA

Notes:

Select samples analyzed for California Code of Regulations Title 22 (CAM 17) Metals by EPA Method 6010B/7470A by Enthalpy Associated Laboratories (Enthalpy) in Orange, California

Select samples analyzed for PCBs by EPA Method 8082 by Enthalpy

Select samples analyzed for Organochlorine Pesticides (OCPs) by EPA Method 8081A by Enthalpy

Select samples analyzed for Arsenic by EPA Method 6020 by Enthalpy

RED indicates the value exceeds the DTSC SLs

J: estimated value between the method detection limit (MDL) and laboratory reporting limit

MDL: method detection limit

mg/kg: milligrams per kilogram

ND: not detected

PQL: practical quantification limit

RWQCB: Regional Water Quality Control Board

RDL: reporting detection limit

SL: Screening Level

(1): California Department of Toxic Substance Control (DTSC) Office of Human and Ecological Risk (HERO, 2018) RSLs Human Health Risk Assessment (HHRA) Note 3

(2): United States Environmental Protection Agency (EPA) Regional Screening Levels for Residential Soil (RSL-mg/kg) November 2017

(3): Los Angeles Unified School District Environmental Import/Export Materials Testing Section 01 4524 dated August 29, 2018

*: Arsenic screening level based on California background level

**: LAUSD limit requiring further analysis for leaching potential

***: LAUSD limit before testing for Hexavalent Chromium

****: Run TTLC. If TTLC soil concentration is greater than TTLC limit, it is a California Regulated Hazardous Waste. If the TTLC soil concentration is less than TTLC limit, compare to 10x the STLC limit. If soil concentration is greater than 10x the STLC limit, conduct WET test. If soil concentration does not pass WET test it is considered a California Regulated Hazardous Waste. If the soil concentration is less than 10x the STLC limit or passes the WET test, compare the concentration to 20x the TCLP limit. If the soil concentration is less than 20x the TCLP limit, the soil is considered non-hazardous and may be used at school sites. However, if the soil concentration is greater than 20x the TCLP limit, a TCLP leaching test is required. If the soil concentration results from the TCLP leaching test are lower than the TCLP limit, then the waste cannot leach enough chemical into soil and groundwater to be considered a toxic hazardous waste and therefore is not a Federal-Regulated Hazardous Waste and may be used at school sites. However, if the soil concentration result from the leaching test is greater than the TCLP Limit, it is considered a Federal-Regulated (RCRA) Hazardous Waste.

Table 5
Summary of PEA Stepout Boring Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-1A		SB-1B		SB-1C		SB-5A		SB-5B		SB-5C		Residential Screening Levels		
				SB-1A-0.5'	SB-1A-1.5'	SB-1B-0.5'	SB-1B-1.5'	SB-1C-0.5'	SB-1C-1.5'	SB-5A-0.5'	SB-5A-1.5'	SB-5B-0.5'	SB-5B-1.5'	SB-5C-0.5'	SB-5C-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	157.0	49.6	6.23	5.02	9.84	3.62	34.0	6.21	12.1	5.64	6.19	5.78	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	24.0	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	0.674	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--



Table 5
Summary of PEA Stepout Boring Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-3A		SB-3B		SB-7A		SB-7B		SB-15A		SB-15B		Residential Screening Levels		
				SB-3A-0.5'	SB-3A-1.5'	SB-3B-0.5'	SB-3B-1.5'	SB-7A-0.5'	SB-7A-1.5'	SB-7B-0.5'	SB-7B-1.5'	SB-15A-0.5'	SB-15A-1.5'	SB-15-0.5'	SB-15-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	5.08	5.79	3.82	4.28	15.6	4.36	14.2	11.2	5.24	3.09	6.58	3.9	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--



Table 5
Summary of PEA Stepout Boring Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-30A		SB-30B		SB-30C		Residential Screening Levels		
				SB-30A-0.5'	SB-30A-1.5'	SB-30B-0.5'	SB-30B-1.5'	SB-30C-0.5'	SB-30C-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	6.09	4.62	5.04	3.65	6.64	5.13	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	NE	23,000	--



Table 5
Summary of PEA Stepout Boring Soil Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Notes:
Select samples analyzed for Lead by EPA Method 6010B by Enthalpy Associated Laboratories (Enthalpy) in Orange, California
RED indicates the value exceeds the DTSC SLs
J: estimated value between the method detection limit (MDL) and laboratory reporting limit
MDL: method detection limit
mg/kg: milligrams per kilogram
ND: not detected
PQL: practical quantification limit
RWQCB: Regional Water Quality Control Board
RDL: reporting detection limit
SL: Screening Level
(1): California Department of Toxic Substance Control (DTSC) Office of Human and Ecological Risk (HERO, 2018) RSLs Human Health Risk Assessment (HHRA) Note 3
(2): United States Environmental Protection Agency (EPA) Regional Screening Levels for Residential Soil (RSL-mg/kg) November 2017
(3): Los Angeles Unified School District Environmental Import/Export Materials Testing Section 01 4524 dated August 29, 2018
*: Arsenic screening level based on California background level
**: LAUSD limit requiring further analysis for leaching potential
***: LAUSD limit before testing for Hexavalent Chromium
****: Run TTLC. If TTLC soil concentration is greater than TTLC limit, it is a California Regulated Hazardous Waste. If the TTCL soil concentration is less than TTLC limit, compare to 10x the STLC limit. If soil concentration is greater than 10x the STLC limit, conduct WET test. If soil concentration does not pass WET test it is considered a California Regulated Hazardous Waste. If the soil concentration is less than 10x the STLC limit or passes the WET test, compare the concentration to 20x the TCLP limit. If the soil concentration is less than 20x the TCLP limit, the soil is considered non-hazardous and may be used at school sites. However, if the soil concentration is greater than 20x the TCLP limit, a TCLP leaching test is required. If the soil concentration results from the TCLP leaching test are lower than the TCLP limit, then the waste cannot leach enough chemical into soil and groundwater to be considered a toxic hazardous waste and therefore is not a Federal-Regulated Hazardous Waste and may be used at school sites. However, if the soil concentration result from the leaching test is greater than the TCLP Limit, it is considered a Federal-Regulated (RCRA) Hazardous Waste.

Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-33		SB-34		SB-35		Residential Screening Levels		
				SB-33-0.5'	SB-33-1.5'	SB-34-0.5'	SB-34-1.5'	SB-35-0.5'	SB-35-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.54 J	1.11 J	4.68	2.60 J	1.43 J	1.16 J	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	122	107	131	96.8	138	108	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.59	1.80	1.37	1.60	1.47	1.84	2,100	71	--
	Chromium	6010B	mg/kg	26.9	26.2	32.2	23.5	30.9	23.9	36,000	120,000	100***
	Cobalt	6010B	mg/kg	10.6	10.6	11.8	9.88	11.4	10.3	NE	23	--
	Copper	6010B	mg/kg	19.4	17.2	14.7	17.0	14.7	17.1	NE	3,100	--
	Lead	6010B	mg/kg	11.7	5.32	72.2	4.86	9.61	4.12	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.82 J	0.60 J	1.48	1.12	0.58 J	0.60 J	NE	390	--
	Nickel	6010B	mg/kg	19.3	19.7	17.3	18.1	19.0	19.9	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	0.58 J	1.21 J	1.82 J	<0.42	1.89 J	1.42 J	NE	0.78	--
	Vanadium	6010B	mg/kg	42.6	39.9	47.9	36.8	48.0	38.6	390	390	--
	Zinc	6010B	mg/kg	60.6	51.2	64.4	47.2	55.5	49.5	NE	23,000	--
Arsenic		6020	mg/kg	14.4	5.89	4.03	5.30	3.93	5.91	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	NE	0.30	0.30

Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-33		SB-34		SB-35		Residential Screening Levels		
				SB-33-0.5'	SB-33-1.5'	SB-34-0.5'	SB-34-1.5'	SB-35-0.5'	SB-35-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0042	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0032	<0.0016	<0.0016	<0.0016	<0.0032	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.003	<0.0015	<0.0015	<0.0015	<0.003	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.003	<0.0015	<0.0015	<0.0015	<0.003	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.070	<0.035	<0.035	<0.035	<0.070	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0024	<0.0012	<0.0012	<0.0012	<0.0024	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0042	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0024	<0.0012	<0.0012	<0.0012	<0.0024	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0056	<0.0028	<0.0028	<0.0028	<0.0056	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0068	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0054	<0.0027	<0.0027	<0.0027	<0.0054	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0042	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0082	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0026	<0.0013	<0.0013	<0.0013	<0.0026	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0046	<0.0023	<0.0023	<0.0023	<0.0046	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0184	<0.0092	<0.0092	<0.0092	<0.0184	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.108	<0.054	<0.0054	<0.0054	<0.108	<0.054	NE	0.49	RL
Polychlorinated Biphenyls (PCBs)	PCB-1016	8082	mg/kg	--	--	<0.003	<0.003	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	<0.014	<0.014	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	<0.0095	<0.0095	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	<0.014	<0.014	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	<0.019	<0.019	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	<0.02	<0.02	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	<0.0069	<0.0069	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	<0.017	<0.017	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	<0.086	<0.086	--	--	NE	NE	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-36		SB-37		SB-38		SB-39				Residential Screening Levels		
				SB-36-0.5'	SB-36-1.5'	SB-37-0.5'	SB-37-1.5'	SB-38-0.5'	SB-38-1.5'	SB-39-0.5'	SB-39-0.5' (DUP)	SB-39-1.5'	SB-39-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	<0.37	0.48 J	0.87 J	<0.37	0.95 J	<0.37	<0.37	<0.37	1.50 J	<0.37	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	107	139	134	107	105	104	114	76	105.0	88.6	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.94	2.05	1.79	1.65	1.16	2.06	1.43	1.27	1.65	1.39	2,100	71	--
	Chromium	6010B	mg/kg	26.9	38.4	25.1	29.1	27.9	25.6	20.9	19.4	24.8	27.1	36,000	120,000	100***
	Cobalt	6010B	mg/kg	10.7	13.7	12.1	10.5	9.55	9.57	8.65	7.61	9.37	8.54	NE	23	--
	Copper	6010B	mg/kg	18.0	22.7	20	18.0	13.8	17.1	18.2	14.6	17.9	19.5	NE	3,100	--
	Lead	6010B	mg/kg	6.16	7.70	5.68	12.1	47.0	5.25	24.7	12.1	4.60	2.97	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.92 J	1.19	0.91 J	0.88 J	0.96 J	1.93	0.80 J	0.33 J	0.79 J	0.87 J	NE	390	--
	Nickel	6010B	mg/kg	20.7	30.7	22.1	22.1	22.3	17.5	16.8	13.3	18.4	18.5	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	1.94 J	<0.72	0.77 J	1.04 J	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	0.96 J	1.08 J	0.47 J	1.17 J	2.06 J	3.94	<0.42	1.53 J	1.00 J	<0.42	NE	0.78	--
	Vanadium	6010B	mg/kg	40.9	67.4	38.5	41.0	46.0	38.8	38.6	32.9	38.4	46.1	390	390	--
	Zinc	6010B	mg/kg	54.7	79.1	51.6	60.6	58.6	44.6	98.4	53.1	43.6	40.7	NE	23,000	--
Arsenic		6020	mg/kg	5.44	7.54	5.85	14.8	6.60	6.79	21.1	7.98	6.30	9.61	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-36		SB-37		SB-38		SB-39				Residential Screening Levels		
				SB-36-0.5'	SB-36-1.5'	SB-37-0.5'	SB-37-1.5'	SB-38-0.5'	SB-38-1.5'	SB-39-0.5'	SB-39-0.5' (DUP)	SB-39-1.5'	SB-39-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0042	<0.0105	<0.0021	<0.0105	<0.0105	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.002	<0.002	<0.002	<0.004	<0.010	<0.002	<0.010	<0.010	<0.002	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.002	<0.002	<0.002	<0.004	<0.010	<0.002	<0.010	<0.010	<0.002	<0.002	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0032	<0.008	<0.0016	<0.008	<0.008	<0.0016	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.003	<0.0075	<0.0015	<0.0075	<0.0075	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.003	<0.0075	<0.0015	<0.0075	<0.0075	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.070	<0.175	<0.035	<0.175	<0.175	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0024	<0.006	<0.0012	<0.006	<0.006	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0042	<0.0105	<0.0021	<0.0105	<0.0105	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0024	<0.006	<0.0012	<0.006	<0.006	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0056	<0.014	<0.0028	<0.014	<0.014	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0068	<0.017	<0.0034	<0.017	<0.017	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0054	<0.0135	<0.0027	<0.0135	<0.0135	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0042	<0.105	<0.0021	<0.105	<0.105	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0082	<0.205	<0.0041	<0.205	<0.205	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0026	<0.0065	<0.0013	<0.0065	<0.0065	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0046	<0.0115	<0.0023	<0.0115	<0.0115	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.004	<0.010	<0.002	<0.010	<0.010	<0.002	<0.002	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0184	<0.0460	<0.0092	<0.0460	<0.0460	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.108	<0.270	<0.054	<0.270	<0.270	<0.054	<0.054	NE	0.49	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-40			SB-41			SB-42			Residential Screening Levels		
				SB-40-0.5'	SB-40-1.5'	SB-40-2.5'	SB-41-0.5'	SB-41-1.5'	SB-41-2.5'	SB-42-0.5'	SB-42-1.5'	SB-42-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.80 J	<0.37	3.05	0.51 J	0.74 J	1.12	0.98 J	2.29 J	<0.37	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	154	103	99.9	106	99.4	101	159	84.8	83.4	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.71	1.58	1.57	1.56	1.5	1.58	1.45	1.24	1.23	2,100	71	--
	Chromium	6010B	mg/kg	27.2	25.5	27.9	22.8	28.2	35.9	26.1	25.6	23.1	36,000	120,000	100***
	Cobalt	6010B	mg/kg	10.9	9.81	9.88	9.57	11.3	11.3	11.1	8.41	7.78	NE	23	--
	Copper	6010B	mg/kg	20.3	17.6	18.0	17.3	18.5	22.5	19.0	16.7	18.3	NE	3,100	--
	Lead	6010B	mg/kg	7.31	3.98	3.62	3.45	4.59	4.02	110	3.86	3.56	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	0.448	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	0.020 J	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.93 J	0.75 J	1.23	0.53 J	1.10	1.10 J	0.51 J	0.64 J	0.89 J	NE	390	--
	Nickel	6010B	mg/kg	19.1	15.4	20.2	16.9	20.0	24.2	18.8	15.9	15.1	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	1.82 J	<0.72	<0.72	<0.72	1.25 J	<0.72	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	0.44 J	<0.42	<0.42	<0.42	<0.42	<0.42	0.47 J	<0.42	<0.42	NE	0.78	--
	Vanadium	6010B	mg/kg	44	39.6	44.8	36.5	49.0	61.8	45.0	37.4	37.4	390	390	--
	Zinc	6010B	mg/kg	51.1	38.3	46.0	42.4	45.8	49.2	69.4	41.7	41.3	NE	23,000	--
Arsenic		6020	mg/kg	5.66	5.17	7.95	5.94	6.76	8.96	44.9	6.77	9.57	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-40			SB-41			SB-42			Residential Screening Levels		
				SB-40-0.5'	SB-40-1.5'	SB-40-2.5'	SB-41-0.5'	SB-41-1.5'	SB-41-2.5'	SB-42-0.5'	SB-42-1.5'	SB-42-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0051 J	<0.002	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.011	<0.002	<0.002	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.0016	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.003	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.003	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.070	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0024	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0024	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0056	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0054	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0042	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0026	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0046	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0184	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.108	<0.054	<0.054	NE	0.49	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-43				SB-44			SB-45			Residential Screening Levels		
				SB-43-0.5'	SB-43-0.5' (DUP)	SB-43-1.5'	SB-43-2.5'	SB-44-0.5'	SB-44-1.5'	SB-44-2.5'	SB-45-0.5'	SB-45-1.5'	SB-45-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.22 J	1.08 J	0.83 J	1.24 J	3.43	<0.37	1.27 J	1.46 J	1.72 J	3.01	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	107	105	94.6	90.8	201	90.6	90.7	90.7	102	104	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.68	1.54	1.58	1.52	1.28	1.37	1.46	1.48	1.81	1.70	2,100	71	--
	Chromium	6010B	mg/kg	24.9	22.8	24.0	28.6	23.6	20.8	26.8	25.3	23.6	32.5	36,000	120,000	100***
	Cobalt	6010B	mg/kg	8.19	10.5	8.24	9.99	11.3	8.58	9.15	7.9	9.46	13.2	NE	23	--
	Copper	6010B	mg/kg	18.7	15.6	15.9	19.6	21.5	15.8	17.3	15.4	16.8	20.6	NE	3,100	--
	Lead	6010B	mg/kg	5.42	4.82	3.58	3.62	16.5	3.47	4.00	15.0	4.60	7.64	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.43 J	0.31 J	0.49 J	0.80 J	0.44 J	0.72 J	0.70 J	1.24	1.56	2.24	NE	390	--
	Nickel	6010B	mg/kg	15.9	17.2	21.8	20.9	17.1	16.2	19.0	17.5	19.0	29.0	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	0.76 J	<0.72	<0.72	<0.72	<0.72	1.34 J	1.65 J	2.52 J	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	<0.42	0.45 J	<0.42	<0.42	0.73 J	<0.42	0.97 J	1.23 J	3.50	1.15 J	NE	0.78	--
	Vanadium	6010B	mg/kg	40.0	34.7	35.2	45.6	43.7	33.8	41.5	39.3	37.2	58.6	390	390	--
	Zinc	6010B	mg/kg	45.7	43.8	42.6	45.5	61.6	37.2	44.0	27.4	47.6	59.8	NE	23,000	--
Arsenic		6020	mg/kg	6.15	6.76	6.22	7.31	48.5	6.72	6.75	6.02	5.00	9.83	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-43				SB-44			SB-45			Residential Screening Levels		
				SB-43-0.5'	SB-43-0.5' (DUP)	SB-43-1.5'	SB-43-2.5'	SB-44-0.5'	SB-44-1.5'	SB-44-2.5'	SB-45-0.5'	SB-45-1.5'	SB-45-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0105	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.002	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	0.0022 J	<0.002	<0.002	<0.010	<0.002	<0.002	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.008	<0.0016	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0075	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0075	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.175	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0105	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.014	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.017	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0135	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.105	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.205	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0115	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.002	<0.002	NE	0.57	RL
Polychlorinated Biphenyls (PCBs)	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0460	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.270	<0.054	<0.054	NE	0.49	RL
	PCB-1016	8082	mg/kg	--	--	--	--	<0.003	<0.003	<0.003	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	<0.014	<0.014	<0.014	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	<0.0095	<0.0095	<0.0095	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	<0.014	<0.014	<0.014	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	<0.019	<0.019	<0.019	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	<0.020	<0.020	<0.020	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	<0.0069	<0.0069	<0.0069	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	<0.017	<0.017	<0.017	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	<0.0086	<0.0086	<0.0086	--	--	--	NE	NE	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-46			SB-47				SB-48			Residential Screening Levels		
				SB-46-0.5'	SB-46-1.5'	SB-46-2.5'	SB-47-0.5'	SB-47-1.5'	SB-47-1.5' (DUP)	SB-47-2.5'	SB-48-0.5'	SB-48-1.5'	SB-48-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	2.53 J	0.89 J	0.64 J	1.43 J	2.51 J	<0.37	<0.37	<0.37	0.64 J	<0.37	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	160	107	109	152	86.0	96.6	104	121	113	108	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.14	1.85	1.69	1.00	1.47	1.55	1.61	1.96	1.82	1.88	2,100	71	--
	Chromium	6010B	mg/kg	21.5	24.7	31.2	22.2	21.4	26.6	29.5	30.3	25.7	32.2	36,000	120,000	100***
	Cobalt	6010B	mg/kg	12.8	10.3	11.9	12.7	8.89	11.5	11.3	11.1	10.9	11.8	NE	23	--
	Copper	6010B	mg/kg	29.7	18.2	19.5	18.8	15.5	17.7	18.6	18.9	18.5	20.7	NE	3,100	--
	Lead	6010B	mg/kg	35.6	4.78	5.95	15.0	3.38	4.69	6.18	11.5	5.20	5.95	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.22 J	0.84 J	1.02	0.21 J	0.50 J	0.64 J	0.83 J	0.83 J	0.87 J	1.54	NE	390	--
	Nickel	6010B	mg/kg	15.7	19	24.3	15.4	17	21.7	24.5	20	20.5	25.2	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	1.81 J	<0.42	<0.42	0.93 J	0.50 J	<0.42	<0.42	<0.42	0.59 J	1.04 J	NE	0.78	--
	Vanadium	6010B	mg/kg	40.4	38.7	53.0	44.1	34.5	45.1	48.7	44.8	40.4	51.9	390	390	--
	Zinc	6010B	mg/kg	87.5	63.5	60.1	63.3	44.9	54.5	62.4	68.8	55.6	61.8	NE	23,000	--
Arsenic		6020	mg/kg	2.48	5.17	8.21	25.9	6.96	6.38	8.97	30.6	5.69	7.14	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-46			SB-47				SB-48			Residential Screening Levels		
				SB-46-0.5'	SB-46-1.5'	SB-46-2.5'	SB-47-0.5'	SB-47-1.5'	SB-47-1.5' (DUP)	SB-47-2.5'	SB-48-0.5'	SB-48-1.5'	SB-48-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	0.0066	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	0.0043 J	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	NE	0.49	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-49				SB-50		SB-51		SB-52		Residential Screening Levels		
				SB-49-0.5'	SB-49-0.5' (DUP)	SB-49-1.5'	SB-49-2.5'	SB-50-0.5'	SB-50-1.5'	SB-51-0.5'	SB-51-1.5'	SB-52-0.5'	SB-52-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	2.32 J	0.85 J	2.45 J	<0.37	0.64 J	<0.37	0.96 J	<0.37	<0.37	<0.37	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	123	121	116	128	183	179	108	131	199	136	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	2.12	1.87	1.72	1.70	1.52	2.24	1.96	1.78	1.62	1.90	2,100	71	--
	Chromium	6010B	mg/kg	31.4	28.3	29.3	35.8	24.6	31.2	23.6	37.7	27.4	29.4	36,000	120,000	100***
	Cobalt	6010B	mg/kg	10.8	10.9	12.2	11.4	12.6	13.7	9.24	13.7	14.5	12.1	NE	23	--
	Copper	6010B	mg/kg	21.6	19.2	20.0	19.7	21.00	683	20.2	24.1	29.4	19.6	NE	3,100	--
	Lead	6010B	mg/kg	5.64	4.15	4.94	5.59	21.9	56.4	11.4	5.18	40.4	5.27	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	0.91 J	0.84 J	1.17	0.87 J	0.43 J	0.65 J	0.63 J	0.71 J	<0.13	1.71	NE	390	--
	Nickel	6010B	mg/kg	23.2	21.5	25.1	26.9	19.6	21.4	18.9	27.8	19.0	21.0	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	<0.42	<0.42	<0.42	<0.42	1.83 J	1.11 J	<0.42	<0.42	<0.42	3.06	NE	0.78	--
	Vanadium	6010B	mg/kg	46.2	43.9	50.6	55.2	46.1	43.8	35.0	62.6	43.5	49.8	390	390	--
	Zinc	6010B	mg/kg	70.1	55.4	63.2	63.0	80.0	121	66.2	72.9	123	53.7	NE	23,000	--
Arsenic		6020	mg/kg	6.46	5.32	6.30	8.66	69.0	6.98	218	10.7	233	6.30	12*	12*	12*
Arsenic STLC (in milligrams/Liter)		6020	mg/L	--	--	--	--	2.110	--	9.960	--	10.400	--			
Arsenic TCLP (in milligrams/Liter)		6020	mg/L	--	--	--	--	--	--	2.450	--	2.890	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-49				SB-50		SB-51		SB-52		Residential Screening Levels		
				SB-49-0.5'	SB-49-0.5' (DUP)	SB-49-1.5'	SB-49-2.5'	SB-50-0.5'	SB-50-1.5'	SB-51-0.5'	SB-51-1.5'	SB-52-0.5'	SB-52-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	NE	0.49	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-53			SB-54		SB-55			SB-56 (1)		Residential Screening Levels		
				SB-53-0.5'	SB-53-0.5' (DUP)	SB-53-1.5'	SB-54-0.5'	SB-54-1.5'	SB-55-0.5'	SB-55-1.5'	SB-55-1.5' (DUP)	SB-56-0.5'	SB-56-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	1.76 J	2.47 J	<0.37	1.31 J	<0.37	<0.37	0.72 J	0.49 J	<0.37	<0.37	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	127	166	110	146	115	102	101	88.4	129	98.2	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.46	1.67	1.78	2.28	1.66	1.73	1.53	1.22	1.83	1.49	2,100	71	--
	Chromium	6010B	mg/kg	27.9	32.9	25.9	31.7	26.3	23.8	25.5	26.4	32.4	24.9	36,000	120,000	100***
	Cobalt	6010B	mg/kg	11.5	11.7	9.88	10.9	9.10	8.61	10.3	9.15	10.5	9.12	NE	23	--
	Copper	6010B	mg/kg	28.2	35.7	17.6	32.0	18.9	20.0	17.3	17.3	19.6	14.8	NE	3,100	--
	Lead	6010B	mg/kg	3.08	44.1	3.54	23.4	4.93	5.85	4.48	2.40	6.05	3.59	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	1.05	1.17	1.02	0.87 J	0.56 J	0.33 J	0.83 J	0.69 J	0.57 J	0.15 J	NE	390	--
	Nickel	6010B	mg/kg	1.59	19.4	17.5	18.9	19.5	18.2	19.1	16.4	18.1	17.0	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	1.00 J	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	0.82	1.64 J	<0.42	0.71 J	0.63 J	0.47 J	0.75 J	0.45 J	0.80	<0.42	NE	0.78	--
	Vanadium	6010B	mg/kg	40.8	47.4	39.1	48.4	40.7	36.9	41.4	40.7	48.9	37.0	390	390	--
	Zinc	6010B	mg/kg	6.79	146	57.9	88.6	50.1	59.2	47.4	49.0	46.6	40.1	NE	23,000	--
Arsenic		6020	mg/kg	129	252	6.61	124	5.59	59.7	6.90	6.16	6.45	5.90	12*	12*	12*
Arsenic STLC (in milligrams/Liter)		6020	mg/L	--	--	--	5.090	--	2.610	--	--	--	--			
Arsenic TCLP (in milligrams/Liter)		6020	mg/L	--	--	--	1.040	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	0.05 J	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte	EPA Method	Unit	SB-53			SB-54		SB-55			SB-56 (1)		Residential Screening Levels		
			SB-53-0.5'	SB-53-0.5' (DUP)	SB-53-1.5'	SB-54-0.5'	SB-54-1.5'	SB-55-0.5'	SB-55-1.5'	SB-55-1.5' (DUP)	SB-56-0.5'	SB-56-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0016	<0.0016	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0015	<0.0015	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	NE	0.070	RL
Polychlorinated Biphenyls (PCBs)	Lindane (Gamma-BHC)	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	NE	0.49	RL
	PCB-1016	8082	mg/kg	--	--	--	--	--	<0.0030	<0.0030	<0.0030	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	--	<0.0140	<0.0140	<0.0140	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	--	<0.0095	<0.0095	<0.0095	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	--	<0.0140	<0.0140	<0.0140	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	--	<0.0190	<0.0190	<0.0190	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	--	<0.0200	<0.0200	<0.0200	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	--	<0.0069	<0.0069	<0.0069	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	--	<0.0170	<0.0170	<0.0170	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	--	<0.0086	<0.0086	<0.0086	--	NE	NE	RL



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-56 (2)	SB-57			SB-58			SB-60			Residential Screening Levels		
				SB-56-2.5'	SB-57-0.5'	SB-57-1.5'	SB-57-2.5'	SB-58-0.5'	SB-58-1.5'	SB-58-2.5'	SB-60-0.5'	SB-60-0.5' (DUP)	SB-60-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	0.67 J	<0.37	<0.37	2.19 J	<0.37	1.97 J	1.00 J	1.05 J	2.49 J	1.84 J	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	115	581	<0.23	90.5	103	135	122	160	123	129	NE	15,000	--
	Beryllium	6010B	mg/kg	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1,600	160	--
	Cadmium	6010B	mg/kg	1.84	1.16	<0.21	1.36	1.42	2.10	1.93	1.68	1.08	1.88	2,100	71	--
	Chromium	6010B	mg/kg	34.4	8.25	<0.13	27.0	26.2	35.4	29.4	33.3	35.8	28.3	36,000	120,000	100***
	Cobalt	6010B	mg/kg	11.2	17.2	<0.19	9.33	8.94	11.8	11.6	12.4	10.9	10.4	NE	23	--
	Copper	6010B	mg/kg	24.9	19.9	17.1	16.6	21.1	24.3	21.8	21.2	20.8	20.1	NE	3,100	--
	Lead	6010B	mg/kg	6.20	7.52	4.49	4.07	16.4	16.4	4.51	41.1	8.64	3.25	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	1.21	<0.13	<0.13	0.91 J	0.95 J	1.57	0.75 J	1.10	0.21 J	0.77 J	NE	390	--
	Nickel	6010B	mg/kg	24.8	7.08	48.0	19.8	17.4	23.6	20.5	19.2	20.6	16.4	15,000	1,500	--
	Selenium	6010B	mg/kg	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	NE	390	--
	Silver	6010B	mg/kg	<0.13	<0.13	0.17 J	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	390	390	--
	Thallium	6010B	mg/kg	0.56 J	0.81 J	<0.42	<0.42	1.29 J	<0.42	<0.42	0.89 J	<0.42	<0.42	NE	0.78	--
	Vanadium	6010B	mg/kg	55.5	32.0	<0.37	44.5	44.3	59.6	47.9	53.2	40.1	42.6	390	390	--
	Zinc	6010B	mg/kg	58.3	54.4	43.2	44.6	72.0	73.1	54.4	71.0	58.2	51.8	NE	23,000	--
Arsenic		6020	mg/kg	7.86	12.5	5.38	8.23	7.17	9.06	6.36	8.51	8.06	5.98	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471A	mg/kg	<0.039	<0.039	<0.039	<0.039	0.05 J	<0.039	<0.039	<0.039	<0.039	<0.039	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	--	NE	0.30	0.30



Table 6
Summary of Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
Los Angeles, CA

Analyte		EPA Method	Unit	SB-56 (2)	SB-57			SB-58			SB-60			Residential Screening Levels		
				SB-56-2.5'	SB-57-0.5'	SB-57-1.5'	SB-57-2.5'	SB-58-0.5'	SB-58-1.5'	SB-58-2.5'	SB-60-0.5'	SB-60-0.5' (DUP)	SB-60-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Organochlorine Pesticides (OCPs)	4,4'-DDD	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	1.9	RL
	4,4'-DDE	8081A	mg/kg	<0.002	<0.002	<0.002	<0.002	0.0039 J	0.0016	<0.002	<0.002	<0.002	<0.002	NE	2.0	RL
	4,4'-DDT	8081A	mg/kg	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	NE	1.9	RL
	a-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.086	RL
	a-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Aldrin	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.039	RL
	b-BHC	8081A	mg/kg	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	NE	0.30	RL
	Chlordane (technical)	8081A	mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	0.160	<0.035	<0.035	0.44	1.7	RL
	d-BHC	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Dieldrin	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	0.034	RL
	Endosulfan I	8081A	mg/kg	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	NE	NE	RL
	Endosulfan II	8081A	mg/kg	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	NE	NE	RL
	Endosulfan sulfate	8081A	mg/kg	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	NE	NE	RL
	Endrin	8081A	mg/kg	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	NE	19	RL
	Endrin aldehyde	8081A	mg/kg	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	NE	NE	RL
	Endrin Ketone	8081A	mg/kg	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	NE	NE	RL
	g-Chlordane	8081A	mg/kg	--	--	--	--	--	--	--	--	--	--			
	Heptachlor	8081A	mg/kg	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	NE	0.13	RL
	Heptachlor epoxide	8081A	mg/kg	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	NE	0.070	RL
	Lindane (Gamma-BHC)	8081A	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NE	0.57	RL
	Methoxychlor	8081A	mg/kg	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	<0.0092	NE	320	RL
	Toxaphene	8081A	mg/kg	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	NE	0.49	RL
Polychlorinated Biphenyls (PCBs)	PCB-1016	8082	mg/kg	--	--	--	--	<0.003	<0.003	<0.003	--	--	--	NE	4.1	RL
	PCB-1221	8082	mg/kg	--	--	--	--	<0.014	<0.014	<0.014	--	--	--	NE	0.20	RL
	PCB-1232	8082	mg/kg	--	--	--	--	<0.0095	<0.0095	<0.0095	--	--	--	NE	0.17	RL
	PCB-1242	8082	mg/kg	--	--	--	--	<0.014	<0.014	<0.014	--	--	--	NE	0.23	RL
	PCB-1248	8082	mg/kg	--	--	--	--	<0.019	<0.019	<0.019	--	--	--	NE	0.23	RL
	PCB-1254	8082	mg/kg	--	--	--	--	<0.020	<0.020	<0.020	--	--	--	NE	0.24	RL
	PCB-1260	8082	mg/kg	--	--	--	--	<0.0069	<0.0069	<0.0069	--	--	--	NE	0.24	RL
	PCB-1262	8082	mg/kg	--	--	--	--	<0.017	<0.017	<0.017	--	--	--	NE	NE	RL
	PCB-1268	8082	mg/kg	--	--	--	--	<0.0086	<0.0086	<0.0086	--	--	--	NE	NE	RL



Table 6
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Notes: Select samples analyzed for California Code of Regulations Title 22 (CAM 17) Metals by EPA Method 6010B/7470A by Enthalpy Associated Laboratories (Enthalpy) in Orange, California Select samples analyzed for Arsenic by EPA Method 6020 by Enthalpy Select samples analyzed for Mercury by EPA Method 7471A by Enthalpy Select samples analyzed for Organochlorine Pesticides (OCPs) by EPA Method 8081A by Enthalpy Select samples analyzed for Polychlorinated Biphenyls (PCBs) by EPA Method 8082 by Enthalpy RED indicates the value exceeds the DTSC SLs J: estimated value between the method detection limit (MDL) and laboratory reporting limit MDL: method detection limit mg/kg: milligrams per kilogram ND: not detected PQL: practical quantification limit RWQCB: Regional Water Quality Control Board RDL: reporting detection limit SL: Screening Levels (1): California Department of Toxic Substance Control (DTSC) Office of Human and Ecological Risk (HERO, 2018) RSLs Human Health Risk Assessment (HHRA) Note 3 (2): United States Environmental Protection Agency (EPA) Regional Screening Levels for Residential Soil (RSL-mg/kg) November 2017 (3): Los Angeles Unified School District Environmental Import/Export Materials Testing Section 01 4524 dated August 29, 2018 *: Arsenic screening level based on California background level **: LAUSD limit requiring further analysis for leaching potential ***: LAUSD limit before testing for Hexavalent Chromium ****: Run TTLC. If TTLC soil concentration is greater than TTLC limit, it is a California Regulated Hazardous Waste. If the TTCL soil concentration is less than TTLC limit, compare to 10x the STLC limit. If soil concentration is greater than 10x the STLC limit, conduct WET test. If soil concentration does not pass WET test it is considered a California Regulated Hazardous Waste. If the soil concentration is less than 10x the STLC limit or passes the WET test, compare the concentration to 20x the TCLP limit. If the soil concentration is less than 20x the TCLP limit, the soil is considered non-hazardous and may be used at school sites. However, if the soil concentration is greater than 20x the TCLP limit, a TCLP leaching test is required. If the soil concentration results from the TCLP leaching test are lower than the TCLP limit, then the waste cannot leach enough chemical into soil and groundwater to be considered a toxic hazardous waste and therefore is not a Federal-Regulated Hazardous Waste and may be used at school sites. However, if the soil concentration result from the leaching test is greater than the TCLP Limit, it is considered a Federal-Regulated (RCRA) Hazardous Waste.

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-61		SB-62		SB-63		SB-64			Residential Screening Levels		
				SB-61-0.5'	SB-61-1.5'	SB-62-0.5'	SB-62-1.5'	SB-63-0.5'	SB-63-1.5'	SB-64-0.5'	SB-64-1.5'	SB-64-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	9.85	6.64	14.7	8.73	25.8	8.22	7.18	8.81	9.64	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	12*	12*	12*
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	NE	0.78	--
Mercury		7471	mg/kg	--	--	--	--	--	--	--	--	--	1	11	--
Hexavalent Chromium		7199	mg/kg	--	--	--	--	--	--	--	--	--	NE	0.30	0.30

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-65			SB-66			SB-67			SB-68			Residential Screening Levels		
				SB-65-0.5'	SB-65-1.0'	SB-65-1.5'	SB-66-0.5'	SB-66-1.0'	SB-66-1.5'	SB-67-0.5'	SB-67-1.0'	SB-67-1.5'	SB-68-0.5'	SB-68-1.0'	SB-68-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	7.94	190	11.8	33.4	144	12.6	68.8	271	74.4	8.18	9.45	8.24	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
Arsenic TCLP (EPA 1311/3010A)		6010B	mg/L	--	1.689	--	--	1.815	--	--	3.89	--	--	--	--			
Arsenic STLC		6010B	mg/L	--	9.43	--	--	9.39	--	2.38	16.1	2.70	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-69			SB-70			SB-71			SB-72			Residential Screening Levels		
				SB-69-0.5'	SB-69-1.0'	SB-69-1.5'	SB-70-0.5'	SB-70-1.0'	SB-70-1.5'	SB-71-0.5'	SB-71-1.0'	SB-71-1.5'	SB-72-0.5'	SB-72-1.0'	SB-72-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	260	8.34	9.13	115	6.98	9.27	63.0	8.77	27.0	32.1	13.0	16.7	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
Arsenic TCLP (EPA 1311/3010A)		6010B	mg/L	1.157	--	--	1.405	--	--	--	--	--	--	--	--			
Arsenic STLC		6010B	mg/L	6.67	--	--	6.22	--	--	2.51	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-73			SB-74			SB-75			SB-76			Residential Screening Levels		
				SB-73-0.5'	SB-73-1.0'	SB-73-1.5'	SB-74-0.5'	SB-74-1.0'	SB-74-1.5'	SB-75-0.5'	SB-75-1.0'	SB-75-1.5'	SB-76-0.5'	SB-76-1.0'	SB-76-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	84.2	9.70	6.59	47.1	8.41	20.9	111	9.16	4.71	53.9	5.09	8.73	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
Arsenic TCLP (EPA 1311/3010A)		6010B	mg/L	--	--	--	--	--	--	0.850	--	--	--	--	--			
Arsenic STLC		6010B	mg/L	3.58	--	--	--	--	--	4.60	--	--	2.42	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-77			SB-78			SB-79			SB-80			Residential Screening Levels		
				SB-77-0.5'	SB-77-1.0'	SB-77-1.5'	SB-78-0.5'	SB-78-1.0'	SB-78-1.5'	SB-79-0.5'	SB-79-1.0'	SB-79-1.5'	SB-80-0.5'	SB-80-1.0'	SB-80-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	5.74	8.23	5.30	5.56	6.5	7.22	9.60	10.7	7.53	13.4	5.84	7.95	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
Arsenic TCLP (EPA 1311/3010A)		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--			
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-81			SB-82			SB-83			SB-84			Residential Screening Levels		
				SB-81-0.5'	SB-81-1.0'	SB-81-1.5'	SB-82-0.5'	SB-82-1.0'	SB-82-1.5'	SB-83-0.5'	SB-83-1.0'	SB-83-1.5'	SB-84-0.5'	SB-84-1.0'	SB-84-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	18.7	19.8	5.68	12.1	6.78	4.94	7.61	6.99	7.49	153	71.6	10.9	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
Arsenic TCLP (EPA 1311/3010A)		6010B	mg/L	--	--	--	--	--	--	--	--	--	1.497	--	--			
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	--	--	8.52	3.88	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-33A		SB-33B		SB-33C			Residential Screening Levels		
				SB-33A-0.5'	SB-33A-1.5'	SB-33B-0.5'	SB-33B-1.5'	SB-33C-0.5'	SB-33C-0.5' (Dup)	SB-33C-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	5.02	--	6.18	--	29.2	23.5	11.1	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-33D		SB-37A		SB-37B			SB-37C		SB-37D		Residential Screening Levels		
				SB-33D-0.5'	SB-33D-1.5'	SB-37A-0.5'	SB-37A-1.5'	SB-37B-0.5'	SB-37B-0.5' (Dup)	SB-37B-1.5'	SB-37C-0.5'	SB-37C-1.5'	SB-37D-0.5'	SB-37D-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	5.45	--	5.44	--	27.5	32.7	--	89.9	7.61	31.8	7.90	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	4.080	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-39A			SB-39B			SB-39D			SB-42A			Residential Screening Levels		
				SB-39A-0.5'	SB-39A-1.5'	SB-39A-2.5'	SB-39B-0.5'	SB-39B-1.5'	SB-39B-2.5'	SB-39D-0.5'	SB-39D-1.5'	SB-39D-2.5'	SB-42A-0.5'	SB-42A-1.5'	SB-42A-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	29.0	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	6.16	--	--	5.70	--	--	8.26	--	--	99.7	5.39	6.81	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	--	--	4.080	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-42B			SB-42C				SB-42D			SB-44B				Residential Screening Levels		
				SB-42B-0.5'	SB-42B-1.5'	SB-42B-2.5'	SB-42C-0.5'	SB-42C-1.5'	SB-42C-1.5' (DUP)	SB-42C-2.5'	SB-42D-0.5'	SB-42D-1.5'	SB-42D-2.5'	SB-44B-0.5'	SB-44B-1.5'	SB-44B-1.5' (Dup)	SB-44B-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	13.2	--	--	12.3	--	--	--	39.5	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	19.1	--	--	35.6	6.96	--	7.35	33.8	6.72	6.66	4.67	--	--	--	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-44D			SB-47B				SB-47C			SB-47D			Residential Screening Levels		
				SB-44D-0.5'	SB-44D-1.5'	SB-44D-2.5'	SB-47B-0.5'	SB-47B-0.5' (Dup)	SB-47B-1.5'	SB-47B-2.5'	SB-47C-0.5'	SB-47C-1.5'	SB-47C-2.5'	SB-47D-0.5'	SB-47D-1.5'	SB-47D-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	15.9	6.66	7.19	13.2	27.0	--	--	131	6.28	8.30	6.18	--	--	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	6.980	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	1.450	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-48B			SB-48C			SB-48D			SB-50A		Residential Screening Levels		
				SB-48B-0.5'	SB-48B-1.5'	SB-48B-2.5'	SB-48C-0.5'	SB-48C-1.5'	SB-48C-2.5'	SB-48D-0.5'	SB-48D-1.5'	SB-48D-2.5'	SB-50A-0.5'	SB-50A-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	15.5	7.35	6.59	5.90	--	--	15.3	6.22	7.84	22.8	6.24	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-50B		SB-50C		SB-50D			SB-51A		SB-51B		Residential Screening Levels		
				SB-50B-0.5'	SB-50B-1.5'	SB-50C-0.5'	SB-50C-1.5'	SB-50D-0.5'	SB-50D-0.5' (Dup)	SB-50D-1.5'	SB-51A-0.5'	SB-51A-1.5'	SB-51B-0.5'	SB-51B-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	633	56.6	7.71	--	69.0	32.1	6.39	26.8	--	395	11.0	12*	12*	12*
Arsenic STLC		6010B	mg/L	9.310	--	--	--	2.590	--	--	--	--	38.100	--			
Arsenic TCLP		6010B	mg/L	2.110	--	--	--	--	--	--	--	--	3.850	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-51C		SB-51D		SB-52A		SB-52B		SB-52C		SB-52D		Residential Screening Levels		
				SB-51C-0.5'	SB-51C-1.5'	SB-51D-0.5'	SB-51D-1.5'	SB-52A-0.5'	SB-52A-1.5'	SB-52B-0.5'	SB-52B-1.5'	SB-52C-0.5'	SB-52C-1.5'	SB-52D-0.5'	SB-52D-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	136	8.42	92.9	8.86	15.0	--	5.52	--	27.7	--	23.5	--	12*	12*	12*
Arsenic STLC		6010B	mg/L	6.000	--	4.240	--	--	--	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	1.000	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-53A		SB-53B			SB-53D		SB-54A		SB-54B		SB-54C		Residential Screening Levels		
				SB-53A-0.5'	SB-53A-1.5'	SB-53B-0.5'	SB-53B-1.5'	SB-53B-1.5' (Dup)	SB-53D-0.5'	SB-53D-1.5'	SB-54A-0.5'	SB-54A-1.5'	SB-54B-0.5'	SB-54B-1.5'	SB-54C-0.5'	SB-54C-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	54.9	--	65.3	--	--	136	67.6	5.35	--	8.83	--	5.65	--	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	--	8.990	4.890	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	1.910	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-54D		SB-55A		SB-55B		SB-55C			SB-55D		Residential Screening Levels		
				SB-54D-0.5'	SB-54D-1.5'	SB-55A-0.5'	SB-55A-1.5'	SB-55B-0.5'	SB-55B-1.5'	SB-55C-0.5'	SB-55C-1.5'	SB-55C-1.5' (Dup)	SB-55D-0.5'	SB-55D-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	9.40	--	6.41	--	87.3	8.35	55.4	7.75	--	21.1	6.96	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	--	3.760	--	2.280	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-57A			SB-57B			SB-57C				SB-57D			Residential Screening Levels		
				SB-57A-0.5'	SB-57A-1.5'	SB-57A-2.5'	SB-57B-0.5'	SB-57B-1.5'	SB-57B-2.5'	SB-57C-0.5'	SB-57C-1.5'	SB-57C-1.5' (Dup)	SB-57C-2.5'	SB-57D-0.5'	SB-57D-1.5'	SB-57D-2.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	6.03	--	--	151	5.42	--	6.95	--	--	--	6.86	--	--	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	5.600	--	--	--	--	--	--	--	--	--			
Arsenic TCLP		6010B	mg/L	--	--	--	0.791	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-37C2		SB-37D2			SB-37C3		SB-42A2		SB-42D2		Residential Screening Levels		
				SB-37C2-0.5'	SB-37C2-1.5'	SB-37D2-0.5'	SB-37D2-0.5' (DUP)	SB-37D2-1.5'	SB-37C3-0.5'	SB-37C3-1.5'	SB-42A2-0.5'	SB-42A2-1.5'	SB-42D2-0.5'	SB-42D2-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	189	38.2	57.4	48.6	35.5	136	45.3	43.2	5.37	61.9	7.52	12*	12*	12*
Arsenic STLC		6010B	mg/L	14.2	--	2.68	--	--	--	--	--	--	2.99	--			
Arsenic TCLP		6010B	mg/L	1.766	--	--	--	--	--	--	--	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-50A2			SB-50B2		SB-50B3		SB-50AB2			SB-53D2		Residential Screening Levels		
				SB-50A2-0.5'	SB-50A2-1.5'	SB-50A2-2.5'	SB-50B2-0.5'	SB-50B2-1.5'	SB-50B3-0.5'	SB-50B3-1.5'	SB-50AB2-0.5'	SB-50AB2-0.5' (DUP)	SB-50AB2-1.5'	SB-53D2-0.5'	SB-53D2-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	9.94	--	--	140	5.62	9.12	8.33	6.34	14.10	6.02	118	7.12	12*	12*	12*
Arsenic STLC		6010B	mg/L	--	--	--	7.78	--	--	--	--	--	--	5.30	--			
Arsenic TCLP		6010B	mg/L	--	--	--	1.465	--	--	--	--	--	--	0.907	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Analyte		EPA Method	Unit	SB-55B2		SB-55C2		SB-57B2		Residential Screening Levels		
				SB-55B2-0.5'	SB-55B2-1.5'	SB-55C2-0.5'	SB-55C2-1.5'	SB-57B2-0.5'	SB-57B2-1.5'	DTSC ⁽¹⁾	EPA ⁽²⁾	LAUSD ⁽³⁾
Title 22 (CAM 17) Metals	Antimony	6010B	mg/kg	--	--	--	--	--	--	NE	31	--
	Arsenic	6010B	mg/kg	--	--	--	--	--	--	12*	12*	12*
	Barium	6010B	mg/kg	--	--	--	--	--	--	NE	15,000	--
	Beryllium	6010B	mg/kg	--	--	--	--	--	--	1,600	160	--
	Cadmium	6010B	mg/kg	--	--	--	--	--	--	2,100	71	--
	Chromium	6010B	mg/kg	--	--	--	--	--	--	36,000	120,000	100***
	Cobalt	6010B	mg/kg	--	--	--	--	--	--	NE	23	--
	Copper	6010B	mg/kg	--	--	--	--	--	--	NE	3,100	--
	Lead	6010B	mg/kg	--	--	--	--	--	--	80	400	80/50**
	Lead STLC (in milligrams/Liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Lead TCLP (in milligrams/liter)	6010B	mg/L	--	--	--	--	--	--	80	400	80/50**
	Molybdenum	6010B	mg/kg	--	--	--	--	--	--	NE	390	--
	Nickel	6010B	mg/kg	--	--	--	--	--	--	15,000	1,500	--
	Selenium	6010B	mg/kg	--	--	--	--	--	--	NE	390	--
	Silver	6010B	mg/kg	--	--	--	--	--	--	390	390	--
	Thallium	6010B	mg/kg	--	--	--	--	--	--	NE	0.78	--
	Vanadium	6010B	mg/kg	--	--	--	--	--	--	390	390	--
	Zinc	6010B	mg/kg	--	--	--	--	--	--	NE	23,000	--
Arsenic		6020	mg/kg	86.4	7.83	128	17.50	99.3	5.01	12*	12*	12*
Arsenic STLC		6010B	mg/L	4.08	--	6.67	--	4.93	--			
Arsenic TCLP		6010B	mg/L	--	--	1.556	--	--	--			
Thallium		6020	mg/kg	--	--	--	--	--	--	NE	0.78	--

Table 7
Summary of Additional Soil Characterization Analytical Results
Los Angeles Unified School District
Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, CA

Notes:

Select samples analyzed for Lead by EPA Method 6010B by Enthalpy Associated Laboratories (Enthalpy) in Orange, California

Select samples analyzed for Arsenic by EPA Method 6020 by Enthalpy

Select samples analyzed for Arsenic by EPA Method 6010B by Enthalpy

RED indicates the value exceeds the DTSC SLs

J: estimated value between the method detection limit (MDL) and laboratory reporting limit

MDL: method detection limit

mg/kg: milligrams per kilogram

ND: not detected

PQL: practical quantification limit

RWQCB: Regional Water Quality Control Board

RDL: reporting detection limit

SL: Screening Levels

(1): California Department of Toxic Substance Control (DTSC) Office of Human and Ecological Risk (HERO, 2018) RSLs Human Health Risk Assessment (HHRA) Note 3

(2): United States Environmental Protection Agency (EPA) Regional Screening Levels for Residential Soil (RSL-mg/kg) November 2017

(3): Los Angeles Unified School District Environmental Import/Export Materials Testing Section 01 4524 dated August 29, 2018

*: Arsenic screening level based on California background level

**: LAUSD limit requiring further analysis for leaching potential

***: LAUSD limit before testing for Hexavalent Chromium

****: Run TTLC. If TTLC soil concentration is greater than TTLC limit, it is a California Regulated Hazardous Waste. If the TTCL soil concentration is less than TTLC limit, compare to 10x the STLC limit. If soil concentration is greater than 10x the STLC limit, conduct WET test. If soil concentration does not pass WET test it is considered a California Regulated Hazardous Waste. If the soil concentration is less than 10x the STLC limit or passes the WET test, compare the concentration to 20x the TCLP limit. If the soil concentration is less than 20x the TCLP limit, the soil is considered non-hazardous and may be used at school sites. However, if the soil concentration is greater than 20x the TCLP limit, a TCLP leaching test is required. If the soil concentration results from the TCLP leaching test are lower than the TCLP limit, then the waste cannot leach enough chemical into soil and groundwater to be considered a toxic hazardous waste and therefore is not a Federal-Regulated Hazardous Waste and may be used at school sites. However, if the soil concentration result from the leaching test is greater than the TCLP Limit, it is considered a Federal-Regulated (RCRA) Hazardous Waste.

Table 8
Estimated Volumes of Impacted Soil
Shenandoah Street Elementary School
Los Angeles, CA

Assessment Area of Property	Contaminant of Concern	Boring Area	Corresponding Color on Site Plan	Minimum Excavation Depth (ft.)	Approximate Surface Area (ft ²)	Approximate Volume (ft ³)	Approximate Volume (yds ³)	Designated Disposal Scenario
North	Lead	SB-1, SB-5, SB-7	Orange	1.0	1,050	1,050	39	Cal Haz
	Lead	SB-3, SB-15, SB-30, SB-42	Green	1.0	675	675	25	Non Haz
South	Arsenic	SB-37, SB-51/SB-52/SB-53, SB-53, SB-54, SB-57B, SB-69/SB-70	Yellow	1.0	18,835	18,835	698	Cal Haz
	Arsenic	SB-50, SB-67	Pink	2.0	2,500	5,000	185	Cal Haz
	Arsenic	SB-33, SB-37/SB-39/SB-47/SB-48, SB-43/SB-44/SB-33, SB-55/SB-72/SB-74/SB-75, SB-57, SB-63	Blue	1.0	58,340	58,340	2,160	Non Haz
Total Estimated Removal Volume from PEA and Additional Assessments (yds ³)								3,107
Estimated Bulking During Excavation*								10%
Estimated Post Excavation Soil Volume to be Removed and Disposed (yds ³)								3,417
<p>NOTES: Lead (Pb) Site Screening Level: 80 mg/kg Arsenic (As) Site Screening Level: 12 mg/kg ft. = feet ft³ = cubic feet ft² = square feet yds³ = cubic yards Non Haz = Non Hazardous Disposal Designation Cal Haz = California Hazardous (Non-RCRA) Disposal Designation * = based on a potential bulk factor of 10% for sandy soil</p>								



APPENDIX A
PEA Scoping Document



ES Engineering Services, LLC
1 Park Plaza, Suite 1000
Irvine, CA 92614
t 714.919.6500
f 949.988.3514

August 22, 2017

Ms. Jennifer Hilario
Site Assessment Project Manager
Los Angeles Unified School District
Office of Environmental Health & Safety
Contract Professional
333 South Beaudry, 21st Floor (21-223-07)
Los Angeles, CA 90017

Proj. No. 191395

Preliminary Endangerment Assessment Equivalent (PEA-E) Scoping Document

Shenandoah Street Elementary School
Los Angeles, California

INTRODUCTION

In July 2017 the ES Engineering Services, LLC (ES) conducted a Phase I Environmental Site Assessment (Phase I ESA) for the Los Angeles Unified School District (District), for proposed construction at the Shenandoah Street Elementary School (Site) in Los Angeles, California (**Figure 1**). The District is preparing to demolish the existing classroom buildings that will make way for the construction of new classroom buildings on the property. ES prepared this *Preliminary Endangerment Assessment Equivalent (PEA-E) Scoping Document* (Work Scope) to evaluate potential environmental conditions and provide recommendations for assessing environmental conditions, if any, at the Site.

BACKGROUND

Based upon the findings in the Phase I ESA, prior to site construction of the Main Building in 1928, the land was utilized for agricultural purposes. Several smaller structures were located in the northeast portion of the site (current location of classroom buildings 24, 39 and 37). The North Building was constructed in 1940. Smaller classroom buildings (Classrooms 20 through 43) were constructed at separate times, from 1947 until 1991. An addition and remodeling was performed on the Main Building in 1977.

In 1978, the United States Consumer Product Safety Commission (U.S. CPSC) banned the application of paint containing more than 0.06 percent lead by weight due to lead's toxicity and damaging effects caused on the nervous system. According to the U.S. CPSC, school structures constructed prior to January 1, 1993 with paint surface coatings are assumed to have lead-based paint. Classroom buildings 9 through 12 and 46 and 47 were constructed after 1993.

Although during the site visit, the interior of each of the structure appeared to have been re-modeled, asbestos-containing materials and lead-based paint may be present in parts of each of the classroom buildings due to the known age of the structures. Rain storms, wind and

**PEA-E Scoping Document
Shenandoah Street Elementary School**

other types of weathering such as sunlight can cause leaching, paint chipping, abrasion and scraping resulting in a potential accumulation of lead in soil, generally within 7 to 10 feet from exterior walls.

The potential for organochlorine pesticide (OCP) contaminated soils resulting from the former agricultural use of the subject property and the use of termiticides applied at wood building foundations for termite control. Because of the age of some of the buildings, there is potential for the presence of pesticides and termiticides in the onsite soil and in the vicinity of the on-site buildings.

During site visits for the Phase 1 ESA, a clarifier was noted in the boiler room. Also, two pad-mounted transformers were observed at the site; a main transformer housed in a locked concrete vault located near the Main Building and a “dry-type” transformer located at the southeast corner of the playground. A third transformer was indicated on the Facilities Design Plan provided by the LAUSD and located north of the North Building. Two pole-mounted transformers were also observed on adjacent properties. Please refer to the attached **Figure 2** for the locations of the observed features.

Arsenic is naturally occurring in soils, particularly in the western United States. However, arsenic has been used in alloys of lead (for example, in car batteries and ammunition), in the production of pesticides, treated wood products, herbicides, and insecticides as an herbicide. The background soil screening level for arsenic in Southern California is 12.0 milligrams per kilogram (mg/kg - DTSC, 2008). Laboratory analysis of soil samples collected during this assessment will also be analyzed for arsenic.

The clarifier located in the boiler room will also be sampled.

WORKPLAN

This workplan was prepared and will be conducted in accordance with the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) PEA Guidance Manual (January 1994, revised October 2015). The PEA is required by the DTSC prior to issuing unrestricted land use certification to ensure that existing site conditions do not present significant risks to future students and faculty.

The site was used for agricultural purposes prior to 1928. Therefore, soil samples will be analyzed for organochlorine pesticides (OCPs). The first structures were constructed after 1928 and most were constructed prior to 1991. Lead from paint on structures developed prior to 1993 have potentially impacted nearby asphalt and soil and shallow borings are necessary to identify potential impacts. Arsenic will also be analyzed for soil samples collected from select borings. Soil samples to evaluate a potential release of polychlorinated biphenyls (PCBs) from the former or current transformers in use at the site will be collected and analyzed. Finally, because of the potential to collect and concentrate contaminants of concern (COCs) related to the use of the boiler and mentioned above, the clarifier located in the boiler room will be sampled for carbon chain total petroleum hydrocarbons (TPHcc), full scan volatile organic



**PEA-E Scoping Document
Shenandoah Street Elementary School**

Los Angeles Unified School District
Los Angeles, California

Page 3
August 22, 2017

compounds (VOCs), semi-volatile organic compounds (SVOCs), California Assessment Manual (CAM) 17 metals and PCBs.

As previously mentioned, semi-permanent classroom buildings No. 9 through 12, 46 and 47 were constructed after 1993. Consequently, it is unlikely that lead-based paint is present on exterior surfaces near these structures.

DATA COLLECTION AND EVALUATION

Methodology

A sampling and analysis program will be conducted to evaluate the potential presence of select chemical constituents in surface and shallow soils. Because the depth to groundwater beneath the Site is approximately 70 feet below ground surface (bgs), it is unlikely that groundwater has been affected by historical site activities. Consequently, groundwater assessment will not be conducted at this time. If necessary, the PEA-E Report will provide a leaching/groundwater assessment to estimate the potential for residual contamination, if present, to leach and impact groundwater at concentrations above drinking water standards. The site is not located within a methane zone, so soil vapor sampling for methane is not part of this scope.

For the PEA soil assessment, potential impacts by lead, arsenic, organochlorine pesticides (OCPs), and polychlorinated biphenyls (PCBs) will be based on a soil sampling strategy conducted in accordance with DTSC's *Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers*, dated June 9, 2006.

To determine the effects of paint fall to the ground after peeling and weathering from walls, windows, and doors, the drip zone (or area near buildings) will be sampled. The drip zone analysis measures the spatial extent of unsafe soil lead levels as you move away from exterior walls painted with lead paint. Because the site has been covered with asphalt since sometime after 1952, there is also potential for the asphalt to also contain lead.



**PEA-E Scoping Document
Shenandoah Street Elementary School**

Soil Borings

Thirty-three (33) soil borings will be advanced at the Site to assess areas of potential environmental concern (defined below). Each boring will be continuously cored to a depth of 2.5 feet bgs and soil samples collected from the surface zone (approximately 0.0 to 0.5 feet bgs) and from shallow soils (approximately 1 to 1.5 and 2 to 2.5 feet bgs). Where necessary, deeper samples will be collected from approximately 3.0 to 3.5 feet bgs and 5.0 to 5.5 feet bgs are proposed. Each proposed boring location and the corresponding soil sample analyses to be performed is described below:

- Twenty-nine soil borings (SB1 through SB29) are proposed to collect soil samples from the surface zone (approximately 0.0 to 0.5 feet bgs) and shallow zones (approximately 1 to 1.5 and 2 to 2.5 feet bgs) to evaluate the potential for lead-based paint on exterior surfaces (i.e. buildings constructed prior to 1993) and to screen for arsenic. The soil samples collected from the surface zone will be submitted to the laboratory and analyzed for lead and arsenic; the shallow zone soil samples will be archived at the laboratory for future analysis, if necessary.

The surface soil samples collected from borings SB1 through SB29 will also be analyzed for OCPs, due to the potential historic use of pesticides throughout the site. Soil samples collected and submitted for OCP analysis will be composited by the laboratory at a rate of approximately 3 samples to 1; the shallow zone soil samples will be archived at the laboratory for future analysis, if necessary.

- Soil borings SB-30 through SB-32 are proposed to collect deeper soil samples to assess impacts from transformers potentially in use in those areas prior to 1978. Soil samples will be collected from approximately 3.0 feet bgs and approximately 5.0 feet bgs. The samples collected will be submitted to the laboratory for analysis for PCBs.
- Soil boring SB-33 is proposed to collect deeper soil samples to assess potential soil impacts from the clarifier in use in the boiler room. Soil samples will be collected from approximately 3 to 3.5 feet bgs and approximately 5.0 to 5.5 feet bgs. The samples collected will be submitted to the laboratory for analysis for TPHcc, VOCs, SVOCs, CAM 17 metals and PCBs.

The resulting laboratory data will be subjected to data validation to assure that data quality objectives (DQOs) are met and that the data are suitable for use in the human health and ecological screening evaluation. Quality assurance/quality control measures will include duplicate sample laboratory analyses for lead, arsenic and PCBs at a rate of approximately 5% of the total number of samples (4 soil samples). Based on a review of the analytical results, step-out and/or deepened soil borings may be necessary to complete assessment of the COCs listed above. The proposed soil sampling locations are shown on the attached **Figure 2**. The soil sampling plan is also included in the attached **Table**.



**PEA-E Scoping Document
Shenandoah Street Elementary School**

Los Angeles Unified School District
Los Angeles, California

Page 5
August 22, 2017

REFERENCES

Determination of a Southern California Regional Background Arsenic Concentration in Soil, prepared by California Department of Toxic Substances Control (DTSC) and dated 2008.

Preliminary Endangerment Assessment Guidance Manual, prepared by California Department of Toxic Substances Control (DTSC) and dated January 1994 (revised October 2013).

Interim Guidance for Evaluation of School Sites with Potential Soil Contamination as a Result from Lead-based Paint, Organochlorine Pesticides from Termiticides and Polychlorinated Biphenyls from Electrical Transformers, prepared by DTSC and last revised on September 12, 2006.

Low-Threat Underground Storage Tank Case Closure Policy, State Water Board Resolution No. 2012-0016.



Table - Soil Sampling Plan
Shenandoah Street Elementary School
Los Angeles, CA

Boring ID	TD (ft bgs)	Pb 6010B	As 6020	OCPs 8081A	PCBs 8082	TPHcc 8015	VOCs 8260	SVOCs 8270	CAM Metals 6010B	Dup?	Sample Interval
SB-1	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-2	2.5	X	X	X						As, Pb	0-0.5', 1-1.5', 2-2.5'
SB-3	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-4	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-5	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-6	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-7	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-8	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-9	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-10	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-11	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-12	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-13	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-14	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-15	2.5	X	X	X						Pb	0-0.5', 1-1.5', 2-2.5'
SB-16	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-17	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-18	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-19	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-20	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-21	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-22	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-23	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-24	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-25	2.5	X	X	X						Pb	0-0.5', 1-1.5', 2-2.5'
SB-26	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-27	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-28	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-29	2.5	X	X	X							0-0.5', 1-1.5', 2-2.5'
SB-30	5	X			X						3', 5'
SB-31	5	X			X						3', 5'
SB-32	5	X			X						3', 5'
SB-33	5.5	X			X	X	X	X	X	PCB	3.0-3.5', 5.0-5.5'

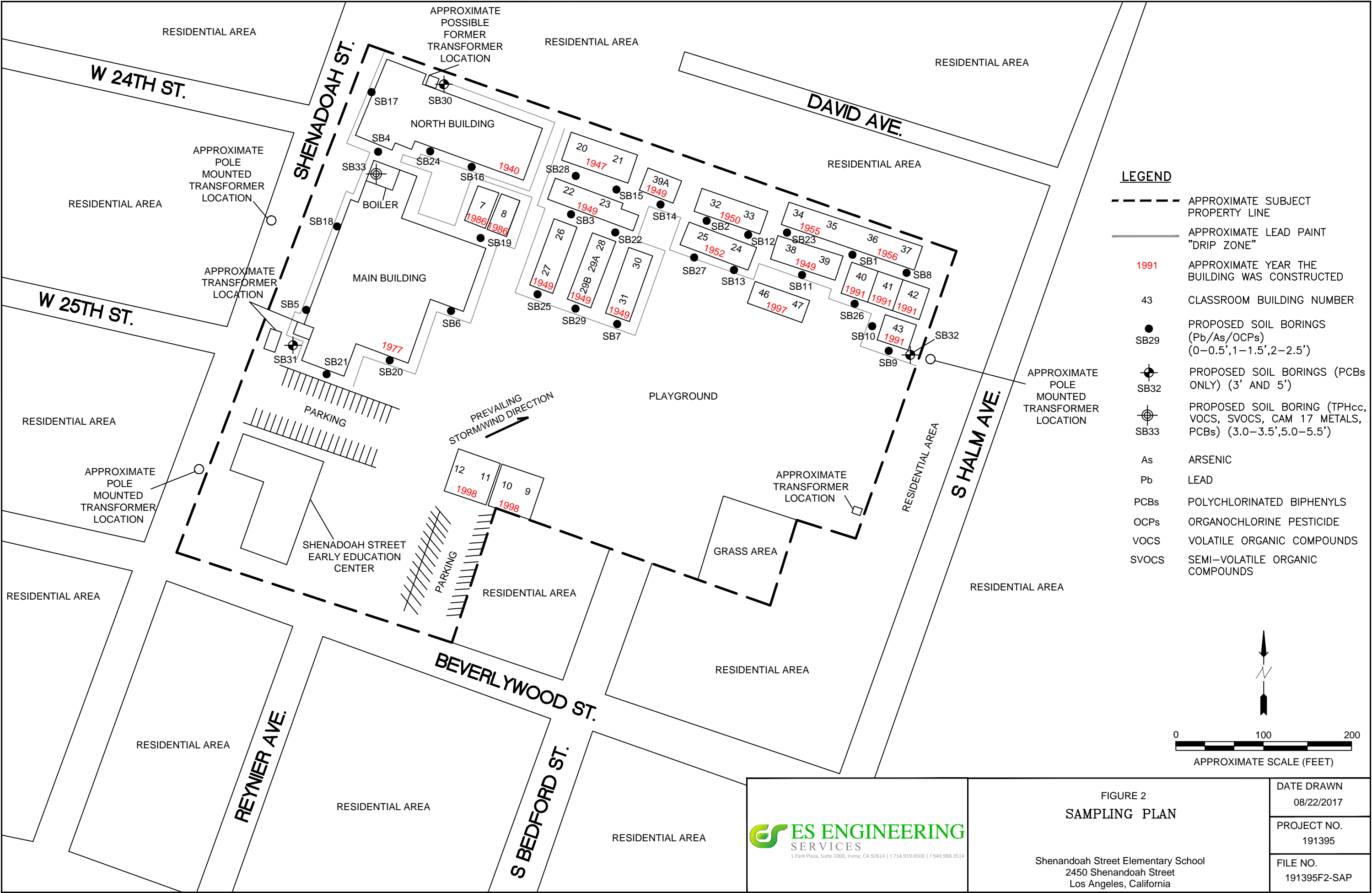
Totals: **33** **29** **10** **4** **1** **1** **1** **1**


Surface zone (0-0.5') soil samples collected for AS/Pb/OCP will be submitted to the laboratory for analysis;
shallow zone (1-1.5' and 2-2.5') soil samples will be archived at the laboratory for future analysis, if necessary.

Dups from the 0-0.5' or 1.5-2' soil horizons

All locations require Asphalt/Concrete coring







ES ENGINEERING
SERVICES
1 Park Plaza, Suite 1000, Irvine, CA 92614 | t 714.919.6500 | f 949.988.3514

FIGURE 2
SAMPLING PLAN

Shenandoah Street Elementary School
2450 Shenandoah Street
Los Angeles, California

DATE DRAWN 08/22/2017
PROJECT NO. 191395
FILE NO. 191395F2-SAP

APPENDIX B
Public Notification Letter

Los Angeles Unified School District

Office of Environmental Health and Safety

AUSTIN BEUTNER
Superintendent of Schools

VIVIAN EKCHIAN
Chief Executive Officer, Office of Educational Services

CARLOS A. TORRES
Director, Environmental Health and Safety

November 14, 2018

TO: Neighbors and Community Members of
Shenandoah Street Elementary School

FROM: Los Angeles Unified School District
Office of Environmental Health and Safety

REGARDING: Preliminary Environmental Assessment
Shenandoah Street Elementary School, Los Angeles, California

The Los Angeles Unified School District (LAUSD) - Office of Environmental Health and Safety (OEHS) would like to provide you with advance notice for a Preliminary Environmental Assessment (PEA) that will be conducted within the boundaries of Shenandoah Street Elementary School, located at 2450 Shenandoah Street, Los Angeles, CA 90034. The PEA will be conducted across most of the campus scheduled to undergo a comprehensive modernization.

A licensed contractor, working on behalf of LAUSD, will perform the environmental investigation under the oversight of the LAUSD-OEHS, which is independent from the LAUSD Facilities Services Division (LAUSD-FSD). (The LAUSD-FSD is the responsible Branch for the development and construction of the comprehensive modernization project.) The entire environmental investigation will consist of sampling at locations on campus where existing facilities will be demolished (as needed) and new buildings/paving/landscaping will be constructed in its place. Soil samples will be analyzed for potential residual arsenic, lead-based paint, polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCPs). If necessary, a soil cleanup will be performed prior to construction activities to protect students, faculty, and staff.

The field work phase focusing on the areas where portable classrooms are currently located is anticipated to be completed in November 2018 and scheduled to begin on the week of November 19, 2018 during LAUSD's Thanksgiving break. Field work is scheduled to be conducted between 7:00 am and 5:00 pm. Soil sampling in additional areas will be completed at a later date as soon as design is finalized for the rest of the comprehensive modernization project.

The results of the investigation will be submitted to LAUSD-OEHS in a report for review. The report will include an assessment of whether any of the above listed compounds are present in soil at concentrations that would require further assessment, or if a response action will be necessary before the Site is cleared for construction activities. When the OEHS's review is complete, OEHS will issue a determination with regard to the assessment.

If you have any questions concerning the upcoming environmental investigation or other related activities for the proposed project, please contact Jennifer Hilario, LAUSD Office of Environmental Health and Safety, Site Assessment Project Manager at (213) 241-4261 (email at jennifer.hilario@lausd.net).

Los Angeles Unified School District

Office of Environmental Health and Safety

AUSTIN BEUTNER
Superintendent of Schools

VIVIAN EKCHIAN
Chief Executive Officer, Office of Educational Services

CARLOS A. TORRES
Director, Environmental Health and Safety

14 de noviembre del 2018

A: Vecinos y Miembros Comunitarios de la
Escuela Primaria Shenandoah Street

DE: Distrito Escolar Unificado de Los Ángeles
Oficina de Salud y Seguridad Ambiental

ASUNTO: Evaluación Inicial Ambiental
Escuela Primaria Shenandoah Street, Los Ángeles, California

La Oficina de Salud y Seguridad Ambiental (OEHS, por sus siglas en inglés) del Distrito Escolar Unificado de Los Ángeles (LAUSD) desea avisarle que se llevará a cabo una evaluación inicial ambiental (PEA) dentro de la Escuela Primaria Shenandoah Street. La escuela se encuentra en 2450 Shenandoah Street, Los Ángeles, CA 90034. La PEA se llevará a cabo en la mayoría parte del campo programado para someterse a una modernización integral.

Un contratista licenciado, trabajando por parte de LAUSD, realizará la investigación inicial ambiental bajo la supervisión de la Oficina de Salud y Seguridad Ambiental, que es independiente de la división de servicios de instalaciones de LAUSD. (La división de servicios de instalaciones es la rama responsable para el desarrollo y construcción del proyecto). La toda investigación ambiental consistirá en la toma de muestras ambientales en áreas de la escuela donde se demolerán las estructuras existentes (según sea necesario) para la construcción de nuevas aulas de clases/pavimento/jardín. El suelo será analizado para identificar la presencia de arsénico, pintura a base de plomo, bifenilos policlorados y pesticidas organoclorados. También se analizarán muestras de vapor de suelo para la presencia de compuestos orgánicos volátiles. Si es necesario, y para la protección de la salud de los estudiantes, maestros y del personal escolar, se realizará la limpieza ambiental del suelo antes de que inicien las actividades de construcción.

Se anticipa que la fase de trabajo de campo que se enfoca en las áreas donde se ubican actualmente las aulas portátiles se completará en noviembre de 2018 durante las vacaciones de acción de gracias empezando en la semana del 19 de noviembre del 2018. Las horas de trabajo serán entre 7:00 am y 5:00 pm. El muestreo del suelo en áreas adicionales se completará en una fecha posterior tan pronto como el diseño finalice para el resto del proyecto de modernización integral.

Los resultados de la investigación serán presentados al LAUSD-OEHS en un informe para su revisión. El informe incluirá una evaluación de la presencia de los compuestos mencionados anteriormente. La evaluación también identificará si los compuestos se encuentran en el suelo a niveles que requieran una evaluación adicional, mitigación o una "acción de respuesta" antes de que el área de estudio sea despejada para la construcción. Cuando finalice la revisión por parte de la Oficina de Salud y Seguridad Ambiental, el OEHS emitirá una conclusión con respecto a la evaluación ambiental.

Si tiene alguna pregunta acerca de la investigación ambiental u otras actividades relacionadas, por favor póngase en contacto con la gerente del proyecto Jennifer Hilario de la Oficina de Salud y Seguridad Ambiental del Distrito llamando al (213) 241-4261 (correo electrónico jennifer.hilario@lausd.net).

APPENDIX C
Laboratory Analytical Data



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 408720
Report Date: 01/10/2019
Date Received: 11/21/2018
Client ID: 12860

Comments: Shenandoah Elementary School
#026RC1-191395
PO1026791
2450 Shenandoah Street, Los Angeles, CA

Revised Report 2 - See attached report for EPA 8081A and EPA 8082 results. Additional STLC, TCLP & TTLC results requested on 12/06/18 and 01/03/19 are also included.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
408720-001	SB-1-0.5'	408720-025	SB-16-0.5'	408720-049	SB-30-1.5'
408720-002	SB-1-1.5'	408720-026	SB-16-1.5'	408720-050	SB-31-0.5'
408720-003	SB-2-0.5'	408720-027	SB-17-0.5'	408720-051	SB-31-1.5'
408720-004	SB-2-1.5'	408720-028	SB-17-1.5'	408720-052	SB-32-0.5'
408720-005	SB-3-0.5'	408720-029	SB-18-0.5'	408720-053	SB-32-1.5'
408720-006	SB-3-1.5'	408720-030	SB-18-1.5'	408720-054	SB-5-0.5' (DUP)
408720-007	SB-4-0.5'	408720-031	SB-19-0.5'	408720-055	SB-11-0.5' (DUP)
408720-008	SB-4-1.5'	408720-032	SB-19-1.5'	408720-056	SB-16-0.5' (DUP)
408720-009	SB-5-0.5'	408720-033	SB-21-0.5'	408720-057	SB-25-0.5' (DUP)
408720-010	SB-5-1.5'	408720-034	SB-21-1.5'	408720-058	SB-28-0.5' (DUP)
408720-011	SB-6-0.5'	408720-035	SB-22-0.5'	408720-059	SB-2-0.5' (DUP)
408720-012	SB-6-1.5'	408720-036	SB-22-1.5'	408720-060	Equipment Blank- Day 1
408720-013	SB-7-0.5'	408720-037	SB-24-0.5'	408720-061	Equipment Blank- Day 2
408720-014	SB-7-1.5'	408720-038	SB-24-1.5'	408720-062	Soil Sample Composite
408720-015	SB-8-0.5'	408720-039	SB-25-0.5'		
408720-016	SB-8-1.5'	408720-040	SB-25-1.5'		
408720-017	SB-9-0.5'	408720-041	SB-26-0.5'		
408720-018	SB-9-1.5'	408720-042	SB-26-1.5'		
408720-019	SB-10-0.5'	408720-043	SB-27-0.5'		
408720-020	SB-10-1.5'	408720-044	SB-27-1.5'		
408720-021	SB-11-0.5'	408720-045	SB-28-0.5'		
408720-022	SB-11-1.5'	408720-046	SB-28-1.5'		
408720-023	SB-15-0.5'	408720-047	SB-29-3'		
408720-024	SB-15-1.5'	408720-048	SB-30-0.5'		

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:09	Site:	
Sample #: <u>408720-001</u>	Client Sample #: SB-1-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1199884	
Lead	0.232	1	0.005	0.05	mg/L	01/10/19	01/10/19	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.25 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	4.91	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	123	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.34	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	28.5	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	11.3	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.9	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	212	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	2.19	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	17.6	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	2.24 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	48.7	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	108	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	13.8	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	3.72	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:16	Site:	
Sample #: <u>408720-002</u>	Client Sample #: SB-1-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	8.62	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 12:34	Site:	
Sample #: <u>408720-003</u>	Client Sample #: SB-2-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	2.18 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	4.38	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	60.3	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	0.58	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	7.32	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	4.79	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	8.28	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	8.86	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.01	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	8.40	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	2.50 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	2.26 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	24.4	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	22.6	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	4.05	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						
Method: EPA 8082 <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 12:45	Site:	
Sample #: <u>408720-004</u>	Client Sample #: SB-2-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:49	Site:	
Sample #: <u>408720-005</u>	Client Sample #: SB-3-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.05 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	1.45	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	118	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.12	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	31.3	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	12.1	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	14.0	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	88.7	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.73 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	17.9	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	1.06 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	53.8	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	58.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	3.50	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	1.624 J	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP J
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:55	Site:	
Sample #: <u>408720-006</u>	Client Sample #: SB-3-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	4.54	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:36	Site:	
Sample #: <u>408720-007</u>	Client Sample #: SB-4-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	ND	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN
Arsenic	6.03	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	123	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.64	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	28.1	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	10.4	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.8	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	17.3	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.93 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	19.6	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	50.2	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	58.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	4.65	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:42	Site:	
Sample #: <u>408720-008</u>	Client Sample #: SB-4-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:54	Site:	
Sample #: <u>408720-009</u>	Client Sample #: SB-5-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1199885	
Lead	0.035 J	1	0.005	0.05	mg/L	01/10/19	01/10/19	KLN B1,J
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	0.67 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	3.33	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	104	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.58	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	31.1	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	11.4	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	16.0	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	47.9	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.49 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	19.0	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	53.0	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	62.2	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	5.95	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	3.00	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:59	Site:	
Sample #: <u>408720-010</u>	Client Sample #: SB-5-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	6.62	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:26	Site:	
Sample #: <u>408720-011</u>	Client Sample #: SB-6-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	0.94 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	5.30	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	120	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.88	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	24.4	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.91	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	20.2	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	15.0	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.32	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	31.2	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	43.9	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	66.5	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.09	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 10:30	Site:	
Sample #: <u>408720-012</u>	Client Sample #: SB-6-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:35	Site:	
Sample #: <u>408720-013</u>	Client Sample #: SB-7-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1199885	
Lead	0.028 J	1	0.005	0.05	mg/L	01/10/19	01/10/19	KLN B1,J
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	2.74 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	4.82	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	141	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.41	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	25.7	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	10.1	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	18.8	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	175	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.02	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	18.2	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	1.72 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	44.9	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	146	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	6.72	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	3.14	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	0.13 J	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW J
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						
Method: EPA 8082 <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:40	Site:	
Sample #: <u>408720-014</u>	Client Sample #: SB-7-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	5.53	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:58	Site:	
Sample #: <u>408720-015</u>	Client Sample #: SB-8-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	2.60 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	4.86	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	111	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.63	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	23.6	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.35	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	18.2	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	6.57	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.00	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	17.5	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	1.40 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	41.6	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	48.9	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198412	
Arsenic	3.57	10	0.2	3	mg/Kg	12/04/18	12/05/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 15:01	Site:	
Sample #: <u>408720-016</u>	Client Sample #: SB-8-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:18	Site:	
Sample #: <u>408720-017</u>	Client Sample #: SB-9-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	2.13 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	5.80	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	101	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.73	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	25.7	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	8.89	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	16.5	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	8.34	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.97 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	18.7	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	41.9	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	48.2	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.31	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:23	Site:	
Sample #: <u>408720-018</u>	Client Sample #: SB-9-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:31	Site:	
Sample #: <u>408720-019</u>	Client Sample #: SB-10-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B					QCBatchID: QC1197966		
Antimony	ND	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN
Arsenic	5.00	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	107	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.58	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	24.8	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.63	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.1	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	8.08	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.02	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	18.2	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	41.2	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	47.9	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B					QCBatchID: QC1197968		
Arsenic	7.87	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A					QCBatchID: QC1197977		
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached					QCBatchID:		
See Attached	1							

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:38	Site:	
Sample #: <u>408720-020</u>	Client Sample #: SB-10-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:					QCBatchID:		
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:00	Site:	
Sample #: <u>408720-021</u>	Client Sample #: SB-11-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	0.57 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	6.63	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	114	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.78	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	24.6	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.00	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	18.2	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	5.31	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.98 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	18.6	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	1.14 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	40.7	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	50.1	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.01	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:05	Site:	
Sample #: <u>408720-022</u>	Client Sample #: SB-11-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:45	Site:	
Sample #: <u>408720-023</u>	Client Sample #: SB-15-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	0.81 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	6.46	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	123	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.65	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	26.6	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.56	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	20.7	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	112	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.02	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	20.9	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	45.2	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	83.6	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	4.25	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.58 J	20	0.4	6	mg/Kg	12/25/18	11/26/18	JP J
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:50	Site:	
Sample #: <u>408720-024</u>	Client Sample #: SB-15-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	5.73	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:27	Site:	
Sample #: <u>408720-025</u>	Client Sample #: SB-16-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.34 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	6.94	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	116	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.84	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	23.0	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.21	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	18.6	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	12.0	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.97 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	22.1	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	41.9	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	56.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.09	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:33	Site:	
Sample #: <u>408720-026</u>	Client Sample #: SB-16-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:14	Site:	
Sample #: <u>408720-027</u>	Client Sample #: SB-17-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.09 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	4.98	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	120	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.68	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	24.1	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	10.2	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	19.3	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	10.3	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.23	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	18.9	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	42.5	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	56.2	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	4.49	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:20	Site:	
Sample #: <u>408720-028</u>	Client Sample #: SB-17-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 13:58	Site:	
Sample #: <u>408720-029</u>	Client Sample #: SB-18-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.38 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	8.25	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	102	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.56	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	22.0	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	8.72	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.9	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	28.6	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.99 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	17.4	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	35.8	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	79.7	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	6.62	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 14:05	Site:	
Sample #: <u>408720-030</u>	Client Sample #: SB-18-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 13:40	Site:	
Sample #: <u>408720-031</u>	Client Sample #: SB-19-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	0.55 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	5.91	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	109	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.74	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	22.4	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.57	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.2	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	6.31	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.92 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	18.8	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	39.0	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	49.7	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	4.54	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 13:47	Site:	
Sample #: <u>408720-032</u>	Client Sample #: SB-19-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:32	Site:	
Sample #: <u>408720-033</u>	Client Sample #: SB-21-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.92 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	6.11	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	95.8	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.24	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	21.6	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	8.07	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	16.3	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	20.4	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.10	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	16.4	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	40.0	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	112	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	5.97	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:40	Site:	
Sample #: <u>408720-034</u>	Client Sample #: SB-21-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:22	Site:	
Sample #: <u>408720-035</u>	Client Sample #: SB-22-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	2.08 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	1.71	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	75.3	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	0.77	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	19.3	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.33	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	13.6	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	8.57	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.47 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	16.7	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	0.90 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	34.2	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	41.1	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	1.940 J	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP J
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	0.08 J	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW J
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:24	Site:	
Sample #: <u>408720-036</u>	Client Sample #: SB-22-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:07	Site:	
Sample #: <u>408720-037</u>	Client Sample #: SB-24-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.26 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	8.06	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	128	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.64	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	31.2	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	11.3	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	19.5	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	18.8	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.27	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	22.1	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	53.7	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	70.9	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	6.27	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:12	Site:	
Sample #: <u>408720-038</u>	Client Sample #: SB-24-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 07:50	Site:	
Sample #: <u>408720-039</u>	Client Sample #: SB-25-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197966	
Antimony	1.62 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN B1,J
Arsenic	5.90	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	528	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.63	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	33.2	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	10.9	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	22.7	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN
Lead	29.5	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	0.74 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	22.0	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	0.77 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	50.6	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	63.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197968	
Arsenic	4.61	10	0.2	3	mg/Kg	12/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197977	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:00	Site:	
Sample #: <u>408720-040</u>	Client Sample #: SB-25-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 15:12	Site:	
Sample #: <u>408720-041</u>	Client Sample #: SB-26-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.65 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	7.28	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	108	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.78	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	22.8	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.31	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	27.0	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	25.8	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	2.23	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	17.6	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	1.19 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	1.76 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	41.3	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	104	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	5.53	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 15:18	Site:	
Sample #: <u>408720-042</u>	Client Sample #: SB-26-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 15:23	Site:	
Sample #: <u>408720-043</u>	Client Sample #: SB-27-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.95 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	3.30	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	97.4	1	0.23	1	mg/Kg	11/25/18	11/27/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.43	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	19.0	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.18	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	16.6	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	7.18	1	0.32	1	mg/Kg	11/25/18	11/27/18	KLN
Molybdenum	1.82	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	14.8	1	0.2	1.5	mg/Kg	11/25/18	11/27/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	2.62 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	35.8	1	0.37	0.5	mg/Kg	11/25/18	11/27/18	KLN
Zinc	41.8	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	4.26	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 15:30	Site:	
Sample #: <u>408720-044</u>	Client Sample #: SB-27-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 16:00	Site:	
Sample #: <u>408720-045</u>	Client Sample #: SB-28-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	1.56 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	4.82	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	97.7	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.53	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	29.9	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	10.8	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	22.5	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	10.1	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	1.19	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	18.7	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	47.0	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	79.9	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	3.45	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 16:05	Site:	
Sample #: <u>408720-046</u>	Client Sample #: SB-28-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 11:29	Site:	
Sample #: <u>408720-047</u>	Client Sample #: SB-29-3'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 8082 <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:12	Site:	
Sample #: <u>408720-048</u>	Client Sample #: SB-30-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.86 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	8.46	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	110	1	0.23	1	mg/Kg	11/25/18	12/03/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.82	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	25.8	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.27	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	22.6	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	94.1	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	1.21	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	20.6	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	1.22 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	1.09 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	43.4	1	0.37	0.5	mg/Kg	11/25/18	12/03/18	KLN
Zinc	116	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198825	
Lead	0.668	10	0.05	0.15	mg/L		12/13/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	5.23	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:18	Site:	
Sample #: <u>408720-049</u>	Client Sample #: SB-30-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1198609	
Lead	5.17	1	0.32	1	mg/Kg	12/10/18	12/11/18	KLN

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 11:06	Site:	
Sample #: <u>408720-050</u>	Client Sample #: SB-31-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.96 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	4.66	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	128	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.69	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	19.7	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.46	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	16.1	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	6.26	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	1.18	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	16.5	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	1.31 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	37.7	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	47.5	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	5.02	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 11:10	Site:	
Sample #: <u>408720-051</u>	Client Sample #: SB-31-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:06	Site:	
Sample #: <u>408720-052</u>	Client Sample #: SB-32-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.56 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	5.60	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	102	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.59	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	22.0	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	8.79	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.4	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	5.55	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	1.15	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Nickel	17.4	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	3.11	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	37.1	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	46.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	6.14	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:12	Site:	
Sample #: <u>408720-053</u>	Client Sample #: SB-32-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:59	Site:	
Sample #: <u>408720-054</u>	Client Sample #: SB-5-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	QC Batch ID	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1197967	QC1197967	
Antimony	0.95 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN	J
Arsenic	3.56	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN	
Barium	90.8	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Cadmium	2.00	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Chromium	34.6	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN	
Cobalt	12.4	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Copper	23.5	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN	B
Lead	131	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN	
Molybdenum	ND	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN	
Nickel	17.8	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN	
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Thallium	0.80 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN	J
Vanadium	53.3	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN	
Zinc	88.0	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1197969	QC1197969	
Arsenic	1.932 J	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP	J
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1197976	QC1197976	
Mercury	0.04 J	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW	J
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QC Batch ID:		
See Attached		1							

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 09:00	Site:	
Sample #: <u>408720-055</u>	Client Sample #: SB-11-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	QC Batch ID	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1197967	QC1197967	
Antimony	ND	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN	
Arsenic	4.53	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN	
Barium	127	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Cadmium	1.71	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Chromium	26.3	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN	
Cobalt	10.4	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Copper	18.2	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN	B
Lead	5.64	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN	
Molybdenum	0.77 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN	B1,J
Nickel	18.3	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN	
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN	
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN	
Vanadium	46.2	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN	
Zinc	51.1	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1197969	QC1197969	
Arsenic	4.01	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1197976	QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW	
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QC Batch ID:		
See Attached		1							

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 08:27	Site:	
Sample #: <u>408720-056</u>	Client Sample #: SB-16-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	1.00 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	5.66	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	104	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.55	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	22.3	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.09	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	17.4	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	9.88	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	0.80 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	18.4	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	40.4	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	53.6	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	5.18	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 07:50	Site:	
Sample #: <u>408720-057</u>	Client Sample #: SB-25-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	0.40 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	3.20	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	145	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.32	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	29.4	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	9.71	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	21.0	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	56.9	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	0.42 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	16.9	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	43.8	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	98.1	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	4.73	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 16:00	Site:	
Sample #: <u>408720-058</u>	Client Sample #: SB-28-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	1.78 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	4.89	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	108	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.37	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	30.8	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	11.7	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	21.1	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	21.0	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	0.99 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	18.3	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	1.84 J	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	0.67 J	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN J
Vanadium	52.0	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	88.3	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	3.92	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 12:34	Site:	
Sample #: <u>408720-059</u>	Client Sample #: SB-2-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 8082 <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 16:30	Site:	
Sample #: 408720-060	Client Sample #: Equipment Blank- Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes		
Method: EPA 6010B NELAC		Prep Method: EPA 3010A				QCBatchID: QC1198051			
Antimony	ND	1	0.014	0.04	mg/L	11/27/18	11/27/18	KLN	
Arsenic	ND	1	0.008	0.01	mg/L	11/27/18	11/27/18	KLN	
Barium	ND	1	0.002	0.01	mg/L	11/27/18	11/27/18	KLN	
Beryllium	ND	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN	
Cadmium	ND	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN	
Chromium	ND	1	0.002	0.01	mg/L	11/27/18	11/27/18	KLN	
Cobalt	ND	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN	
Copper	ND	1	0.004	0.01	mg/L	11/27/18	11/30/18	KLN	
Lead	ND	1	0.005	0.01	mg/L	11/27/18	11/27/18	KLN	
Molybdenum	0.0088 J	1	0.005	0.01	mg/L	11/27/18	11/27/18	KLN J	
Nickel	ND	1	0.003	0.02	mg/L	11/27/18	11/27/18	KLN	
Selenium	ND	1	0.016	0.03	mg/L	11/27/18	11/27/18	KLN	
Silver	ND	1	0.003	0.005	mg/L	11/27/18	11/27/18	KLN	
Thallium	ND	1	0.009	0.05	mg/L	11/27/18	11/27/18	KLN	
Vanadium	ND	1	0.002	0.005	mg/L	11/27/18	11/27/18	KLN	
Zinc	0.015 J	1	0.007	0.05	mg/L	11/27/18	11/27/18	KLN B1,J	
Method: EPA 6020 NELAC		Prep Method: EPA 3010A				QCBatchID: QC1198143			
Arsenic	ND	1	0.31	2	ug/L	11/29/18	11/29/18	JP	
Method: EPA 7470A NELAC		Prep Method: Method				QCBatchID: QC1198091			
Mercury	ND	1	0.094	0.4	ug/L	11/28/18	11/28/18	SBW	
Method: EPA 8081A NELAC		Prep Method: EPA 3510C				QCBatchID: QC1197961			
4,4'-DDD	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD	
4,4'-DDE	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD	
4,4'-DDT	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD	
a-BHC	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD	
Aldrin	ND	1	0.007	0.1	ug/L	11/25/18	11/26/18	TD	
b-BHC	ND	1	0.003	0.1	ug/L	11/25/18	11/26/18	TD	
Chlordane (technical)	ND	1	0.27	1	ug/L	11/25/18	11/26/18	TD	
d-BHC	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD	
Dieldrin	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD	
Endosulfan I	ND	1	0.004	0.1	ug/L	11/25/18	11/26/18	TD	
Endosulfan II	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD	
Endosulfan sulfate	ND	1	0.012	0.1	ug/L	11/25/18	11/26/18	TD	
Endrin	ND	1	0.008	0.1	ug/L	11/25/18	11/26/18	TD	
Endrin aldehyde	ND	1	0.009	0.1	ug/L	11/25/18	11/26/18	TD	
Endrin Ketone	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD	
Heptachlor	ND	1	0.003	0.1	ug/L	11/25/18	11/26/18	TD	
Heptachlor epoxide	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD	
Lindane (Gamma-BHC)	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD	
Methoxychlor	ND	1	0.055	0.1	ug/L	11/25/18	11/26/18	TD	
Toxaphene	ND	1	0.48	2	ug/L	11/25/18	11/26/18	TD	
Surrogate	% Recovery		Limits		Notes				
Decachlorobiphenyl DCB (SUR)	64		50-150						
Tetrachloro-m-xylene TCMX (SUR)	60		50-150						
Method: EPA 8082 NELAC		Prep Method: EPA 3510C				QCBatchID: QC1197962			
PCB-1016	ND	1	0.058	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1221	ND	1	0.253	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1232	ND	1	0.196	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1242	ND	1	0.169	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1248	ND	1	0.1	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1254	ND	1	0.054	0.5	ug/L	11/25/18	11/26/18	TD	
PCB-1260	ND	1	0.08	0.5	ug/L	11/25/18	11/26/18	TD	

Matrix: Water		Client: ES Engineering			Collector: Client				
Sampled: 11/19/2018 16:30		Site:							
Sample #: <u>408720-060</u>		Client Sample #: Equipment Blank- Day 1			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1262		ND	1	0.045	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1268		ND	1	0.062	0.5	ug/L	11/25/18	11/26/18	TD
<u>Surrogate</u>		<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		66			50-150				

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 13:11	Site:	
Sample #: 408720-061	Client Sample #: Equipment Blank- Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3010A						QCBatchID: QC1198051	
Antimony	ND	1	0.014	0.04	mg/L	11/27/18	11/27/18	KLN
Arsenic	ND	1	0.008	0.01	mg/L	11/27/18	11/27/18	KLN
Barium	ND	1	0.002	0.01	mg/L	11/27/18	11/27/18	KLN
Beryllium	ND	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN
Cadmium	0.002 J	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN B1,J
Chromium	ND	1	0.002	0.01	mg/L	11/27/18	11/27/18	KLN
Cobalt	ND	1	0.001	0.005	mg/L	11/27/18	11/27/18	KLN
Copper	ND	1	0.004	0.01	mg/L	11/27/18	11/30/18	KLN
Lead	ND	1	0.005	0.01	mg/L	11/27/18	11/30/18	KLN
Molybdenum	ND	1	0.005	0.01	mg/L	11/27/18	11/30/18	KLN
Nickel	0.004 J	1	0.003	0.02	mg/L	11/27/18	11/27/18	KLN B1,J
Selenium	ND	1	0.016	0.03	mg/L	11/27/18	11/27/18	KLN
Silver	ND	1	0.003	0.005	mg/L	11/27/18	11/27/18	KLN
Thallium	0.035 J	1	0.009	0.05	mg/L	11/27/18	11/27/18	KLN J
Vanadium	ND	1	0.002	0.005	mg/L	11/27/18	11/27/18	KLN
Zinc	0.024 J	1	0.007	0.05	mg/L	11/27/18	11/27/18	KLN B1,J
Method: EPA 6020 NELAC	Prep Method: EPA 3010A						QCBatchID: QC1198143	
Arsenic	ND	1	0.31	2	ug/L	11/29/18	11/29/18	JP
Method: EPA 7470A NELAC	Prep Method: Method						QCBatchID: QC1198091	
Mercury	ND	1	0.094	0.4	ug/L	11/28/18	11/28/18	SBW
Method: EPA 8081A NELAC	Prep Method: EPA 3510C						QCBatchID: QC1197961	
4,4'-DDD	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD
4,4'-DDE	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD
4,4'-DDT	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD
a-BHC	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD
Aldrin	ND	1	0.007	0.1	ug/L	11/25/18	11/26/18	TD
b-BHC	ND	1	0.003	0.1	ug/L	11/25/18	11/26/18	TD
Chlordane (technical)	ND	1	0.27	1	ug/L	11/25/18	11/26/18	TD
d-BHC	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD
Dieldrin	ND	1	0.006	0.1	ug/L	11/25/18	11/26/18	TD
Endosulfan I	ND	1	0.004	0.1	ug/L	11/25/18	11/26/18	TD
Endosulfan II	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD
Endosulfan sulfate	ND	1	0.012	0.1	ug/L	11/25/18	11/26/18	TD
Endrin	ND	1	0.008	0.1	ug/L	11/25/18	11/26/18	TD
Endrin aldehyde	ND	1	0.009	0.1	ug/L	11/25/18	11/26/18	TD
Endrin Ketone	ND	1	0.011	0.1	ug/L	11/25/18	11/26/18	TD
Heptachlor	ND	1	0.003	0.1	ug/L	11/25/18	11/26/18	TD
Heptachlor epoxide	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD
Lindane (Gamma-BHC)	ND	1	0.002	0.1	ug/L	11/25/18	11/26/18	TD
Methoxychlor	ND	1	0.055	0.1	ug/L	11/25/18	11/26/18	TD
Toxaphene	ND	1	0.48	2	ug/L	11/25/18	11/26/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)	66			50-150				
Tetrachloro-m-xylene TCMX (SUR)	60			50-150				
Method: EPA 8082 NELAC	Prep Method: EPA 3510C						QCBatchID: QC1197962	
PCB-1016	ND	1	0.058	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1221	ND	1	0.253	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1232	ND	1	0.196	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1242	ND	1	0.169	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1248	ND	1	0.1	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1254	ND	1	0.054	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1260	ND	1	0.08	0.5	ug/L	11/25/18	11/26/18	TD

Matrix: Water		Client: ES Engineering			Collector: Client				
Sampled: 11/20/2018 13:11		Site:							
Sample #: <u>408720-061</u>		Client Sample #: Equipment Blank- Day 2			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1262		ND	1	0.045	0.5	ug/L	11/25/18	11/26/18	TD
PCB-1268		ND	1	0.062	0.5	ug/L	11/25/18	11/26/18	TD
<u>Surrogate</u>		<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		74			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 13:20	Site:	
Sample #: 408720-062	Client Sample #: Soil Sample Composite	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197967	
Antimony	1.29 J	1	0.37	3	mg/Kg	11/25/18	11/27/18	KLN J
Arsenic	7.66	1	0.36	1	mg/Kg	11/25/18	11/27/18	KLN
Barium	130	1	0.23	1	mg/Kg	11/25/18	11/30/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/25/18	11/27/18	KLN
Cadmium	1.65	1	0.21	0.5	mg/Kg	11/25/18	11/27/18	KLN
Chromium	28.4	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN
Cobalt	11.2	1	0.19	0.5	mg/Kg	11/25/18	11/27/18	KLN
Copper	20.7	1	0.31	1	mg/Kg	11/25/18	11/27/18	KLN B
Lead	18.2	1	0.32	1	mg/Kg	11/25/18	12/03/18	KLN
Molybdenum	0.94 J	1	0.13	1	mg/Kg	11/25/18	11/27/18	KLN B1,J
Nickel	20.5	1	0.2	1.5	mg/Kg	11/25/18	12/03/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/25/18	11/27/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/25/18	11/27/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/25/18	11/27/18	KLN
Vanadium	52.0	1	0.37	0.5	mg/Kg	11/25/18	11/30/18	KLN
Zinc	69.3	1	0.28	5	mg/Kg	11/25/18	11/27/18	KLN
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1198120	
Lead	0.105	1	0.005	0.015	mg/L	11/28/18	11/28/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197969	
Arsenic	5.96	10	0.2	3	mg/Kg	11/25/18	11/26/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197976	
Mercury	ND	1	0.039	0.14	mg/Kg	11/26/18	11/26/18	SBW
Method: EPA 8015M	Prep Method: EPA 3580A						QCBatchID: QC1198012	
TPH (C13 to C22)	ND	1	10	10	mg/Kg	11/26/18	11/27/18	MTS
TPH (C23 to C44)	18	1	10	10	mg/Kg	11/26/18	11/27/18	MTS
TPH (C6 to C12)	ND	1	10	10	mg/Kg	11/26/18	11/27/18	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Triacontane (SUR)	110			50-150				
Method: EPA 8081A <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						
Method: EPA 8082 <i>NELAC</i>	Prep Method: See Attached						QCBatchID:	
See Attached		1						
Method: EPA 8260B <i>NELAC</i>	Prep Method: EPA 5030						QCBatchID: QC1197948	
1,1,1,2-Tetrachloroethane	ND	1	0.24	5	ug/Kg	11/24/18		ZZ
1,1,1-Trichloroethane	ND	1	0.15	5	ug/Kg	11/24/18		ZZ
1,1,2,2-Tetrachloroethane	ND	1	0.29	5	ug/Kg	11/24/18		ZZ
1,1,2-Trichloroethane	ND	1	0.22	5	ug/Kg	11/24/18		ZZ
1,1,2-Trichlorotrifluoroethane	ND	1	0.74	5	ug/Kg	11/24/18		ZZ
1,1-Dichloroethane	ND	1	0.23	5	ug/Kg	11/24/18		ZZ
1,1-Dichloroethene	ND	1	0.18	5	ug/Kg	11/24/18		ZZ
1,1-Dichloropropene	ND	1	0.21	5	ug/Kg	11/24/18		ZZ
1,2,3-Trichlorobenzene	ND	1	0.18	5	ug/Kg	11/24/18		ZZ
1,2,3-Trichloropropane	ND	1	0.2	5	ug/Kg	11/24/18		ZZ
1,2,4-Trichlorobenzene	ND	1	0.33	5	ug/Kg	11/24/18		ZZ
1,2,4-Trimethylbenzene	ND	1	0.28	5	ug/Kg	11/24/18		ZZ
1,2-Dibromo-3-chloropropane	ND	1	0.2	5	ug/Kg	11/24/18		ZZ
1,2-Dibromoethane	ND	1	0.12	5	ug/Kg	11/24/18		ZZ
1,2-Dichlorobenzene	ND	1	0.18	5	ug/Kg	11/24/18		ZZ
1,2-Dichloroethane	ND	1	0.14	5	ug/Kg	11/24/18		ZZ
1,2-Dichloropropane	ND	1	0.34	5	ug/Kg	11/24/18		ZZ
1,3,5-Trimethylbenzene	ND	1	0.23	5	ug/Kg	11/24/18		ZZ
1,3-Dichlorobenzene	ND	1	0.21	5	ug/Kg	11/24/18		ZZ

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 13:20	Site:	
Sample #: 408720-062	Client Sample #: Soil Sample Composite	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
1,3-Dichloropropane	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
1,4-Dichlorobenzene	ND	1	0.24	5	ug/Kg		11/24/18	ZZ
2,2-Dichloropropane	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
2-Butanone (MEK)	1.8 J	1	0.72	100	ug/Kg		11/24/18	ZZ B1,J
2-Chlorotoluene	ND	1	0.25	5	ug/Kg		11/24/18	ZZ
4-Chlorotoluene	ND	1	0.22	5	ug/Kg		11/24/18	ZZ
4-Isopropyltoluene	ND	1	0.27	5	ug/Kg		11/24/18	ZZ
4-Methyl-2-pentanone (MIBK)	ND	1	0.17	5	ug/Kg		11/24/18	ZZ
Acetone	ND	1	50	100	ug/Kg		11/24/18	ZZ
Allyl Chloride	ND	1	0.14	5	ug/Kg		11/24/18	ZZ
Benzene	ND	1	0.18	5	ug/Kg		11/24/18	ZZ
Bromobenzene	ND	1	0.3	5	ug/Kg		11/24/18	ZZ
Bromochloromethane	ND	1	0.18	5	ug/Kg		11/24/18	ZZ
Bromodichloromethane	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
Bromoform	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
Bromomethane	ND	1	0.22	5	ug/Kg		11/24/18	ZZ
Carbon Tetrachloride	ND	1	0.18	5	ug/Kg		11/24/18	ZZ
Chlorobenzene	ND	1	0.18	5	ug/Kg		11/24/18	ZZ
Chlorodibromomethane	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
Chloroethane	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
Chloroform	0.56 J	1	0.17	5	ug/Kg		11/24/18	ZZ J
Chloromethane	ND	1	0.21	5	ug/Kg		11/24/18	ZZ
cis-1,2-Dichloroethene	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
cis-1,3-dichloropropene	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
cis-1,4-dichloro-2-butene	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
Dibromomethane	ND	1	0.21	5	ug/Kg		11/24/18	ZZ
Dichlorodifluoromethane	ND	1	0.23	5	ug/Kg		11/24/18	ZZ
Ethylbenzene	ND	1	0.23	5	ug/Kg		11/24/18	ZZ
Hexachlorobutadiene	ND	1	0.42	5	ug/Kg		11/24/18	ZZ
Isopropylbenzene	ND	1	0.25	5	ug/Kg		11/24/18	ZZ
m and p-Xylene	ND	1	0.38	5	ug/Kg		11/24/18	ZZ
Methylene chloride	8.7	1	0.21	5	ug/Kg		11/24/18	ZZ
Methyl-t-butyl Ether (MTBE)	ND	1	0.17	5	ug/Kg		11/24/18	ZZ
Naphthalene	ND	1	0.16	5	ug/Kg		11/24/18	ZZ
N-butylbenzene	ND	1	0.25	5	ug/Kg		11/24/18	ZZ
N-propylbenzene	ND	1	0.22	5	ug/Kg		11/24/18	ZZ
o-Xylene	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
Sec-butylbenzene	ND	1	0.28	5	ug/Kg		11/24/18	ZZ
Styrene	ND	1	0.13	5	ug/Kg		11/24/18	ZZ
Tert-butylbenzene	ND	1	0.34	5	ug/Kg		11/24/18	ZZ
Tetrachloroethene	ND	1	0.23	5	ug/Kg		11/24/18	ZZ
Toluene	ND	1	0.17	5	ug/Kg		11/24/18	ZZ
trans-1,2-dichloroethene	ND	1	0.19	5	ug/Kg		11/24/18	ZZ
trans-1,3-dichloropropene	ND	1	0.18	5	ug/Kg		11/24/18	ZZ
trans-1,4-dichloro-2-butene	ND	1	0.2	5	ug/Kg		11/24/18	ZZ
Trichloroethene	ND	1	0.23	5	ug/Kg		11/24/18	ZZ
Trichlorofluoromethane	ND	1	0.23	5	ug/Kg		11/24/18	ZZ
Vinyl Chloride	ND	1	0.14	5	ug/Kg		11/24/18	ZZ
Xylenes (Total)	ND	1	0.38	5	ug/Kg		11/24/18	ZZ
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>
1,2-Dichloroethane-d4 (SUR)			128		70-145			
4-Bromofluorobenzene (SUR)			102		70-145			
Dibromofluoromethane (SUR)			124		70-145			
Toluene-d8 (SUR)			102		70-145			

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 13:20	Site:	
Sample #: 408720-062	Client Sample #: Soil Sample Composite	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 8270C NELAC	Prep Method: EPA 3545						QC Batch ID: QC1198135	
1,2,4-Trichlorobenzene	ND	1	22	250	ug/Kg	01/29/18	11/29/18	MTS
1,2-Dichlorobenzene	ND	1	37	250	ug/Kg	01/29/18	11/29/18	MTS
1,3-Dichlorobenzene	ND	1	50	250	ug/Kg	01/29/18	11/29/18	MTS
1,4-Dichlorobenzene	ND	1	31	250	ug/Kg	01/29/18	11/29/18	MTS
1-Methylnaphthalene	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
2,4,5-Trichlorophenol	ND	1	43	250	ug/Kg	01/29/18	11/29/18	MTS
2,4,6-Trichlorophenol	ND	1	35	250	ug/Kg	01/29/18	11/29/18	MTS
2,4-Dichlorophenol	ND	1	23	250	ug/Kg	01/29/18	11/29/18	MTS
2,4-Dimethylphenol	ND	1	100	250	ug/Kg	01/29/18	11/29/18	MTS
2,4-Dinitrophenol	ND	1	23	1200	ug/Kg	01/29/18	11/29/18	MTS
2,4-Dinitrotoluene	ND	1	14	250	ug/Kg	01/29/18	11/29/18	MTS
2,6-Dinitrotoluene	ND	1	33	250	ug/Kg	01/29/18	11/29/18	MTS
2-Chloronaphthalene	ND	1	15	250	ug/Kg	01/29/18	11/29/18	MTS
2-Chlorophenol	ND	1	15	250	ug/Kg	01/29/18	11/29/18	MTS
2-Methyl-4,6-dinitrophenol	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
2-Methylnaphthalene	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
2-Methylphenol (o-Cresol)	ND	1	31	250	ug/Kg	01/29/18	11/29/18	MTS
2-Nitroaniline	ND	1	31	250	ug/Kg	01/29/18	11/29/18	MTS
2-Nitrophenol	ND	1	16	250	ug/Kg	01/29/18	11/29/18	MTS
3 and 4-Methylphenol (m and p-Cresol)	ND	1	19	400	ug/Kg	01/29/18	11/29/18	MTS
3,3'-Dichlorobenzidine	ND	1	54	1200	ug/Kg	01/29/18	11/29/18	MTS
3-Nitroaniline	ND	1	37	250	ug/Kg	01/29/18	11/29/18	MTS
4-Bromophenyl phenyl ether	ND	1	24	250	ug/Kg	01/29/18	11/29/18	MTS
4-Chloro-3-methylphenol	ND	1	18	250	ug/Kg	01/29/18	11/29/18	MTS
4-Chloroaniline	ND	1	73	250	ug/Kg	01/29/18	11/29/18	MTS
4-Chlorophenyl phenyl ether	ND	1	19	250	ug/Kg	01/29/18	11/29/18	MTS
4-Nitroaniline	ND	1	148	250	ug/Kg	01/29/18	11/29/18	MTS
4-Nitrophenol	ND	1	117	250	ug/Kg	01/29/18	11/29/18	MTS
Acenaphthene	ND	1	25	250	ug/Kg	01/29/18	11/29/18	MTS
Acenaphthylene	ND	1	20	250	ug/Kg	01/29/18	11/29/18	MTS
Aniline	ND	1	101	250	ug/Kg	01/29/18	11/29/18	MTS
Anthracene	ND	1	23	250	ug/Kg	01/29/18	11/29/18	MTS
Azobenzene	ND	1	67	250	ug/Kg	01/29/18	11/29/18	MTS
Benz(a)anthracene	ND	1	22	250	ug/Kg	01/29/18	11/29/18	MTS
Benzidine	ND	1	23	1200	ug/Kg	01/29/18	11/29/18	MTS
Benzo(a)pyrene	ND	1	25	250	ug/Kg	01/29/18	11/29/18	MTS
Benzo(b)fluoranthene	ND	1	27	250	ug/Kg	01/29/18	11/29/18	MTS
Benzo(g,h,i)perylene	ND	1	29	250	ug/Kg	01/29/18	11/29/18	MTS
Benzo(k)fluoranthene	ND	1	32	250	ug/Kg	01/29/18	11/29/18	MTS
Benzoic acid	ND	1	36	1200	ug/Kg	01/29/18	11/29/18	MTS
Benzyl alcohol	ND	1	36	250	ug/Kg	01/29/18	11/29/18	MTS
Bis(2-chloroethoxy)methane	ND	1	15	250	ug/Kg	01/29/18	11/29/18	MTS
Bis(2-chloroethyl) Ether	ND	1	25	1200	ug/Kg	01/29/18	11/29/18	MTS
Bis(2-chloroisopropyl) Ether	ND	1	17	250	ug/Kg	01/29/18	11/29/18	MTS
Bis(2-ethylhexyl) phthalate	ND	1	52	250	ug/Kg	01/29/18	11/29/18	MTS
Butylbenzyl Phthalate	ND	1	44	250	ug/Kg	01/29/18	11/29/18	MTS
Carbazole	ND	1	23	250	ug/Kg	01/29/18	11/29/18	MTS
Chrysene	ND	1	20	250	ug/Kg	01/29/18	11/29/18	MTS
Dibenz(a,h)anthracene	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
Dibenzofuran	ND	1	14	250	ug/Kg	01/29/18	11/29/18	MTS
Diethyl phthalate	ND	1	24	250	ug/Kg	01/29/18	11/29/18	MTS
Dimethyl phthalate	ND	1	22	250	ug/Kg	01/29/18	11/29/18	MTS
Di-n-butyl phthalate	ND	1	67	250	ug/Kg	01/29/18	11/29/18	MTS
Di-n-octyl phthalate	ND	1	23	250	ug/Kg	01/29/18	11/29/18	MTS

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/20/2018 13:20	Site:	
Sample #: 408720-062	Client Sample #: Soil Sample Composite	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Fluoranthene	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
Fluorene	ND	1	27	250	ug/Kg	01/29/18	11/29/18	MTS
Hexachlorobenzene	ND	1	15	250	ug/Kg	01/29/18	11/29/18	MTS
Hexachlorobutadiene	ND	1	39	250	ug/Kg	01/29/18	11/29/18	MTS
Hexachlorocyclopentadiene	ND	1	14	1200	ug/Kg	01/29/18	11/29/18	MTS
Hexachloroethane	ND	1	43	250	ug/Kg	01/29/18	11/29/18	MTS
Indeno(1,2,3-cd)pyrene	ND	1	90	250	ug/Kg	01/29/18	11/29/18	MTS
Isophorone	ND	1	25	250	ug/Kg	01/29/18	11/29/18	MTS
Naphthalene	ND	1	25	250	ug/Kg	01/29/18	11/29/18	MTS
Nitrobenzene	ND	1	21	1200	ug/Kg	01/29/18	11/29/18	MTS
N-Nitrosodimethylamine (NDMA)	ND	1	34	250	ug/Kg	01/29/18	11/29/18	MTS
N-Nitrosodi-n-propylamine (NDPA)	ND	1	26	250	ug/Kg	01/29/18	11/29/18	MTS
N-Nitrosodiphenylamine	ND	1	24	250	ug/Kg	01/29/18	11/29/18	MTS
Pentachlorophenol	ND	1	55	1200	ug/Kg	01/29/18	11/29/18	MTS
Phenanthrene	ND	1	22	250	ug/Kg	01/29/18	11/29/18	MTS
Phenol	ND	1	26	250	ug/Kg	01/29/18	11/29/18	MTS
Pyrene	ND	1	23	250	ug/Kg	01/29/18	11/29/18	MTS
Pyridine	ND	1	21	250	ug/Kg	01/29/18	11/29/18	MTS
Total Cresol	ND	1	400	400	ug/Kg	01/29/18	11/29/18	MTS
<u>Surrogate</u>			<u>% Recovery</u>					<u>Limits</u>
2,4,6-Tribromophenol (SUR)			85					34-143
2-Fluorobiphenyl (SUR)			62					41-125
2-Fluorophenol (SUR)			54					13-153
Nitrobenzene-d5 (SUR)			61					27-125
p-Terphenyl (SUR)			71					33-155
Phenol-d5 (SUR)			63					10-110

QCBatchID: QC1197948

Analyst: lucy

Method: EPA 8260B

Matrix: Solid

Analyzed: 11/24/2018

Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1197948MB1					
1,1,1,2-Tetrachloroethane	ND	ug/Kg	0.24	5	
1,1,1-Trichloroethane	ND	ug/Kg	0.15	5	
1,1,2,2-Tetrachloroethane	ND	ug/Kg	0.29	5	
1,1,2-Trichloroethane	ND	ug/Kg	0.22	5	
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg	0.74	5	
1,1-Dichloroethane	ND	ug/Kg	0.23	5	
1,1-Dichloroethene	ND	ug/Kg	0.18	5	
1,1-Dichloropropene	ND	ug/Kg	0.21	5	
1,2,3-Trichlorobenzene	ND	ug/Kg	0.18	5	
1,2,3-Trichloropropane	ND	ug/Kg	0.2	5	
1,2,4-Trichlorobenzene	ND	ug/Kg	0.33	5	
1,2,4-Trimethylbenzene	ND	ug/Kg	0.28	5	
1,2-Dibromo-3-chloropropane	ND	ug/Kg	0.2	5	
1,2-Dibromoethane	ND	ug/Kg	0.12	5	
1,2-Dichlorobenzene	ND	ug/Kg	0.18	5	
1,2-Dichloroethane	ND	ug/Kg	0.14	5	
1,2-Dichloropropane	ND	ug/Kg	0.34	5	
1,3,5-Trimethylbenzene	ND	ug/Kg	0.23	5	
1,3-Dichlorobenzene	ND	ug/Kg	0.21	5	
1,3-Dichloropropane	ND	ug/Kg	0.19	5	
1,4-Dichlorobenzene	ND	ug/Kg	0.24	5	
2,2-Dichloropropane	ND	ug/Kg	0.19	5	
2-Butanone (MEK)	1.6 J	ug/Kg	0.72	100	
2-Chlorotoluene	ND	ug/Kg	0.25	5	
4-Chlorotoluene	ND	ug/Kg	0.22	5	
4-Isopropyltoluene	ND	ug/Kg	0.27	5	
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg	0.17	5	
Acetone	ND	ug/Kg	50	100	
Allyl Chloride	ND	ug/Kg	0.14	5	
Benzene	ND	ug/Kg	0.18	5	
Bromobenzene	ND	ug/Kg	0.3	5	
Bromochloromethane	ND	ug/Kg	0.18	5	
Bromodichloromethane	ND	ug/Kg	0.2	5	
Bromoform	ND	ug/Kg	0.19	5	
Bromomethane	ND	ug/Kg	0.22	5	
Carbon Tetrachloride	ND	ug/Kg	0.18	5	
Chlorobenzene	ND	ug/Kg	0.18	5	
Chlorodibromomethane	ND	ug/Kg	0.19	5	
Chloroethane	ND	ug/Kg	0.2	5	
Chloroform	ND	ug/Kg	0.17	5	
Chloromethane	ND	ug/Kg	0.21	5	
cis-1,2-Dichloroethene	ND	ug/Kg	0.2	5	
cis-1,3-dichloropropene	ND	ug/Kg	0.2	5	
cis-1,4-dichloro-2-butene	ND	ug/Kg	0.2	5	
Dibromomethane	ND	ug/Kg	0.23	5	
Dichlorodifluoromethane	ND	ug/Kg	0.23	5	
Di-isopropyl ether (DIPE)	ND	ug/Kg	0.21	5	
Ethanol	ND	ug/Kg	100	500	
Ethylbenzene	ND	ug/Kg	0.25	5	
Ethyl-tertbutylether (ETBE)	ND	ug/Kg	0.42	5	
Hexachlorobutadiene	ND	ug/Kg	0.38	5	
Isopropylbenzene	ND	ug/Kg	0.17	5	

QCBatchID: QC1197948	Analyst: lucy	Method: EPA 8260B
Matrix: Solid	Analyzed: 11/24/2018	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1197948MB1					
m and p-Xylene	ND	ug/Kg	0.21	5	
Methylene chloride	2.4 J	ug/Kg	0.22	5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg	0.25	5	
Naphthalene	ND	ug/Kg	0.28	5	
N-butylbenzene	ND	ug/Kg	0.16	5	
N-propylbenzene	ND	ug/Kg	0.19	5	
o-Xylene	ND	ug/Kg	0.13	5	
Sec-butylbenzene	ND	ug/Kg	0.34	5	
Styrene	ND	ug/Kg	0.23	5	
t-Butyl alcohol (TBA)	ND	ug/Kg	8.8	10	
Tert-amylmethylether (TAME)	ND	ug/Kg	0.19	5	
Tert-butylbenzene	ND	ug/Kg	0.18	5	
Tetrachloroethene	ND	ug/Kg	0.2	5	
Toluene	ND	ug/Kg	0.23	5	
trans-1,2-dichloroethene	ND	ug/Kg	0.23	5	
trans-1,3-dichloropropene	ND	ug/Kg	0.14	5	
trans-1,4-dichloro-2-butene	ND	ug/Kg	0.38	5	
Trichloroethene	ND	ug/Kg	0.39	5	
Trichlorofluoromethane	ND	ug/Kg	0.25	5	
Vinyl Chloride	ND	ug/Kg	0.18	5	
Xylenes (Total)	ND	ug/Kg	0.45	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197948LCS1											
1,1-Dichloroethene	50		54		ug/Kg	108			59-172		
Benzene	50		48		ug/Kg	96			62-137		
Chlorobenzene	50		46		ug/Kg	92			60-133		
Methyl-t-butyl Ether (MTBE)	50		46		ug/Kg	92			62-137		
Toluene	50		46		ug/Kg	92			59-139		
Trichloroethene	50		47		ug/Kg	94			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197948MS1, QC1197948MSD1												Source: 408726-003
1,1-Dichloroethene	ND	50	50	54	53	ug/Kg	108	106	1.9	59-172	22	
Benzene	ND	50	50	47	50	ug/Kg	94	100	6.2	62-137	24	
Chlorobenzene	ND	50	50	44	42	ug/Kg	88	84	4.7	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	48	49	ug/Kg	96	98	2.1	62-137	21	
Toluene	1.8	50	50	45	45	ug/Kg	86	86	0.0	59-139	21	
Trichloroethene	ND	50	50	48	46	ug/Kg	96	92	4.3	66-142	21	

Source: 408726-003

QCBatchID: QC1197961	Analyst: Jarriaga	Method: EPA 8081A
Matrix: Water	Analyzed: 11/25/2018	Instrument: SVOA-GC (group)

Blank Summary						
---------------	--	--	--	--	--	--

Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197961MB1						
4,4'-DDD	ND	ug/L	0.011	0.1		
4,4'-DDE	ND	ug/L	0.006	0.1		
4,4'-DDT	ND	ug/L	0.011	0.1		
a-BHC	ND	ug/L	0.002	0.1		
Aldrin	ND	ug/L	0.007	0.1		
b-BHC	ND	ug/L	0.003	0.1		
Chlordane (technical)	ND	ug/L	0.27	1		
d-BHC	ND	ug/L	0.006	0.1		
Dieldrin	ND	ug/L	0.006	0.1		
Endosulfan I	ND	ug/L	0.004	0.1		
Endosulfan II	ND	ug/L	0.011	0.1		
Endosulfan sulfate	ND	ug/L	0.012	0.1		
Endrin	ND	ug/L	0.008	0.1		
Endrin aldehyde	ND	ug/L	0.009	0.1		
Endrin Ketone	ND	ug/L	0.011	0.1		
Heptachlor	ND	ug/L	0.003	0.1		
Heptachlor epoxide	ND	ug/L	0.002	0.1		
Lindane (Gamma-BHC)	ND	ug/L	0.002	0.1		
Methoxychlor	ND	ug/L	0.055	0.1		
Toxaphene	ND	ug/L	0.48	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary										
--	--	--	--	--	--	--	--	--	--	--

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197961LCS1, QC1197961LCSD1											
4,4'-DDD	0.5	0.5	0.36	0.35	ug/L	72	70	3	42-142	20	
4,4'-DDE	0.5	0.5	0.35	0.35	ug/L	70	70	0	48-133	20	
4,4'-DDT	0.5	0.5	0.41	0.40	ug/L	82	80	2	40-143	20	
a-BHC	0.5	0.5	0.31	0.31	ug/L	62	62	0	55-122	20	
Aldrin	0.5	0.5	0.35	0.34	ug/L	70	68	3	46-117	20	
b-BHC	0.5	0.5	0.38	0.36	ug/L	76	72	5	46-136	20	
d-BHC	0.5	0.5	0.34	0.34	ug/L	68	68	0	53-124	20	
Dieldrin	0.5	0.5	0.36	0.38	ug/L	72	76	5	49-129	20	
Endosulfan I	0.5	0.5	0.34	0.34	ug/L	68	68	0	54-122	20	
Endosulfan II	0.5	0.5	0.35	0.34	ug/L	70	68	3	46-132	20	
Endosulfan sulfate	0.5	0.5	0.39	0.38	ug/L	78	76	3	52-129	20	
Endrin	0.5	0.5	0.41	0.41	ug/L	82	82	0	57-145	20	
Endrin aldehyde	0.5	0.5	0.35	0.34	ug/L	70	68	3	48-116	20	
Endrin Ketone	0.5	0.5	0.36	0.36	ug/L	72	72	0	44-137	20	
Heptachlor	0.5	0.5	0.35	0.37	ug/L	70	74	6	51-128	20	
Heptachlor epoxide	0.5	0.5	0.32	0.32	ug/L	64	64	0	51-122	20	
Lindane (Gamma-BHC)	0.5	0.5	0.33	0.33	ug/L	66	66	0	54-128	20	
Methoxychlor	0.5	0.5	0.61	0.59	ug/L	122	118	3	52-158	20	

QCBatchID: <u>QC1197962</u>	Analyst: Jarriaga	Method: EPA 8082
Matrix: Water	Analyzed: 11/25/2018	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197962MB1						
PCB-1016	ND	ug/L	0.058	0.5		
PCB-1221	ND	ug/L	0.253	0.5		
PCB-1232	ND	ug/L	0.196	0.5		
PCB-1242	ND	ug/L	0.169	0.5		
PCB-1248	ND	ug/L	0.1	0.5		
PCB-1254	ND	ug/L	0.054	0.5		
PCB-1260	ND	ug/L	0.08	0.5		
PCB-1262	ND	ug/L	0.045	0.5		
PCB-1268	ND	ug/L	0.062	0.5		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1197962LCS1, QC1197962LCSD1												
PCB-1016	5	5	4.4	4.7	ug/L	88	94	7	70-130	20		
PCB-1260	5	5	4.3	4.5	ug/L	86	90	5	70-130	20		

QCBatchID: QC1197966	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1197966MB1					
Antimony	0.96 J	mg/Kg	0.37	3	
Arsenic	0.45 J	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	0.43 J	mg/Kg	0.32	1	
Molybdenum	0.51 J	mg/Kg	0.13	1	
Nickel	0.63 J	mg/Kg	0.2	1.5	
Selenium	ND	mg/Kg	0.72	3	
Silver	ND	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	0.94 J	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197966LCS1											
Antimony	100		108		mg/Kg	108			80-120		
Arsenic	100		100		mg/Kg	100			80-120		
Barium	100		106		mg/Kg	106			80-120		
Beryllium	100		100		mg/Kg	100			80-120		
Cadmium	100		95.5		mg/Kg	96			80-120		
Chromium	100		94.9		mg/Kg	95			80-120		
Cobalt	100		103		mg/Kg	103			80-120		
Copper	100		97.6		mg/Kg	98			80-120		
Lead	100		108		mg/Kg	108			80-120		
Molybdenum	100		103		mg/Kg	103			80-120		
Nickel	100		108		mg/Kg	108			80-120		
Selenium	100		88.9		mg/Kg	89			80-120		
Silver	100		103		mg/Kg	103			80-120		
Thallium	100		99.3		mg/Kg	99			80-120		
Vanadium	100		105		mg/Kg	105			80-120		
Zinc	100		103		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197966MS1, QC1197966MSD1												Source: 408720-001
Antimony	1.25	100	100	50.5	45.5	mg/Kg	49	44	10.4	75-125	20	M
Arsenic	4.91	100	100	107	96.0	mg/Kg	102	91	10.8	75-125	20	
Barium	123	100	100	241	221	mg/Kg	118	98	8.7	75-125	20	
Beryllium	ND	100	100	96.8	95.1	mg/Kg	97	95	1.8	75-125	20	
Cadmium	1.34	100	100	95.7	88.9	mg/Kg	94	88	7.4	75-125	20	
Chromium	28.5	100	100	126	117	mg/Kg	98	89	7.4	75-125	20	
Cobalt	11.3	100	100	111	101	mg/Kg	100	90	9.4	75-125	20	
Copper	17.9	100	100	119	109	mg/Kg	101	91	8.8	75-125	20	
Lead	212	100	100	352	280	mg/Kg	140	68	22.8	75-125	20	M
Molybdenum	2.19	100	100	98.5	90.5	mg/Kg	96	88	8.5	75-125	20	

QCBatchID: <u>QC1197966</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197966MS1, QC1197966MSD1											Source: 408720-001	
Nickel	17.6	100	100	121	112	mg/Kg	103	94	7.7	75-125	20	
Selenium	ND	100	100	89.8	85.1	mg/Kg	90	85	5.4	75-125	20	
Silver	ND	100	100	102	94.0	mg/Kg	102	94	8.2	75-125	20	
Thallium	2.24	100	100	89.9	86.5	mg/Kg	88	84	3.9	75-125	20	
Vanadium	48.7	100	100	163	151	mg/Kg	114	102	7.6	75-125	20	
Zinc	108	100	100	214	197	mg/Kg	106	89	8.3	75-125	20	

QCBatchID: QC1197967	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197967MB1						
Antimony	ND	mg/Kg	0.37	3		
Arsenic	ND	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	1.32	mg/Kg	0.31	1	B	
Lead	0.34 J	mg/Kg	0.32	1		
Molybdenum	0.26 J	mg/Kg	0.13	1		
Nickel	0.50 J	mg/Kg	0.2	1.5		
Selenium	ND	mg/Kg	0.72	3		
Silver	ND	mg/Kg	0.13	0.5		
Thallium	ND	mg/Kg	0.42	3		
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	0.95 J	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197967LCS1											
Antimony	100		117		mg/Kg	117			80-120		
Arsenic	100		108		mg/Kg	108			80-120		
Barium	100		114		mg/Kg	114			80-120		
Beryllium	100		102		mg/Kg	102			80-120		
Cadmium	100		102		mg/Kg	102			80-120		
Chromium	100		102		mg/Kg	102			80-120		
Cobalt	100		110		mg/Kg	110			80-120		
Copper	100		105		mg/Kg	105			80-120		
Lead	100		117		mg/Kg	117			80-120		
Molybdenum	100		112		mg/Kg	112			80-120		
Nickel	100		118		mg/Kg	118			80-120		
Selenium	100		99.8		mg/Kg	100			80-120		
Silver	100		111		mg/Kg	111			80-120		
Thallium	100		108		mg/Kg	108			80-120		
Vanadium	100		114		mg/Kg	114			80-120		
Zinc	100		112		mg/Kg	112			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197967MS1, QC1197967MSD1										Source: 408720-041		
Antimony	0.65	100	100	57.1	51.8	mg/Kg	56	51	9.7	75-125	20	M
Arsenic	7.28	100	100	97.4	95.9	mg/Kg	90	89	1.6	75-125	20	
Barium	108	100	100	205	210	mg/Kg	97	102	2.4	75-125	20	
Beryllium	ND	100	100	95.7	96.0	mg/Kg	96	96	0.3	75-125	20	
Cadmium	1.78	100	100	87.4	87.9	mg/Kg	86	86	0.6	75-125	20	
Chromium	22.8	100	100	107	111	mg/Kg	84	88	3.7	75-125	20	
Cobalt	9.31	100	100	97.8	98.6	mg/Kg	88	89	0.8	75-125	20	
Copper	27.0	100	100	115	115	mg/Kg	88	88	0.0	75-125	20	
Lead	25.8	100	100	118	117	mg/Kg	92	91	0.9	75-125	20	
Molybdenum	2.23	100	100	91.0	91.5	mg/Kg	89	89	0.5	75-125	20	

QCBatchID: <u>QC1197967</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD		
QC1197967MS1, QC1197967MSD1											Source: 408720-041		
Nickel	17.6	100	100	112	112	mg/Kg	94	94	0.0	75-125	20		
Selenium	1.19	100	100	84.7	84.3	mg/Kg	84	83	0.5	75-125	20		
Silver	ND	100	100	93.2	93.8	mg/Kg	93	94	0.6	75-125	20		
Thallium	1.76	100	100	86.0	87.4	mg/Kg	84	86	1.6	75-125	20		
Vanadium	41.3	100	100	139	143	mg/Kg	98	102	2.8	75-125	20		
Zinc	104	100	100	179	177	mg/Kg	75	73	1.1	75-125	20	M	

QCBatchID: QC1197968	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197968MB1						
Arsenic	0.157 J	mg/Kg	0.02	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197968LCS1											
Arsenic	50		48.2		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197968MS1, QC1197968MSD1											Source: 408720-001	
Arsenic	3.72	50	50	40.1	38.8	mg/Kg	73	70	3.3	75-125	20	M

QCBatchID: QC1197969	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197969MB1						
Arsenic	ND	mg/Kg	0.02	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197969LCS1											
Arsenic	50		47.2		mg/Kg	94			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197969MS1, QC1197969MSD1											Source: 408720-041	
Arsenic	5.53	50	50	40.9	43.8	mg/Kg	71	77	6.8	75-125	20	M

QCBatchID: QC1197976	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197976MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197976LCS1											
Mercury	0.83		0.83		mg/Kg	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197976MS1, QC1197976MSD1												Source: 408720-041
Mercury	ND	0.83	0.83	0.76	0.82	mg/Kg	92	99	7.6	75-125	20	

QCBatchID: <u>QC1197977</u>	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 11/26/2018	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197977MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197977LCS1											
Mercury	0.83		0.89		mg/Kg	107			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197977MS1, QC1197977MSD1											Source: 408720-001	
Mercury	ND	0.83	0.83	0.88	0.83	mg/Kg	106	100	5.8	75-125	20	

QCBatchID: <u>QC1198012</u>	Analyst: ssabir	Method: EPA 8015M
Matrix: Solid	Analyzed: 11/26/2018	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198012MB1						
TPH (C10 to C28)	ND	mg/Kg	10	10		
TPH (C13 to C22)	ND	mg/Kg	10	10		
TPH (C23 to C44)	ND	mg/Kg	20	20		
TPH (C6 to C12)	ND	mg/Kg	10	10		
TPH Diesel (SGT)	ND	mg/Kg	10	10		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198012LCS1											
TPH Diesel (SGT)	250		200		mg/Kg	80			36-138		

QCBatchID: QC1198051	Analyst: dswafford	Method: EPA 6010B
Matrix: Water	Analyzed: 11/27/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198051MB1						
Antimony	ND	mg/L	0.014	0.04		
Arsenic	ND	mg/L	0.008	0.01		
Barium	ND	mg/L	0.002	0.01		
Beryllium	ND	mg/L	0.001	0.005		
Cadmium	0.003 J	mg/L	0.001	0.005		
Chromium	ND	mg/L	0.002	0.01		
Cobalt	ND	mg/L	0.001	0.005		
Copper	ND	mg/L	0.004	0.01		
Lead	ND	mg/L	0.005	0.01		
Molybdenum	0.0095 J	mg/L	0.005	0.01		
Nickel	0.005 J	mg/L	0.003	0.02		
Selenium	ND	mg/L	0.016	0.03		
Silver	ND	mg/L	0.003	0.005		
Thallium	ND	mg/L	0.009	0.05		
Vanadium	ND	mg/L	0.002	0.005		
Zinc	0.021 J	mg/L	0.007	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198051LCS1											
Antimony	2		2.15		mg/L	108			80-120		
Arsenic	2		2.01		mg/L	101			80-120		
Barium	2		2.05		mg/L	103			80-120		
Beryllium	2		1.98		mg/L	99			80-120		
Cadmium	2		1.87		mg/L	94			80-120		
Chromium	2		1.80		mg/L	90			80-120		
Cobalt	2		1.95		mg/L	98			80-120		
Copper	2		1.89		mg/L	95			80-120		
Lead	2		2.15		mg/L	108			80-120		
Molybdenum	2		2.04		mg/L	102			80-120		
Nickel	2		2.00		mg/L	100			80-120		
Selenium	2		1.89		mg/L	95			80-120		
Silver	2		2.02		mg/L	101			80-120		
Thallium	2		1.97		mg/L	99			80-120		
Vanadium	2		2.04		mg/L	102			80-120		
Zinc	2		1.88		mg/L	94			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198051MS1, QC1198051MSD1										Source: 408720-060		
Antimony	ND	1	1	1.12	1.14	mg/L	112	114	1.8	75-125	20	
Arsenic	ND	1	1	1.06	1.04	mg/L	106	104	1.9	75-125	20	
Barium	ND	1	1	1.12	1.13	mg/L	112	113	0.9	75-125	20	
Beryllium	ND	1	1	1.06	1.01	mg/L	106	101	4.8	75-125	20	
Cadmium	ND	1	1	1.03	1.03	mg/L	103	103	0.0	75-125	20	
Chromium	ND	1	1	0.952	0.919	mg/L	95	92	3.5	75-125	20	
Cobalt	ND	1	1	1.08	1.08	mg/L	108	108	0.0	75-125	20	
Copper	ND	1	1	0.983	0.956	mg/L	97	94	2.8	75-125	20	
Lead	ND	1	1	1.12	1.12	mg/L	112	112	0.0	75-125	20	
Molybdenum	0.0088	1	1	1.07	1.09	mg/L	106	108	1.9	75-125	20	

QCBatchID: <u>QC1198051</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Water	Analyzed: 11/27/2018	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198051MS1, QC1198051MSD1										Source: 408720-060		
Nickel	ND	1	1	1.13	1.13	mg/L	113	113	0.0	75-125	20	
Selenium	ND	1	1	0.984	0.959	mg/L	98	96	2.6	75-125	20	
Silver	ND	1	1	1.08	1.10	mg/L	108	110	1.8	75-125	20	
Thallium	ND	1	1	1.04	1.03	mg/L	104	103	1.0	75-125	20	
Vanadium	ND	1	1	1.11	1.11	mg/L	111	111	0.0	75-125	20	
Zinc	0.015	1	1	1.05	1.09	mg/L	104	108	3.7	75-125	20	

QCBatchID: <u>QC1198091</u>	Analyst: sbailey-woo	Method: EPA 7470A
Matrix: Water	Analyzed: 11/28/2018	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198091MB1						
Mercury	ND	ug/L	0.094	0.4		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198091LCS1											
Mercury	5		4.90		ug/L	98			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198091MS1, QC1198091MSD1											Source: 408695-039	
Mercury	ND	5	5	5.05	5.07	ug/L	101	101	0.4	75-125	20	

QCBatchID: <u>QC1198120</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/28/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198120MB1						
Lead	ND	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198120LCS1, QC1198120LCSD1											
Lead	2	2	2.11	2.17	mg/L	106	109	3	80-120	20	

QCBatchID: QC1198135

Analyst: Jarriaga

Method: EPA 8270C

Matrix: Solid

Analyzed: 11/29/2018

Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1198135MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg	22	250	
1,2-Dichlorobenzene	ND	ug/Kg	37	250	
1,3-Dichlorobenzene	ND	ug/Kg	50	250	
1,4-Dichlorobenzene	ND	ug/Kg	31	250	
1-Methylnaphthalene	ND	ug/Kg	21	250	
2,4,5-Trichlorophenol	ND	ug/Kg	43	250	
2,4,6-Trichlorophenol	ND	ug/Kg	35	250	
2,4-Dichlorophenol	ND	ug/Kg	23	250	
2,4-Dimethylphenol	ND	ug/Kg	100	250	
2,4-Dinitrophenol	ND	ug/Kg	23	1200	
2,4-Dinitrotoluene	ND	ug/Kg	14	250	
2,6-Dinitrotoluene	ND	ug/Kg	33	250	
2-Chloronaphthalene	ND	ug/Kg	15	250	
2-Chlorophenol	ND	ug/Kg	15	250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg	21	250	
2-Methylnaphthalene	ND	ug/Kg	21	250	
2-Methylphenol (o-Cresol)	ND	ug/Kg	31	250	
2-Nitroaniline	ND	ug/Kg	31	250	
2-Nitrophenol	ND	ug/Kg	16	250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg	19	400	
3,3'-Dichlorobenzidine	ND	ug/Kg	54	1200	
3-Nitroaniline	ND	ug/Kg	37	250	
4-Bromophenyl phenyl ether	ND	ug/Kg	24	250	
4-Chloro-3-methylphenol	ND	ug/Kg	18	250	
4-Chloroaniline	ND	ug/Kg	73	250	
4-Chlorophenyl phenyl ether	ND	ug/Kg	19	250	
4-Nitroaniline	ND	ug/Kg	148	250	
4-Nitrophenol	ND	ug/Kg	117	250	
Acenaphthene	ND	ug/Kg	25	250	
Acenaphthylene	ND	ug/Kg	20	250	
Aniline	ND	ug/Kg	101	250	
Anthracene	ND	ug/Kg	23	250	
Azobenzene	ND	ug/Kg	67	250	
Benz(a)anthracene	ND	ug/Kg	22	250	
Benzidine	ND	ug/Kg	23	1200	
Benzo(a)pyrene	ND	ug/Kg	25	250	
Benzo(b)fluoranthene	ND	ug/Kg	27	250	
Benzo(g,h,i)perylene	ND	ug/Kg	29	250	
Benzo(k)fluoranthene	ND	ug/Kg	32	250	
Benzoic acid	ND	ug/Kg	36	1200	
Benzyl alcohol	ND	ug/Kg	36	250	
Bis(2-chloroethoxy)methane	ND	ug/Kg	15	250	
Bis(2-chloroethyl) Ether	ND	ug/Kg	25	1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg	17	250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg	52	250	
Butylbenzyl Phthalate	ND	ug/Kg	44	250	
Carbazole	ND	ug/Kg	23	250	
Chrysene	ND	ug/Kg	20	250	
Dibenz(a,h)anthracene	ND	ug/Kg	21	250	
Dibenzofuran	ND	ug/Kg	14	250	
Diethyl phthalate	ND	ug/Kg	24	250	
Dimethyl phthalate	ND	ug/Kg	22	250	

QCBatchID: QC1198135	Analyst: Jarriaga	Method: EPA 8270C
Matrix: Solid	Analyzed: 11/29/2018	Instrument: SVOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1198135MB1					
Di-n-butyl phthalate	ND	ug/Kg	67	250	
Di-n-octyl phthalate	ND	ug/Kg	23	250	
Fluoranthene	ND	ug/Kg	21	250	
Fluorene	ND	ug/Kg	27	250	
Hexachlorobenzene	ND	ug/Kg	15	250	
Hexachlorobutadiene	ND	ug/Kg	39	250	
Hexachlorocyclopentadiene	ND	ug/Kg	14	1200	
Hexachloroethane	ND	ug/Kg	43	250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg	90	250	
Isophorone	ND	ug/Kg	25	250	
Naphthalene	ND	ug/Kg	25	250	
Nitrobenzene	ND	ug/Kg	21	1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg	34	250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg	26	250	
N-Nitrosodiphenylamine	ND	ug/Kg	24	250	
Pentachlorophenol	ND	ug/Kg	55	1200	
Phenanthrene	ND	ug/Kg	22	250	
Phenol	ND	ug/Kg	26	250	
Pyrene	ND	ug/Kg	23	250	
Pyridine	ND	ug/Kg	21	250	
Total Cresol	ND	ug/Kg	400	400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198135LCS1											
1,2,4-Trichlorobenzene	2000		1400		ug/Kg	70			43-111		
1,4-Dichlorobenzene	2000		1400		ug/Kg	70			30-116		
2,4,5-Trichlorophenol	2000		1600		ug/Kg	80			57-125		
2,4-Dimethylphenol	2000		1400		ug/Kg	70			50-112		
2,4-Dinitrotoluene	2000		1700		ug/Kg	85			57-124		
2-Chlorophenol	2000		1400		ug/Kg	70			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1500		ug/Kg	75			56-124		
4-Chloro-3-methylphenol	2000		1600		ug/Kg	80			61-122		
4-Nitrophenol	2000		1700		ug/Kg	85			54-126		
Acenaphthene	2000		1500		ug/Kg	75			53-112		
Benzo(b)fluoranthene	2000		1600		ug/Kg	80			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1400		ug/Kg	70			54-110		
Pentachlorophenol	2000		1600		ug/Kg	80			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1700		ug/Kg	85			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198135MS1, QC1198135MSD1												Source: 408706-007
1,2,4-Trichlorobenzene	ND	2000	2000	1400	1400	ug/Kg	70	70	0.0	35-93	30	
1,4-Dichlorobenzene	ND	2000	2000	1400	1400	ug/Kg	70	70	0.0	39-95	30	
2,4,5-Trichlorophenol	ND	2000	2000	1400	1300	ug/Kg	70	65	7.4	44-108	30	
2,4-Dimethylphenol	ND	2000	2000	1200	1100	ug/Kg	60	55	8.7	37-105	30	
2,4-Dinitrotoluene	ND	2000	2000	2500	2400	ug/Kg	125	120	4.1	48-109	30	M
2-Chlorophenol	ND	2000	2000	1300	1200	ug/Kg	65	60	8.0	42-102	30	

Source: 408706-007

QCBatchID: <u>QC1198135</u>	Analyst: Jarriaga	Method: EPA 8270C
Matrix: Solid	Analyzed: 11/29/2018	Instrument: SVOA-MS (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198135MS1, QC1198135MSD1											Source: 408706-007	
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1400	1300	ug/Kg	70	65	7.4	33-116	30	
4-Chloro-3-methylphenol	ND	2000	2000	1300	1200	ug/Kg	65	60	8.0	33-120	30	
4-Nitrophenol	ND	2000	2000	3700	3400	ug/Kg	185	170	8.5	37-107	30	M
Acenaphthene	ND	2000	2000	1500	1400	ug/Kg	75	70	6.9	57-99	30	
Benzo(b)fluoranthene	ND	2000	2000	1300	1200	ug/Kg	65	60	8.0	59-126	30	
Chrysene	ND	2000	2000	1600	1500	ug/Kg	80	75	6.5	68-120	30	
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1200	1200	ug/Kg	60	60	0.0	41-127	30	
Pentachlorophenol	ND	2000	2000	5000	4900	ug/Kg	250	245	2.0	43-120	30	M
Phenol	ND	2000	2000	1300	1300	ug/Kg	65	65	0.0	46-116	30	
Pyrene	ND	2000	2000	1600	1500	ug/Kg	80	75	6.5	53-129	30	

QCBatchID: QC1198143	Analyst: JParedes	Method: EPA 6020
Matrix: Water	Analyzed: 11/29/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198143MB1						
Arsenic	ND	ug/L	0.31	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198143LCS1											
Arsenic	50		48.2		ug/L	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198143MS1, QC1198143MSD1											Source: 408720-060	
Arsenic	ND	50	50	47.2	47.5	ug/L	94	95	0.6	75-125	20	

QCBatchID: QC1198412	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 12/05/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198412MB1						
Arsenic	0.022 J	mg/Kg	0.02	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198412LCS1											
Arsenic	50		48.9		mg/Kg	98			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198412MS1, QC1198412MSD1											Source: 408720-015	
Arsenic	3.57	50	50	49.7	49.6	mg/Kg	92	92	0.2	75-125	20	

QCBatchID: QC1198609	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 12/10/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198609MB1						
Aluminum	ND	mg/Kg	0.53	5		
Antimony	0.91 J	mg/Kg	0.37	3		
Arsenic	0.65 J	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	0.84 J	mg/Kg	0.31	1		
Lead	ND	mg/Kg	0.32	1		
Manganese	ND	mg/Kg	0.14	1		
Molybdenum	0.43 J	mg/Kg	0.13	1		
Nickel	ND	mg/Kg	0.2	1.5		
Selenium	ND	mg/Kg	0.72	3		
Silver	ND	mg/Kg	0.13	0.5		
Thallium	0.70 J	mg/Kg	0.42	3		
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	1.07 J	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198609LCS1											
Antimony	100		105		mg/Kg	105			80-120		
Arsenic	100		104		mg/Kg	104			80-120		
Barium	100		108		mg/Kg	108			80-120		
Beryllium	100		97.5		mg/Kg	98			80-120		
Cadmium	100		102		mg/Kg	102			80-120		
Chromium	100		98.1		mg/Kg	98			80-120		
Cobalt	100		106		mg/Kg	106			80-120		
Copper	100		100		mg/Kg	100			80-120		
Lead	100		108		mg/Kg	108			80-120		
Molybdenum	100		103		mg/Kg	103			80-120		
Nickel	100		110		mg/Kg	110			80-120		
Selenium	100		92.0		mg/Kg	92			80-120		
Silver	100		106		mg/Kg	106			80-120		
Thallium	100		99.8		mg/Kg	100			80-120		
Vanadium	100		107		mg/Kg	107			80-120		
Zinc	100		107		mg/Kg	107			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1198609MS1, QC1198609MSD1												Source: 409274-005
Antimony	2.08	100	100	68.8	56.4	mg/Kg	67	54	19.8	75-125	20	M
Arsenic	2.06	100	100	122	119	mg/Kg	120	117	2.5	75-125	20	
Barium	79.1	100	100	212	217	mg/Kg	133	138	2.3	75-125	20	M
Beryllium	ND	100	100	100	99.9	mg/Kg	100	100	0.1	75-125	20	
Cadmium	0.39	100	100	101	105	mg/Kg	101	105	3.9	75-125	20	
Chromium	17.9	100	100	127	122	mg/Kg	109	104	4.0	75-125	20	
Cobalt	10.5	100	100	121	117	mg/Kg	111	107	3.4	75-125	20	
Copper	33.3	100	100	164	174	mg/Kg	131	141	5.9	75-125	20	M

QCBatchID: <u>QC1198609</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 12/10/2018	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD		
QC1198609MS1, QC1198609MSD1											Source: 409274-005		
Lead	13.6	100	100	138	142	mg/Kg	124	128	2.9	75-125	20	M	
Molybdenum	ND	100	100	111	108	mg/Kg	111	108	2.7	75-125	20		
Nickel	20.9	100	100	151	132	mg/Kg	130	111	13.4	75-125	20	M	
Selenium	ND	100	100	105	102	mg/Kg	105	102	2.9	75-125	20		
Silver	ND	100	100	114	115	mg/Kg	114	115	0.9	75-125	20		
Thallium	1.92	100	100	101	102	mg/Kg	99	100	1.0	75-125	20		
Vanadium	44.3	100	100	164	167	mg/Kg	120	123	1.8	75-125	20		
Zinc	52.0	100	100	164	174	mg/Kg	112	122	5.9	75-125	20		

QCBatchID: <u>QC1198825</u>	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 12/13/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1198825MB1						
Chromium	ND	mg/L	0.002	0.03		
Lead	ND	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1198825LCS1, QC1198825LCSD1											
Chromium	10	10	8.32	8.81	mg/L	83	88	6	80-120	20	
Lead	10	10	9.52	9.63	mg/L	95	96	1	80-120	20	

QCBatchID: <u>QC1199884</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 01/10/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1199884MB1						
Chromium	ND	mg/L	0.002	0.05		
Lead	ND	mg/L	0.005	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1199884LCS1											
Chromium	2		1.850		mg/L	93			80-120		
Lead	2		1.946		mg/L	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1199884MS1, QC1199884MSD1												Source: 410082-001
Chromium	0.252	1	1	0.895	0.861	mg/L	64	61	3.9	75-125	20	M
Lead	0.027	1	1	0.914	0.863	mg/L	89	84	5.7	75-125	20	

QCBatchID: QC1199885	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 01/10/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1199885MB1						
Lead	0.010 J	mg/L	0.005	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1199885LCS1											
Lead	2		1.995		mg/L	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1199885MS1, QC1199885MSD1											Source: 408720-009	
Lead	0.035	1	1	0.935	0.917	mg/L	90	88	1.9	75-125	20	


Data Qualifiers and Definitions

Qualifiers


A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

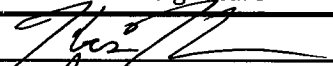
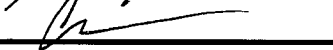
ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record				Turn Around Time (Rush by advanced notice only)								
806 N. Batavia St., Orange, CA 92868			Lab No: <u>408720</u>				Standard:		<input checked="" type="checkbox"/>	4 Day:		<input type="checkbox"/>	3 Day:		<input type="checkbox"/>
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>1</u> of <u>10</u>				2 Day:		<input type="checkbox"/>	1 Day:		<input type="checkbox"/>	Same Day:		<input type="checkbox"/>
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other							


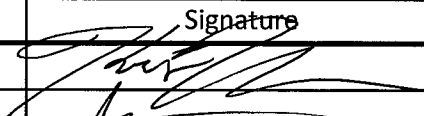
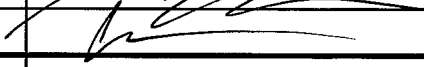
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request										Test Instructions / Comments																																																																																																																																																																																																																																																																																																																														
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	6010B - Cd	6010B - Cr	6010B - Cu	6010B - Fe	6010B - Hg	6010B - Mn	6010B - Ni	6010B - Pb	6010B - Se	6010B - Zn	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu	6010B - Fe	6010B - Mn	6010B - Zn	6010B - Pb	6010B - Cd	6010B - Cr	6010B - Hg	6010B - Se	6010B - V	6010B - W	6010B - Y	6010B - Zr	6010B - Nb	6010B - Mo	6010B - Co	6010B - Ni	6010B - Cu

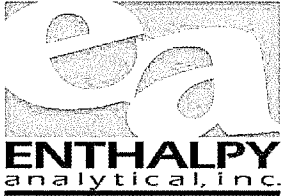


ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)											
806 N. Batavia St., Orange, CA 92868			Lab No:			Standard:		<input checked="" type="checkbox"/>		4 Day:				3 Day:			
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>2</u> of <u>10</u>			2 Day:				1 Day:				Same Day:			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other												


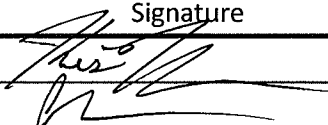
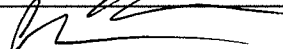
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments			
Company:	ES Engineering Services, LLC			Name:	Shenandoah Elementary School			EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals 6010B							
Report To:	Dane Nygaard			Number:	029RC1-191395														
Email:	dnygaard@es-online.com			P.O. #:	PO1026791														
Address:	1 Park Plaza, Suite 1000			Address:	2450 Shenandoah Street														
	Irvine, CA 92614				Los Angeles, California														
Phone:	714-919-6500			Global ID:															
Fax:	714-919-6501			Sampled By:	Kris Kern														


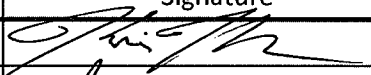
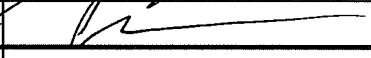
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals 6010B							
1 SB-6-0.5'	11/20/18	1026	Soil	16kss Jar	Ice		X	X		X							
2 SB-6-1.5'	└	1030	└	└	└		X	X		X							Hold
3 SB-7-0.5'		0935					X	X	X	X							
4 SB-7-1.5'		0940					X	X	X	X						Hold	
5 SB-8-0.5'		11/19/18				1458		X	X		X						
6 SB-8-1.5'	11/19/18	1501	└	└	└		X	X		X							Hold
7 SB-9-0.5'	11/20/18	0918					X	X		X							
8 SB-9-1.5'	11/20/18	0923					X	X		X						Hold	
9 SB-10-0.5'	11/19/18	1431					X	X		X							
10 SB-10-1.5'	11/19/18	1438	└	└	Ice		X	X		X							Hold




	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	11/21/18 e 100
1 Received By:		C. Hernandez	EBO	11/21/18 1016
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				


ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)											
806 N. Batavia St., Orange, CA 92868			Lab No:		Standard:		<input checked="" type="checkbox"/>		4 Day:		3 Day:					
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>3</u> of <u>10</u>		2 Day:		<input type="checkbox"/>		1 Day:		Same Day:					
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request						Test Instructions / Comments				
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6010B - Lead</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6020 - Arsenic</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8081 - OC Pesticides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8082 - PCBs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">6010B-CAM 17 Metals</div> </div>												
Report To: Dane Nygaard		Number: 029RC1-191395														
Email: dnygaard@es-online.com		P.O. #: PO1026791														
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street														
Irvine, CA 92614		Los Angeles, California														
Phone: 714-919-6500		Global ID:														
Fax: 714-919-6501		Sampled By: Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.										
1	SB-11-0.5'	11/20/18	0900	Soil	1 Gls Jar	Ice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	SB-11-1.5'	11/20/18	0905			Ice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
3	SB-12-0.5'	11/19/18	1036				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	SB-12-1.5'	11/19/18	1048				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	SB-13-0.5'	11/19/18	1035				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	SB-13-1.5'	11/19/18	1045				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	SB-14-0.5'	11/19/18	1019				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	SB-14-1.5'	11/19/18	1025				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	SB-15-0.5'	11/20/18	0845			Ice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	SB-15-1.5'	11/20/18	0850			Ice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
		Signature		Print Name		Company / Title		Date / Time								
1 Relinquished By:				Kris Kern		ES		11/21/18 @ 1010								
1 Received By:				C. Arnesen		EA		11/21/18 1016								
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Chain of Custody Record Lab No: _____ Page: <u>4</u> of <u>10</u>		Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>								
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other										
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request					Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic EPA 8081 - OC Pesticides EPA 8082 - PCBs Cam 17 Metals 6010B								
Report To:	Dane Nygaard		Number:	029RC1-191395										
Email:	dnygaard@es-online.com		P.O. #:	PO1026791										
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street										
	Irvine, CA 92614			Los Angeles, California										
Phone:	714-919-6500		Global ID:											
Fax:	714-919-6501		Sampled By:	Kris Kern										
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.								
1	SB-16-0.5'	11/20/18	0827	Soil	1 Glass Jar	Ice		X	X		X			
2	SB-16-1.5'	11/20/18	0833					X	X		X			Hold
3	SB-17-0.5'	11/19/18	1414					X	X		X			
4	SB-17-1.5'	11/19/18	1420					X	X		X			Hold
5	SB-18-0.5'	11/19/18	1358					X	X		X			
6	SB-18-1.5'	11/19/18	1405					X	X		X			Hold
7	SB-19-0.5'	11/19/18	1340					X	X		X			
8	SB-19-1.5'	11/19/18	1347			Ice		X	X		X			Hold
9	SB-20-0.5'	11/19/18	1155											
10	SB-20-1.5'	11/19/18	1209											
Signature		Print Name		Company / Title		Date / Time								
1 Relinquished By: 		Kris Kern		ES		11/21/18 @ 1010								
1 Received By: 		C. Hernandez		EA		11/21/18 1010								
2 Relinquished By:														
2 Received By:														
3 Relinquished By:														
3 Received By:														

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)												
806 N. Batavia St., Orange, CA 92868			Lab No:			Standard:		<input checked="" type="checkbox"/>		4 Day:		3 Day:						
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: 5 of 10			2 Day:				1 Day:		Same Day:						
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other					Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other										
CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request								Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School			EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	Cam 17 Metals 6010B							
Report To:	Dane Nygaard		Number:	029RC1-191395														
Email:	dnygaard@es-online.com		P.O. #:	PO1026791														
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street														
	Irvine, CA 92614			Los Angeles, California														
Phone:	714-919-6500		Global ID:															
Fax:	714-919-6501		Sampled By:	Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.												
1	SB-21-0.5'	11/19/18	1232	Soil	1 Glass Jar	ICE		X	X		X							
2	SB-21-1.5'	11/19/18	1240					X	X		X						Hold	
3	SB-22-0.5'	11/19/18	1222					X	X		X							
4	SB-22-1.5'	11/19/18	1224					X	X		X						Hold	
5	SB-23-0.5'	11/19/18	1134														Hold JKR	
6	SB-23-1.5'	11/19/18	1144														Hold JKR	
7	SB-24-0.5'	11/20/18	0807					X	X		X							
8	SB-24-1.5'	11/20/18	0812					X	X		X						Hold	
9	SB-25-0.5'	11/20/18	0750					X	X		X							
10	SB-25-1.5'	11/20/18	0800					X	X		X						Hold	
Signature		Print Name		Company / Title		Date / Time												
1 Relinquished By: 		Kris Kern		ES		11/21/18 @ 1010												
1 Received By: 		C. Anderson		EPA		11/21/18 1010												
2 Relinquished By:																		
2 Received By:																		
3 Relinquished By:																		
3 Received By:																		

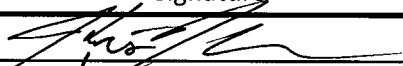

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)											
806 N. Batavia St., Orange, CA 92868				Lab No:				Standard:		<input checked="" type="checkbox"/>		4 Day:		<input type="checkbox"/>		3 Day:		<input type="checkbox"/>	
Phone: (714) 771-6900 Fax: (714) 771-9933				Page: <u>6</u> of <u>10</u>				2 Day:		<input type="checkbox"/>		1 Day:		<input type="checkbox"/>		Same Day:		<input type="checkbox"/>	
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other													
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments			
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic EPA 8081 - OC Pesticides EPA 8082 - PCBs Cam 17 Metals 6010B															
Report To: Dane Nygaard		Number: 029RC1-191395																	
Email: dnygaard@es-online.com		P.O. #: PO1026791																	
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street																	
Irvine, CA 92614		Los Angeles, California																	
Phone: 714-919-6500		Global ID:																	
Fax: 714-919-6501		Sampled By: Kris Kern																	
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.													
1	SB-26-0.5'	11/19/18	1512	Soil	16 Glass Jar	ICE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	SB-26-1.5'	11/19/18	1518				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold	
3	SB-27-0.5'	11/19/18	1523				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	SB-27-1.5'	11/19/18	1530				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold	
5	SB-28-0.5'	11/19/18	1600				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	SB-28-1.5'	11/19/18	1605				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold	
7	SB-29-3'	11/20/18	1129				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	SB-30-0.5'	11/20/18	0912				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	SB-30-1.5'	11/20/18	0918				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold	
10							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		Signature		Print Name		Company / Title		Date / Time											
1 Relinquished By:				Kris Kern		ES		11/21/18 @ 1010											
1 Received By:				W. Anderson		Eko		11/21/18 1010											
2 Relinquished By:																			
2 Received By:																			
3 Relinquished By:																			
3 Received By:																			


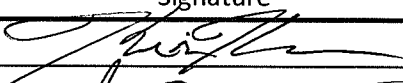

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No: _____ Page: <u>7</u> of <u>10</u>		Standard: <input checked="" type="checkbox"/> <input type="checkbox"/>		4 Day: <input type="checkbox"/> <input type="checkbox"/>		3 Day: <input type="checkbox"/> <input type="checkbox"/>		1 Day: <input type="checkbox"/> <input type="checkbox"/>		Same Day: <input type="checkbox"/> <input type="checkbox"/>		
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614				Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request							Test Instructions / Comments			
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School														
Report To: Dane Nygaard		Number: 029RC1-191395														
Email: dnygaard@es-online.com		P.O. #: PO1026791														
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street														
Irvine, CA 92614		Los Angeles, California														
Phone: 714-919-6500		Global ID:														
Fax: 714-919-6501		Sampled By: Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	Cam 17 Metals 6010B					
1	SB-31-0.5'	11/20/18	1106	Soil	1 Glass Jar	DCE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
2	SB-31-1.5'	11/20/18	1110	I	I	L	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Hold
3	SB-32-0.5'	11/19/18	1206	I	I	L	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
4	SB-32-1.5'	11/19/18	1212	I	I	L	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Hold
5																
6																
7																
8																
9																
10																
		Signature		Print Name		Company / Title		Date / Time								
1 Relinquished By:				Kris Kern		ES		11/21/18 e 1010								
1 Received By:				C. Hernandez		E.A.		11/21/18 1610								
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																


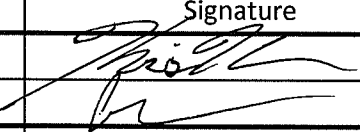

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)								
806 N. Batavia St., Orange, CA 92868			Lab No:		Standard:		<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>	<input type="checkbox"/>
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: 8 of 10		2 Day:		<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>	<input type="checkbox"/>
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other					

CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments							
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals 6010B											
Report To:	Dane Nygaard		Number:	029RC1-191395																	
Email:	dnygaard@es-online.com		P.O. #:	PO1026791																	
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street																	
	Irvine, CA 92614			Los Angeles, California																	
Phone:	714-919-6500		Global ID:																		
Fax:	714-919-6501		Sampled By:	Kris Kern																	

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals 6010B								
1 SB-5-0.5' (DUP)	11/20/18	0959	Soil	1 Jar	Ice		X	X		X								
2 SB-11-0.5' (DUP)	11/20/18	0900	↓	↓	↓		X	X		X								
3 SB-16-0.5' (DUP)	11/20/18	0827	↓	↓	↓		X	X		X								
4 SB-25-0.5' (DUP)	11/20/18	0756	↓	↓	↓		X	X		X								
5 SB-28-0.5' (DUP)	11/19/18	1600	↓	1 Jar	↓		X	X		X								
6 SB-2-0.5' (DUP)	11/20/18	12:34	Soil		Ice				X									
7																		
8																		
9																		
10																		

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Kris Kern	ES	11/21/18 @ 1010
¹ Received By:		Customer	ES	11/21/18 1010
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Chain of Custody Record Lab No: _____ Page: <u>9</u> of <u>10</u>		Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>						
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request				Test Instructions / Comments		
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 8015B - TPH d/mo EPA 8015B/5035 - TPH-g EPA 8260B/5035 - VOCs EPA 8082 - PCBs EPA 8270 - SVOCs EPA 8270 SIM - PAMs EPA 8081 - OC Pesticides EPA 8141 - OP Pesticides EPA 8151 - Herbicides EPA 6010B/747A - CM17 Metals EPA 7141 - Hexavalent Chromium EPA 6020 - Arsenic & Thallium								
Report To: Dane Nygaard		Number: 029RC1-191395										
Email: dnygaard@es-online.com		P.O. #: PO1027691										
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street										
Irvine, CA 92614		Los Angeles, California										
Phone: 714-919-6500		Global ID:										
Fax: 714-919-6501		Sampled By: Kris Kern										
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.						
1 Equipment Blank - Day 1		11/19/18	16:30	Water	Multiple	ICE						
2 Equipment Blank - Day 2		11/20/18	13:11	L	L	L						
3												
4												
5												
6												
7												
8												
9												
10												
Relinquished By:		Signature		Print Name		Company / Title		Date / Time				
1				Kris Kern		ES		11/21/18 e 10/10				
1				C. Hernandez		EPA		11/21/18 10/10				
2												
2												
3												
3												

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record		Turn Around Time (Rush by advanced notice only)								
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No:		Standard:		<input checked="" type="checkbox"/>		4 Day:		3 Day:		
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614				Page: 10 of 10		2 Day:		<input type="checkbox"/>		1 Day:		Same Day:		
		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other						
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request				Test Instructions / Comments		
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		<div style="display: flex; flex-direction: column; align-items: center;"> <div>Total Lead (6010B)</div> <div>Total Arsenic (6010B)</div> <div>STLC Lead (6010B)</div> <div>Organochlorine Pesticides (8081)</div> <div>PCBs (8082)</div> <div>TPH carbon chain (8015)</div> <div>VOCs (8260B)</div> <div>SVOCs (8270)</div> <div>CAM 17 Metals (6010B)</div> </div>										
Report To: Dane Nygaard		Number: 029RC1-191395												
Email: dnygaard@es-online.com		P.O. #: PO1027691												
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street												
Irvine, CA 92614		Los Angeles, California												
Phone: 714-919-6500		Global ID:												
Fax: 714-919-6501		Sampled By: Kris Kern												
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.								
1	Soil Sample Composite	11/20/18	13:20	Soil	2 Jars	Ice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2														
3														
4														
5														
6														
7														
8														
9														
10														
		Signature		Print Name		Company / Title		Date / Time						
1 Relinquished By:				Kris Kern		ES		11/21/18 @ 1010						
1 Received By:				C. Hernandez		EIA		11/21/18 1016						
2 Relinquished By:														
2 Received By:														
3 Relinquished By:														
3 Received By:														



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: _____

Date Received: 11/21/18Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 3 ☐ No (skip section 2) Sample Temp (°C) _____
(No Cooler) _____Sample Temp (°C), One from each cooler: #1: 4.4 #2: 1.3 #3: 3.6 #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____Cooler Temp (°C): #1: 1.3 #2: 0.9 #3: 1.7 #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample IDs present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sampling dates & times present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a relinquished signature present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the tests required clearly indicated on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If custody seals are present, were they intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all samples arrive intact? If no, indicate in Section 4 below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all bottle labels agree with COC? (ID, dates and times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were the samples collected in the correct containers for the required tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the containers labeled with the correct preservatives?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Was a sufficient amount of sample submitted for the requested tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5 Explanations/Comments

Samples have possible water contamination from being submerged under ice water.

SB-2-0.5", and SB-2-0.5" DUP are using the same container

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time: _____
☒ Email (email sent to/on): R.C. / 11/21/18

Project Manager's response: _____

Completed By: _____

Date: 11/21/18

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209

www.enthalpy.com/socal

Sample Acceptance Checklist - Rev 4, 8/8/2017

Ranjit Clarke

From: Kristopher Kern
Sent: Monday, November 26, 2018 4:03 PM
To: Ranjit Clarke
Cc: trickard@es-online.com; Chris Guesnon; Dane Nygaard
Subject: RE: Shenandoah - Equipment Blanks

Hey Ranjit,

You were correct. Please only run the equipment blanks for OCPs, PCBs, Cam 17 Metals, and Arsenic.

Thank you,

Kris Kern

Project Geologist



ES Engineering Services, LLC
1 Park Plaza
Suite 1000
Irvine, CA 92614

t (714) 919-6530
f (949) 988-3514
m (805) 816-1776

kkern@es-online.com
www.es-online.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

P *Please consider the environment before printing*

From: Ranjit Clarke [<mailto:ranjit.clarke@enthalpy.com>]
Sent: Monday, November 26, 2018 3:38 PM
To: Atis Srihiran; Chris Guesnon; Dane Nygaard; Kristopher Kern; Laura Skow; Sarah King; Tanner Rickard; Victor Paitimusa
Subject: RE: Shenandoah - Equipment Blanks

Here it is.

Ranjit Clarke

From: Chris Guesnon
Sent: Thursday, December 06, 2018 3:28 PM
To: Ranjit Clarke
Cc: Dane Nygaard; kkern@es-online.com; trickard@es-online.com
Subject: RE: Shenandoah Elementary School (11/20/18) - Enthalpy Analytical Final Report #408720

Hi Ranjit. Thanks for forwarding the sample results.

The analytical results indicate that lead exceeded the LAUSD accepted criteria (80 mg/kg) in 6 soil samples (SB-1-0.5, SB-3-0.5, SB-7-0.5, SB-15-0.5, SB-30-0.5).

Please run STLC on samples SB-1-0.5, SB-3-0.5, SB-7-0.5, SB-15-0.5, SB-30-0.5.

Please also analyze the deeper (1.5 foot) samples at each location (SB-1-1.5, SB-3-1.5, SB-7-1.5, SB-15-1.5, SB-30-1.5) for lead by EPA 6010.

Thank You.



Chris A. Guesnon
Senior Geologist
ES Engineering Services, LLC
1 Park Plaza
Suite 1000
Irvine, CA 92614

t (714) 919-6526
f (714) 919-6501
m (714) 514-9056
cguesnon@es-online.com
www.es-online.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Subject: Shenandoah Elementary School (11/20/18) - Enthalpy Analytical Final Report #408720

From: Ranjit Clarke [mailto:ranjit.clarke@enthalpy.com]
Sent: Wednesday, December 05, 2018 4:05 PM
To: Atis Srihiran; Chris Guesnon; Dane Nygaard; Kristopher Kern; Laura Skow; Sarah King; Tanner Rickard; Victor Paitimusa
Subject: Shenandoah Elementary School (11/20/18) - Enthalpy Analytical Final Report #408720

Ranjit Clarke

From: Chris Guesnon
Sent: Thursday, December 06, 2018 3:54 PM
To: Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Tanner Rickard
Subject: RE: Shenandoah Elementary School (11/20/18) - Enthalpy Analytical Final Report #408720

Hey Ranjit. Please also include SB-5-0.5 for STLC and run SB-5-1.5 for lead by 6010.

Thank You.



Chris A. Guesnon
Senior Geologist
ES Engineering Services, LLC
1 Park Plaza
Suite 1000
Irvine, CA 92614

t (714) 919-6526
f (714) 919-6501
m (714) 514-9056
cguesnon@es-online.com
www.es-online.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Scdn#Frvg#K#hy#rgh#hinh#sub#j

From: Ranjit Clarke [mailto:ranjit.clarke@enthalpy.com]
Sent: Thursday, December 06, 2018 3:48 PM
To: Chris Guesnon
Cc: Dane Nygaard; Kristopher Kern; Tanner Rickard
Subject: RE: Shenandoah Elementary School (11/20/18) - Enthalpy Analytical Final Report #408720

No problem. I'll add these right now.

Ranjit Clarke

From: Chris Guesnon
Sent: Thursday, January 03, 2019 8:11 AM
To: Ranjit Clarke
Cc: Dane Nygaard
Subject: FW: Lab Results for Shenandoah PEA
Attachments: 408720-00092760-SIGNED.PDF

Flag Status: Flagged

Hey Ranjit. For Shenandoah Elementary School, please run TCLP on samples SB-1-0.5, SB-5-0.5 and SB-7-0.5.

Please Note: As of January 1, 2019, ES Engineering Services, LLC will be operating as Montrose Environmental. All contact information remains the same, and as shown below.

Thank You.



Chris A. Guesnon
Senior Geologist
Montrose Environmental
1 Park Plaza
Suite 1000
Irvine, CA 92614

t (714) 919-6526
f (714) 919-6501
m (714) 514-9056
cguesnon@montrose-env.com
www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Scdn#Frvgth#K#h#y#r#p#h#h#r#h#s#u#b#j

From: Hilario, Jennifer [mailto:jennifer.hilario@lausd.net]
Sent: Thursday, December 06, 2018 3:09 PM
To: Chris Guesnon
Cc: Dane Nygaard; kkern@es-online.com
Subject: RE: Lab Results for Shenandoah PEA

Hi Chris,

Hope you guys are having a good week so far...

Yes, please do run STLC on all those samples and have the lab analyze the deeper samples from those locations.



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 408627
Report Date: 11/29/2018
Date Received: 11/19/2018
Client ID: 12860

Comments: Shenandoah Elementary School
029RC1-191395
PO1026791
2450 Shenandoah Street, Los Angeles, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
-----------------	-------------------------

408627-001	SB-12-0.5'
408627-002	SB-12-1.5'
408627-003	SB-13-0.5'
408627-004	SB-13-1.5'
408627-005	SB-14-0.5'
408627-006	SB-14-1.5'
408627-007	SB-23-0.5'
408627-008	SB-23-1.5'
408627-009	SB-20-0.5'
408627-010	SB-20-1.5'

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Chris Myrter, Project Specialist

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:36	Site:	
Sample #: 408627-001	Client Sample #: SB-12-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197838	
Antimony	1.05 J	1	0.37	3	mg/Kg	11/20/18	11/20/18	KLN B1,J
Barium	98.8	1	0.23	1	mg/Kg	11/20/18	11/20/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/20/18	11/20/18	KLN
Cadmium	1.49	1	0.21	0.5	mg/Kg	11/20/18	11/20/18	KLN
Chromium	23.2	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Cobalt	9.14	1	0.19	0.5	mg/Kg	11/20/18	11/20/18	KLN
Copper	16.6	1	0.31	1	mg/Kg	11/20/18	11/20/18	KLN
Lead	4.92	1	0.32	1	mg/Kg	11/20/18	11/20/18	KLN
Molybdenum	ND	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Nickel	19.0	1	0.2	1.5	mg/Kg	11/20/18	11/20/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/20/18	11/20/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/20/18	11/20/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/20/18	11/20/18	KLN
Vanadium	39.1	1	0.37	0.5	mg/Kg	11/20/18	11/20/18	KLN
Zinc	49.3	1	0.28	5	mg/Kg	11/20/18	11/20/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197839	
Arsenic	4.95	10	0.2	3	mg/Kg	11/20/18	11/21/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197857	
Mercury	0.10 J	1	0.039	0.14	mg/Kg	11/20/18	11/20/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1197848	
4,4'-DDD	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDE	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDT	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
a-BHC	ND	1	1.6	5	ug/Kg	11/20/18	11/21/18	TD
Aldrin	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD
b-BHC	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD
Chlordane (technical)	ND	1	35	50	ug/Kg	11/20/18	11/21/18	TD
d-BHC	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD
Dieldrin	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan I	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan II	ND	1	2.8	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	11/20/18	11/21/18	TD
Endrin	ND	1	2.7	5	ug/Kg	11/20/18	11/21/18	TD
Endrin aldehyde	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
Endrin Ketone	ND	1	4.1	5	ug/Kg	11/20/18	11/21/18	TD
Heptachlor	ND	1	1.3	5	ug/Kg	11/20/18	11/21/18	TD
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	11/20/18	11/21/18	TD
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
Methoxychlor	ND	1	9.2	10	ug/Kg	11/20/18	11/21/18	TD
Toxaphene	ND	1	54	100	ug/Kg	11/20/18	11/21/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	69			50-150				
Tetrachloro-m-xylene TCMX (SUR)	72			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:48	Site:	
Sample #: 408627-002	Client Sample #: SB-12-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:35	Site:	
Sample #: 408627-003	Client Sample #: SB-13-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197838	
Antimony	1.44 J	1	0.37	3	mg/Kg	11/20/18	11/20/18	KLN B1,J
Barium	127	1	0.23	1	mg/Kg	11/20/18	11/20/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/20/18	11/20/18	KLN
Cadmium	1.70	1	0.21	0.5	mg/Kg	11/20/18	11/20/18	KLN
Chromium	21.4	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Cobalt	10.4	1	0.19	0.5	mg/Kg	11/20/18	11/20/18	KLN
Copper	15.9	1	0.31	1	mg/Kg	11/20/18	11/20/18	KLN
Lead	3.06	1	0.32	1	mg/Kg	11/20/18	11/20/18	KLN
Molybdenum	ND	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Nickel	18.4	1	0.2	1.5	mg/Kg	11/20/18	11/20/18	KLN
Selenium	ND	1	0.72	3	mg/Kg	11/20/18	11/20/18	KLN
Silver	ND	1	0.13	0.5	mg/Kg	11/20/18	11/20/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/20/18	11/20/18	KLN
Vanadium	40.6	1	0.37	0.5	mg/Kg	11/20/18	11/20/18	KLN
Zinc	59.2	1	0.28	5	mg/Kg	11/20/18	11/20/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197839	
Arsenic	5.64	10	0.2	3	mg/Kg	11/20/18	11/21/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197857	
Mercury	ND	1	0.039	0.14	mg/Kg	11/20/18	11/20/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1197848	
4,4'-DDD	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDE	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDT	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
a-BHC	ND	1	1.6	5	ug/Kg	11/20/18	11/21/18	TD
Aldrin	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD
b-BHC	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD
Chlordane (technical)	ND	1	35	50	ug/Kg	11/20/18	11/21/18	TD
d-BHC	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD
Dieldrin	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan I	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan II	ND	1	2.8	5	ug/Kg	11/20/18	11/21/18	TD
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	11/20/18	11/21/18	TD
Endrin	ND	1	2.7	5	ug/Kg	11/20/18	11/21/18	TD
Endrin aldehyde	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD
Endrin Ketone	ND	1	4.1	5	ug/Kg	11/20/18	11/21/18	TD
Heptachlor	ND	1	1.3	5	ug/Kg	11/20/18	11/21/18	TD
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	11/20/18	11/21/18	TD
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD
Methoxychlor	ND	1	9.2	10	ug/Kg	11/20/18	11/21/18	TD
Toxaphene	ND	1	54	100	ug/Kg	11/20/18	11/21/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	67			50-150				
Tetrachloro-m-xylene TCMX (SUR)	75			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:45	Site:	
Sample #: 408627-004	Client Sample #: SB-13-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:19	Site:	
Sample #: 408627-005	Client Sample #: SB-14-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1197838		
Antimony	2.03 J	1	0.37	3	mg/Kg	11/20/18	11/20/18	KLN	B1,J
Barium	222	1	0.23	1	mg/Kg	11/20/18	11/20/18	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Cadmium	0.44 J	1	0.21	0.5	mg/Kg	11/20/18	11/20/18	KLN	J
Chromium	7.91	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN	
Cobalt	10.7	1	0.19	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Copper	14.8	1	0.31	1	mg/Kg	11/20/18	11/20/18	KLN	
Lead	1.70	1	0.32	1	mg/Kg	11/20/18	11/20/18	KLN	
Molybdenum	ND	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN	
Nickel	8.01	1	0.2	1.5	mg/Kg	11/20/18	11/20/18	KLN	
Selenium	ND	1	0.72	3	mg/Kg	11/20/18	11/20/18	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Thallium	ND	1	0.42	3	mg/Kg	11/20/18	11/20/18	KLN	
Vanadium	20.9	1	0.37	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Zinc	42.4	1	0.28	5	mg/Kg	11/20/18	11/20/18	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1197839		
Arsenic	2.15 J	10	0.2	3	mg/Kg	11/20/18	11/21/18	JP	J
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1197857		
Mercury	ND	1	0.039	0.14	mg/Kg	11/20/18	11/20/18	SBW	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1197848		
4,4'-DDD	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
4,4'-DDE	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
4,4'-DDT	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
a-BHC	ND	1	1.6	5	ug/Kg	11/20/18	11/21/18	TD	
Aldrin	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD	
b-BHC	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD	
Chlordane (technical)	ND	1	35	50	ug/Kg	11/20/18	11/21/18	TD	
d-BHC	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD	
Dieldrin	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan I	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan II	ND	1	2.8	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin	ND	1	2.7	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin Ketone	ND	1	4.1	5	ug/Kg	11/20/18	11/21/18	TD	
Heptachlor	ND	1	1.3	5	ug/Kg	11/20/18	11/21/18	TD	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	11/20/18	11/21/18	TD	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
Methoxychlor	ND	1	9.2	10	ug/Kg	11/20/18	11/21/18	TD	
Toxaphene	ND	1	54	100	ug/Kg	11/20/18	11/21/18	TD	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	62			50-150					
Tetrachloro-m-xylene TCMX (SUR)	73			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1197849		
PCB-1016	ND	1	3	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1221	ND	1	14	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1232	ND	1	9.5	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1242	ND	1	14	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1248	ND	1	19	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1254	ND	1	20	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1260	ND	1	6.9	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1262	ND	1	17	50	ug/Kg	11/20/18	11/21/18	TD	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:19	Site:	
Sample #: <u>408627-005</u>	Client Sample #: SB-14-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	11/20/18	11/21/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	69			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 10:25	Site:	
Sample #: <u>408627-006</u>	Client Sample #: SB-14-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 11:34	Site:	
Sample #: 408627-007	Client Sample #: SB-23-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1197838		
Antimony	1.75 J	1	0.37	3	mg/Kg	11/20/18	11/20/18	KLN	B1,J
Barium	102	1	0.23	1	mg/Kg	11/20/18	11/20/18	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Cadmium	1.42	1	0.21	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Chromium	23.6	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN	
Cobalt	9.28	1	0.19	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Copper	16.8	1	0.31	1	mg/Kg	11/20/18	11/20/18	KLN	
Lead	19.1	1	0.32	1	mg/Kg	11/20/18	11/20/18	KLN	
Molybdenum	ND	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN	
Nickel	18.2	1	0.2	1.5	mg/Kg	11/20/18	11/20/18	KLN	
Selenium	1.48 J	1	0.72	3	mg/Kg	11/20/18	11/20/18	KLN	J
Silver	ND	1	0.13	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Thallium	ND	1	0.42	3	mg/Kg	11/20/18	11/20/18	KLN	
Vanadium	41.0	1	0.37	0.5	mg/Kg	11/20/18	11/20/18	KLN	
Zinc	90.4	1	0.28	5	mg/Kg	11/20/18	11/20/18	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1197839		
Arsenic	10.4	10	0.2	3	mg/Kg	11/20/18	11/21/18	JP	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1197857		
Mercury	ND	1	0.039	0.14	mg/Kg	11/20/18	11/20/18	SBW	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1197848		
4,4'-DDD	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
4,4'-DDE	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
4,4'-DDT	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
a-BHC	ND	1	1.6	5	ug/Kg	11/20/18	11/21/18	TD	
Aldrin	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD	
b-BHC	ND	1	1.5	5	ug/Kg	11/20/18	11/21/18	TD	
Chlordane (technical)	130	1	35	50	ug/Kg	11/20/18	11/21/18	TD	
d-BHC	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD	
Dieldrin	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan I	ND	1	1.2	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan II	ND	1	2.8	5	ug/Kg	11/20/18	11/21/18	TD	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin	ND	1	2.7	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	11/20/18	11/21/18	TD	
Endrin Ketone	ND	1	4.1	5	ug/Kg	11/20/18	11/21/18	TD	
Heptachlor	ND	1	1.3	5	ug/Kg	11/20/18	11/21/18	TD	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	11/20/18	11/21/18	TD	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	11/20/18	11/21/18	TD	
Methoxychlor	ND	1	9.2	10	ug/Kg	11/20/18	11/21/18	TD	
Toxaphene	ND	1	54	100	ug/Kg	11/20/18	11/21/18	TD	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	65			50-150					
Tetrachloro-m-xylene TCMX (SUR)	75			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1197849		
PCB-1016	ND	1	3	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1221	ND	1	14	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1232	ND	1	9.5	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1242	ND	1	14	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1248	ND	1	19	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1254	ND	1	20	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1260	ND	1	6.9	50	ug/Kg	11/20/18	11/21/18	TD	
PCB-1262	ND	1	17	50	ug/Kg	11/20/18	11/21/18	TD	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 11:34	Site:	
Sample #: <u>408627-007</u>	Client Sample #: SB-23-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	11/20/18	11/21/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	72			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 11:44	Site:	
Sample #: <u>408627-008</u>	Client Sample #: SB-23-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 11:55	Site:	
Sample #: 408627-009	Client Sample #: SB-20-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197838	
Antimony	0.66 J	1	0.37	3	mg/Kg	11/20/18	11/20/18	KLN B1,J
Barium	110	1	0.23	1	mg/Kg	11/20/18	11/20/18	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	11/20/18	11/20/18	KLN
Cadmium	1.52	1	0.21	0.5	mg/Kg	11/20/18	11/20/18	KLN
Chromium	25.2	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Cobalt	9.30	1	0.19	0.5	mg/Kg	11/20/18	11/20/18	KLN
Copper	17.5	1	0.31	1	mg/Kg	11/20/18	11/20/18	KLN
Lead	7.16	1	0.32	1	mg/Kg	11/20/18	11/20/18	KLN
Molybdenum	ND	1	0.13	1	mg/Kg	11/20/18	11/20/18	KLN
Nickel	21.2	1	0.2	1.5	mg/Kg	11/20/18	11/20/18	KLN
Selenium	1.28 J	1	0.72	3	mg/Kg	11/20/18	11/20/18	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	11/20/18	11/20/18	KLN
Thallium	ND	1	0.42	3	mg/Kg	11/20/18	11/20/18	KLN
Vanadium	43.8	1	0.37	0.5	mg/Kg	11/20/18	11/20/18	KLN
Zinc	58.5	1	0.28	5	mg/Kg	11/20/18	11/20/18	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1197839	
Arsenic	5.96	10	0.2	3	mg/Kg	11/20/18	11/21/18	JP
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1197857	
Mercury	ND	1	0.039	0.14	mg/Kg	11/20/18	11/20/18	SBW
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1197848	
4,4'-DDD	ND	5	10.5	25	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDE	ND	5	10	25	ug/Kg	11/20/18	11/21/18	TD
4,4'-DDT	ND	5	10	25	ug/Kg	11/20/18	11/21/18	TD
a-BHC	ND	5	8	25	ug/Kg	11/20/18	11/21/18	TD
Aldrin	ND	5	7.5	25	ug/Kg	11/20/18	11/21/18	TD
b-BHC	ND	5	7.5	25	ug/Kg	11/20/18	11/21/18	TD
Chlordane (technical)	ND	5	175	250	ug/Kg	11/20/18	11/21/18	TD
d-BHC	ND	5	6	25	ug/Kg	11/20/18	11/21/18	TD
Dieldrin	ND	5	10.5	25	ug/Kg	11/20/18	11/21/18	TD
Endosulfan I	ND	5	6	25	ug/Kg	11/20/18	11/21/18	TD
Endosulfan II	ND	5	14	25	ug/Kg	11/20/18	11/21/18	TD
Endosulfan sulfate	ND	5	17	25	ug/Kg	11/20/18	11/21/18	TD
Endrin	ND	5	13.5	25	ug/Kg	11/20/18	11/21/18	TD
Endrin aldehyde	ND	5	10.5	25	ug/Kg	11/20/18	11/21/18	TD
Endrin Ketone	ND	5	20.5	25	ug/Kg	11/20/18	11/21/18	TD
Heptachlor	ND	5	6.5	25	ug/Kg	11/20/18	11/21/18	TD
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	11/20/18	11/21/18	TD
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	11/20/18	11/21/18	TD
Methoxychlor	ND	5	46	50	ug/Kg	11/20/18	11/21/18	TD
Toxaphene	ND	5	270	500	ug/Kg	11/20/18	11/21/18	TD
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	74			50-150				
Tetrachloro-m-xylene TCMX (SUR)	88			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 11/19/2018 12:09	Site:	
Sample #: 408627-010	Client Sample #: SB-20-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:						QCBatchID:	
N/A	N/A	1						

QCBatchID: QC1197838	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/20/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197838MB1						
Antimony	0.85 J	mg/Kg	0.37	3		
Arsenic	ND	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Boron	1.522 J	ug/Wipe	0.26	5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	ND	mg/Kg	0.31	1		
Lead	ND	mg/Kg	0.32	1		
Molybdenum	0.96 J	mg/Kg	0.13	1		
Nickel	ND	mg/Kg	0.2	1.5		
Selenium	ND	mg/Kg	0.72	3		
Silicon, as Silica	ND	ug/Sample	11	11		
Silver	ND	mg/Kg	0.13	0.5		
Thallium	ND	mg/Kg	0.42	3		
Tin	1.148	ug/Wipe	0.7	1	B	
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	ND	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197838LCS1											
Antimony	100		110		mg/Kg	110			80-120		
Arsenic	100		94.8		mg/Kg	95			80-120		
Barium	100		106		mg/Kg	106			80-120		
Beryllium	100		93.7		mg/Kg	94			80-120		
Boron	100		98.0		mg/Kg	98			80-120		
Cadmium	100		105		mg/Kg	105			80-120		
Chromium	100		99.5		mg/Kg	100			80-120		
Cobalt	100		108		mg/Kg	108			80-120		
Copper	100		101		mg/Kg	101			80-120		
Lead	100		99.2		mg/Kg	99			80-120		
Molybdenum	100		103		mg/Kg	103			80-120		
Nickel	100		113		mg/Kg	113			80-120		
Selenium	100		98.4		mg/Kg	98			80-120		
Silver	100		116		mg/Kg	116			80-120		
Thallium	100		98.0		mg/Kg	98			80-120		
Vanadium	100		107		mg/Kg	107			80-120		
Zinc	100		109		mg/Kg	109			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197838MS1, QC1197838MSD1											Source: 408562-005	
Antimony	2.99	100	100	33.0	38.0	mg/Kg	30	35	14.1	75-125	20	M
Arsenic	ND	100	100	99.0	99.7	mg/Kg	99	100	0.7	75-125	20	
Barium	166	100	100	276	292	mg/Kg	110	126	5.6	75-125	20	M
Beryllium	ND	100	100	102	101	mg/Kg	102	101	1.0	75-125	20	
Cadmium	1.07	100	100	96.4	105	mg/Kg	95	104	8.5	75-125	20	
Chromium	37.6	100	100	118	134	mg/Kg	80	96	12.7	75-125	20	

QCBatchID: **QC1197838**

Analyst: dswafford

Method: EPA 6010B

Matrix: Solid

Analyzed: 11/20/2018

Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1197838MS1, QC1197838MSD1											Source: 408562-005	
Cobalt	14.4	100	100	109	120	mg/Kg	95	106	9.6	75-125	20	M
Copper	58.6	100	100	130	137	mg/Kg	71	78	5.2	75-125	20	
Lead	77.2	100	100	133	136	mg/Kg	56	59	2.2	75-125	20	
Molybdenum	6.55	100	100	91.6	105	mg/Kg	85	98	13.6	75-125	20	M
Nickel	36.7	100	100	119	138	mg/Kg	82	101	14.8	75-125	20	
Selenium	ND	100	100	94.4	108	mg/Kg	94	108	13.4	75-125	20	
Silver	ND	100	100	111	122	mg/Kg	111	122	9.4	75-125	20	M
Thallium	2.60	100	100	86.8	99.5	mg/Kg	84	97	13.6	75-125	20	
Vanadium	43.8	100	100	154	163	mg/Kg	110	119	5.7	75-125	20	
Zinc	113	100	100	200	232	mg/Kg	87	119	14.8	75-125	20	

QCBatchID: QC1197839	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 11/20/2018	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197839MB1						
Arsenic	ND	mg/Kg	0.02	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197839LCS1											
Arsenic	50		48.2		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197839MS1, QC1197839MSD1											Source: 408627-001	
Arsenic	4.95	50	50	50.1	48.0	mg/Kg	90	86	4.3	75-125	20	

QCBatchID: QC1197848	Analyst: ssabir	Method: EPA 8081A
Matrix: Solid	Analyzed: 11/20/2018	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197848MB1						
4,4'-DDD	ND	ug/Kg	2.1	5		
4,4'-DDE	ND	ug/Kg	2	5		
4,4'-DDT	ND	ug/Kg	2	5		
a-BHC	ND	ug/Kg	1.6	5		
Aldrin	ND	ug/Kg	1.5	5		
b-BHC	ND	ug/Kg	1.5	5		
Chlordane (technical)	ND	ug/Kg	35	50		
d-BHC	ND	ug/Kg	1.2	5		
Dieldrin	ND	ug/Kg	2.1	5		
Endosulfan I	ND	ug/Kg	1.2	5		
Endosulfan II	ND	ug/Kg	2.8	5		
Endosulfan sulfate	ND	ug/Kg	3.4	5		
Endrin	ND	ug/Kg	2.7	5		
Endrin aldehyde	ND	ug/Kg	2.1	5		
Endrin Ketone	ND	ug/Kg	4.1	5		
Heptachlor	ND	ug/Kg	1.3	5		
Heptachlor epoxide	ND	ug/Kg	2.3	5		
Lindane (Gamma-BHC)	ND	ug/Kg	2	5		
Methoxychlor	ND	ug/Kg	9.2	10		
Toxaphene	ND	ug/Kg	54	100		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197848LCS1											
4,4'-DDD	50		32		ug/Kg	64			43-172		
4,4'-DDE	50		32		ug/Kg	64			44-163		
4,4'-DDT	50		43		ug/Kg	86			40-158		
a-BHC	50		32		ug/Kg	64			45-150		
Aldrin	50		32		ug/Kg	64			46-142		
b-BHC	50		34		ug/Kg	68			42-156		
d-BHC	50		31		ug/Kg	62			37-161		
Dieldrin	50		34		ug/Kg	68			47-151		
Endosulfan I	50		32		ug/Kg	64			47-141		
Endosulfan II	50		31		ug/Kg	62			44-156		
Endosulfan sulfate	50		35		ug/Kg	70			43-157		
Endrin	50		37		ug/Kg	74			47-160		
Endrin aldehyde	50		22		ug/Kg	44			32-127		
Endrin Ketone	50		33		ug/Kg	66			48-159		
Heptachlor	50		32		ug/Kg	64			50-144		
Heptachlor epoxide	50		31		ug/Kg	62			48-145		
Lindane (Gamma-BHC)	50		31		ug/Kg	62			47-151		
Methoxychlor	50		52		ug/Kg	104			36-182		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197848MS1, QC1197848MSD1										Source: 408635-001		
4,4'-DDD	ND	50	50	49	50	ug/Kg	98	100	2.0	43-172	20	
4,4'-DDE	ND	50	50	48	50	ug/Kg	96	100	4.1	44-163	20	
4,4'-DDT	ND	50	50	60	60	ug/Kg	120	120	0.0	40-158	20	
a-BHC	ND	50	50	43	45	ug/Kg	86	90	4.5	45-150	20	

QCBatchID: **QC1197848**

Analyst: ssabir

Method: EPA 8081A

Matrix: Solid

Analyzed: 11/20/2018

Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1197848MS1, QC1197848MSD1											Source: 408635-001	
Aldrin	ND	50	50	49	52	ug/Kg	98	104	5.9	46-142	20	
b-BHC	ND	50	50	44	46	ug/Kg	88	92	4.4	42-156	20	
d-BHC	ND	50	50	52	45	ug/Kg	104	90	14.4	37-161	20	
Dieldrin	ND	50	50	52	50	ug/Kg	104	100	3.9	47-151	20	
Endosulfan I	ND	50	50	47	50	ug/Kg	94	100	6.2	47-141	20	
Endosulfan II	ND	50	50	44	48	ug/Kg	88	96	8.7	44-156	20	
Endosulfan sulfate	ND	50	50	50	52	ug/Kg	100	104	3.9	43-157	20	
Endrin	ND	50	50	58	61	ug/Kg	116	122	5.0	47-160	20	
Endrin aldehyde	ND	50	50	45	47	ug/Kg	90	94	4.3	32-127	20	
Endrin Ketone	ND	50	50	45	47	ug/Kg	90	94	4.3	48-159	20	
Heptachlor	ND	50	50	50	52	ug/Kg	100	104	3.9	50-144	20	
Heptachlor epoxide	ND	50	50	47	47	ug/Kg	94	94	0.0	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	46	47	ug/Kg	92	94	2.2	47-151	20	
Methoxychlor	ND	50	50	88	78	ug/Kg	176	156	12.0	36-182	20	

QCBatchID: QC1197849	Analyst: ssabir	Method: EPA 8082
Matrix: Solid	Analyzed: 11/20/2018	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197849MB1						
PCB-1016	ND	ug/Kg	3	50		
PCB-1221	ND	ug/Kg	14	50		
PCB-1232	ND	ug/Kg	9.5	50		
PCB-1242	ND	ug/Kg	14	50		
PCB-1248	ND	ug/Kg	19	50		
PCB-1254	ND	ug/Kg	20	50		
PCB-1260	ND	ug/Kg	6.9	50		
PCB-1262	ND	ug/Kg	17	50		
PCB-1268	ND	ug/Kg	8.6	50		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1197849LCS1												
PCB-1016	500		540		ug/Kg	108			70-130			
PCB-1260	500		490		ug/Kg	98			70-130			

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197849MS1, QC1197849MSD1											Source: 408627-005	
PCB-1016	ND	500	500	480	510	ug/Kg	96	102	6.1	70-130	20	
PCB-1260	ND	500		450		ug/Kg	90			70-130		

QCBatchID: QC1197857	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 11/20/2018	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1197857MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1197857LCS1											
Mercury	0.83		0.85		mg/Kg	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1197857MS1, QC1197857MSD1												Source: 408562-005
Mercury	0.09	0.83	0.83	1.01	0.93	mg/Kg	111	101	8.2	75-125	20	


Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.




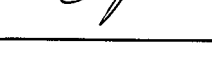
Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868			Lab No: <u>408627</u>		Standard:	<input checked="" type="checkbox"/>	4 Day:		3 Day:			
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: _____ of _____		2 Day:		1 Day:		Same Day:			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other						

CUSTOMER INFORMATION		PROJECT INFORMATION				Analysis Request								Test Instructions / Comments				
Company:	ES Engineering Services, LLC	Name:	Shenandoah Elementary School			EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals								
Report To:	Dane Nygaard	Number:	029RC1-191395															
Email:	dnygaard@es-online.com	P.O. #:	PO1026791															
Address:	1 Park Plaza, Suite 1000	Address:	2450 Shenandoah Street															
	Irvine, CA 92614		Los Angeles, California															
Phone:	714-919-6500	Global ID:																
Fax:	714-919-6501	Sampled By:	Kris Kern / T. Rickard															

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs	CAM 17 Metals								
1 SB-12-0.5'	11/19/18	10:36	Soil	1 Jar			X	X		X								
2 SB-12-1.5'		10:48					X	X		X								Hold
3 SB-13-0.5'		10:35					X	X		X								
4 SB-13-1.5'		10:45					X	X		X								Hold
5 SB-14-0.5'		10:19					X	X	X	X								
6 SB-14-1.5'	11/19/18	10:25	Soil	1 Jar			X	X	X	X								Hold
7 SB-23-0.5"	11/19/18	1134	Soil	1 Jar			X	X	X	X								
8 SB-23-1.5'	11/19/18	1144	Soil	1 Jar			X	X	X	X								Hold
9 SB-20-0.5'	11/19/18	1155	Soil	1 Jar			X	X		X								
10 SB-20-1.5'	11/19/18	12:09	Soil	1 Jar			X	X		X								Hold

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Tanner Rickard	ES Tanner Rickard	11/19/18 12:15
1 Received By:		Ben Salgado	E.A.	11/19/18 12:15
2 Relinquished By:		Ben Salgado	E.A.	11/19/18 1445
2 Received By:		Kris Kern	EA	11/19/18 1445
3 Relinquished By:				
3 Received By:				



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering Service, LLC

Project: Shenandoah Elementary School

Date Received: 11/19/18

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2)

Sample Temp (°C)
(No Cooler) : _____

Sample Temp (°C), One from each cooler: #1: 5.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1.0 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____
☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By: [Signature] Date: 11/19/18

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209

www.enthalpy.com/socal

Sample Acceptance Checklist – Rev 4, 8/8/2017



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 412566
Report Date: 03/06/2019
Date Received: 02/18/2019
Client ID: 12860

Comments: Shenandoah Elementary School
029RC1-191395
2450 Shenandoah Street, Los Angeles, CA

Supplemental Report 1 - STLC and TCLP results have been added where requested.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
412566-001	SB-1A-0.5'	412566-025	SB-30C-0.5'
412566-002	SB-1A-1.5'	412566-026	SB-30C-1.5'
412566-003	SB-1B-0.5'	412566-027	SB-15A-0.5'
412566-004	SB-1B-1.5'	412566-028	SB-15A-1.5'
412566-005	SB-1C-0.5'	412566-029	SB-15B-0.5'
412566-006	SB-1C-1.5'	412566-030	SB-15B-1.5'
412566-007	SB-5A-0.5'		
412566-008	SB-5A-1.5'		
412566-009	SB-5B-0.5'		
412566-010	SB-5B-1.5'		
412566-011	SB-5C-0.5'		
412566-012	SB-5C-1.5'		
412566-013	SB-3A-0.5'		
412566-014	SB-3A-1.5'		
412566-015	SB-3B-0.5'		
412566-016	SB-3B-1.5'		
412566-017	SB-7A-0.5'		
412566-018	SB-7A-1.5'		
412566-019	SB-7B-0.5'		
412566-020	SB-7B-1.5'		
412566-021	SB-30A-0.5'		
412566-022	SB-30A-1.5'		
412566-023	SB-30B-0.5'		
412566-024	SB-30B-1.5'		

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:30		Site:							
Sample #: <u>412566-001</u>		Client Sample #: SB-1A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A		QCBatchID: QC1211965					
Lead		0.674	1	0.005	0.05	mg/L	03/05/19	03/05/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		157	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1212021					
Lead		24.0	10	0.05	0.15	mg/L	03/05/19	03/06/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:33		Site:							
Sample #: <u>412566-002</u>		Client Sample #: SB-1A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		49.6	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:50		Site:							
Sample #: <u>412566-003</u>		Client Sample #: SB-1B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		6.23	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:52		Site:							
Sample #: <u>412566-004</u>		Client Sample #: SB-1B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		5.02	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:55		Site:							
Sample #: <u>412566-005</u>		Client Sample #: SB-1C-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		9.84	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 09:59		Site:							
Sample #: <u>412566-006</u>		Client Sample #: SB-1C-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		3.62	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 10:03		Site:							
Sample #: <u>412566-007</u>		Client Sample #: SB-5A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211498					
Lead		34.0	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:07		Site:						
Sample #: <u>412566-008</u>		Client Sample #: SB-5A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211498				
Lead	6.21	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:10		Site:						
Sample #: <u>412566-009</u>		Client Sample #: SB-5B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211498				
Lead	12.1	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:15		Site:						
Sample #: <u>412566-010</u>		Client Sample #: SB-5B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211498				
Lead	5.64	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:45		Site:						
Sample #: <u>412566-011</u>		Client Sample #: SB-5C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	6.19	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:50		Site:						
Sample #: <u>412566-012</u>		Client Sample #: SB-5C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	5.78	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:50		Site:						
Sample #: <u>412566-013</u>		Client Sample #: SB-3A-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	5.08	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:53		Site:						
Sample #: <u>412566-014</u>		Client Sample #: SB-3A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	5.79	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 10:55		Site:						
Sample #: <u>412566-015</u>		Client Sample #: SB-3B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	3.82	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 10:57		Site:							
Sample #: <u>412566-016</u>		Client Sample #: SB-3B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		4.28	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:03		Site:							
Sample #: <u>412566-017</u>		Client Sample #: SB-7A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		15.6	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:06		Site:							
Sample #: <u>412566-018</u>		Client Sample #: SB-7A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		4.36	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:08		Site:							
Sample #: <u>412566-019</u>		Client Sample #: SB-7B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		14.2	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:10		Site:							
Sample #: <u>412566-020</u>		Client Sample #: SB-7B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		11.2	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:12		Site:							
Sample #: <u>412566-021</u>		Client Sample #: SB-30A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		6.09	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:15		Site:							
Sample #: <u>412566-022</u>		Client Sample #: SB-30A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		4.62	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 02/18/2019 11:32		Site:							
Sample #: <u>412566-023</u>		Client Sample #: SB-30B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1211499					
Lead		5.04	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:35		Site:						
Sample #: <u>412566-024</u>		Client Sample #: SB-30B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	3.65	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:33		Site:						
Sample #: <u>412566-025</u>		Client Sample #: SB-30C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	6.64	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:39		Site:						
Sample #: <u>412566-026</u>		Client Sample #: SB-30C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	5.13	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:42		Site:						
Sample #: <u>412566-027</u>		Client Sample #: SB-15A-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	5.24	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:45		Site:						
Sample #: <u>412566-028</u>		Client Sample #: SB-15A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	3.09	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:48		Site:						
Sample #: <u>412566-029</u>		Client Sample #: SB-15B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	6.58	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 02/18/2019 11:50		Site:						
Sample #: <u>412566-030</u>		Client Sample #: SB-15B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1211499				
Lead	3.90	1	0.32	1	mg/Kg	02/20/19	02/21/19	KLN

QCBatchID: QC1211498	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 02/20/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1211498MB1					
Antimony	ND	mg/Kg	0.37	3	
Arsenic	ND	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	0.50 J	mg/Kg	0.32	1	
Molybdenum	ND	mg/Kg	0.13	1	
Nickel	ND	mg/Kg	0.2	1.5	
Selenium	ND	mg/Kg	0.72	3	
Silver	ND	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	ND	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1211498LCS1											
Antimony	100		101		mg/Kg	101			80-120		
Arsenic	100		93.9		mg/Kg	94			80-120		
Barium	100		100		mg/Kg	100			80-120		
Beryllium	100		99.1		mg/Kg	99			80-120		
Cadmium	100		97.0		mg/Kg	97			80-120		
Chromium	100		96.7		mg/Kg	97			80-120		
Cobalt	100		99.9		mg/Kg	100			80-120		
Copper	100		99.9		mg/Kg	100			80-120		
Lead	100		98.5		mg/Kg	99			80-120		
Molybdenum	100		99.8		mg/Kg	100			80-120		
Nickel	100		100		mg/Kg	100			80-120		
Selenium	100		91.6		mg/Kg	92			80-120		
Silver	100		96.2		mg/Kg	96			80-120		
Thallium	100		95.2		mg/Kg	95			80-120		
Vanadium	100		99.3		mg/Kg	99			80-120		
Zinc	100		96.3		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1211498MS1, QC1211498MSD1												Source: 412494-001
Antimony	2.59	100	100	75.0	101	mg/Kg	72	98	29.5	75-125	20	M
Arsenic	ND	100	100	97.3	108	mg/Kg	97	108	10.4	75-125	20	
Barium	25.2	100	100	123	129	mg/Kg	98	104	4.8	75-125	20	
Beryllium	ND	100	100	101	109	mg/Kg	101	109	7.6	75-125	20	
Cadmium	ND	100	100	102	107	mg/Kg	102	107	4.8	75-125	20	
Chromium	0.56	100	100	103	106	mg/Kg	102	105	2.9	75-125	20	
Cobalt	0.21	100	100	106	112	mg/Kg	106	112	5.5	75-125	20	
Copper	3.49	100	100	112	117	mg/Kg	109	114	4.4	75-125	20	
Lead	1.46	100	100	103	112	mg/Kg	102	111	8.4	75-125	20	
Molybdenum	1.02	100	100	102	115	mg/Kg	101	114	12.0	75-125	20	

QCBatchID: <u>QC1211498</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 02/20/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD		
QC1211498MS1, QC1211498MSD1											Source: 412494-001		
Nickel	1.56	100	100	106	115	mg/Kg	104	113	8.1	75-125	20	M	
Selenium	1.18	100	100	94.3	106	mg/Kg	93	105	11.7	75-125	20		
Silver	ND	100	100	95.7	105	mg/Kg	96	105	9.3	75-125	20		
Thallium	0.48	100	100	85.0	107	mg/Kg	85	107	22.9	75-125	20		
Vanadium	1.97	100	100	108	113	mg/Kg	106	111	4.5	75-125	20		
Zinc	5.50	100	100	111	107	mg/Kg	106	102	3.7	75-125	20		

QCBatchID: QC1211499	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 02/20/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1211499MB1						
Lead	0.38 J	mg/Kg	0.32	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1211499LCS1											
Lead	100		109		mg/Kg	109			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1211499MS1, QC1211499MSD1												Source: 412566-011
Lead	6.19	100	100	106	105	mg/Kg	100	99	0.9	75-125	20	

QCBatchID: QC1211965	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 03/05/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1211965MB1						
Arsenic	ND	mg/L	0.008	0.05		
Lead	0.009 J	mg/L	0.005	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1211965LCS1											
Arsenic	2		2.06		mg/L	103			80-120		
Lead	2		1.908		mg/L	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1211965MS1, QC1211965MSD1												Source: 412566-001
Arsenic	0.026	1	1	1.136	1.082	mg/L	111	106	4.9	75-125	20	
Lead	0.674	1	1	1.731	1.612	mg/L	106	94	7.1	75-125	20	

QCBatchID: QC1212021	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 03/06/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1212021MB1					
Antimony	ND	mg/L	0.014	0.09	
Arsenic	ND	mg/L	0.008	0.03	
Barium	0.003 J	mg/L	0.002	0.03	
Beryllium	ND	mg/L	0.001	0.015	
Cadmium	0.077	mg/L	0.001	0.015	
Chromium	ND	mg/L	0.002	0.03	
Cobalt	ND	mg/L	0.001	0.015	
Copper	ND	mg/L	0.004	0.03	
Lead	0.026	mg/L	0.005	0.015	
Molybdenum	ND	mg/L	0.005	0.03	
Nickel	0.046 J	mg/L	0.003	0.06	
Selenium	0.214	mg/L	0.016	0.03	
Silver	ND	mg/L	0.003	0.015	
Thallium	ND	mg/L	0.009	0.015	
Vanadium	0.026	mg/L	0.002	0.015	
Zinc	ND	mg/L	0.007	0.06	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1212021LCS1, QC1212021LCSD1											
Antimony	20	20	22.7	23.1	mg/L	114	116	2	80-120	20	L
Arsenic	20	20	23.2	25.6	mg/L	116	128	10	80-120	20	
Barium	20	20	21.6	22.0	mg/L	108	110	2	80-120	20	
Beryllium	20	20	21.8	20.3	mg/L	109	102	7	80-120	20	
Cadmium	20	20	20.8	20.9	mg/L	104	105	0	80-120	20	
Chromium	20	20	21.0	21.5	mg/L	105	108	2	80-120	20	
Cobalt	20	20	21.2	21.3	mg/L	106	107	0	80-120	20	
Copper	20	20	22.2	23.1	mg/L	111	116	4	80-120	20	
Lead	20	20	19.0	22.2	mg/L	95	111	16	80-120	20	
Molybdenum	20	20	23.6	23.6	mg/L	118	118	0	80-120	20	
Nickel	20	20	20.4	20.4	mg/L	102	102	0	80-120	20	
Selenium	20	20	21.1	23.7	mg/L	106	119	12	80-120	20	
Silver	20	20	20.0	20.7	mg/L	100	104	3	80-120	20	
Thallium	20	20	19.2	21.3	mg/L	96	107	10	80-120	20	
Vanadium	20	20	22.0	22.4	mg/L	110	112	2	80-120	20	
Zinc	20	20	20.3	20.3	mg/L	102	102	0	80-120	20	


Data Qualifiers and Definitions

Qualifiers


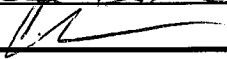
A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.


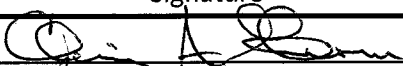
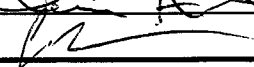
Definitions


DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

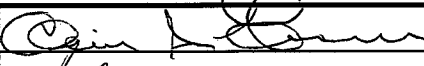
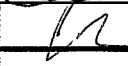
ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)					
806 N. Batavia St., Orange, CA 92868			Lab No: <u>412566</u>			Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>1</u> of <u>3</u>			2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other			

CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request								Test Instructions / Comments					
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School			EPA 6010B - Lead	EPA 6020 - Arsenic	EPA 8081 - OC Pesticides	EPA 8082 - PCBs										
Report To:	Dane Nygaard		Number:	029RC1-191395																
Email:	dnygaard@es-online.com		P.O. #:																	
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street																
	Irvine, CA 92614			Los Angeles, California																
Phone:	714-919-6500		Global ID:																	
Fax:	714-919-6501		Sampled By:	Kris Kern																
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.														
1	SB-1A-0.5'	2/18/19	0930	Soil	1 Glass Jar	No	X													
2	SB-1A-1.5'	1	0933	1	1	1	X													
3	SB-1B-0.5'		0950				X													
4	SB-1B-1.5'		0952				X													
5	SB-1C-0.5'		0955				X													
6	SB-1C-1.5'		0959				X													
7	SB-5A-0.5'		1003				X													
8	SB-5A-1.5'		1007				X													
9	SB-5B-0.5'		1010				X													
10	SB-5B-1.5'		1015				X													

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Chris Guesnon	Montrose	2-18-19 / 1436
1 Received By:		Pittermann	E.A.	2/18/19 1439
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868			Lab No: _____			Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>	<input type="checkbox"/>			
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>2</u> of <u>3</u>			2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>	<input type="checkbox"/>			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request						Test Instructions / Comments			
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6010B - Lead</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6020 - Arsenic</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8081 - OC Pesticides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8082 - PCBs</div> </div>												
Report To: Dane Nygaard		Number: 029RC1-191395														
Email: dnygaard@es-online.com		P.O. #:														
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street														
Irvine, CA 92614		Los Angeles, California														
Phone: 714-919-6500		Global ID:														
Fax: 714-919-6501		Sampled By: Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.										
1	SB-5C-0.5'	2/18/19	1045	Soil	1 Glass Jar	NO	X									
2	SB-5C-1.5'		1050				X									
3	SB-3A-0.5'		1050				X									
4	SB-3A-1.5'		1053				X									
5	SB-3B-0.5'		1055				X									
6	SB-3B-1.5'		1057				X									
7	SB-7A-0.5		1103				X									
8	SB-7A-1.5		1106				X									
9	SB-7B-0.5		1108				X									
10	SB-7B-1.5		1110				X									
			Signature				Print Name		Company / Title			Date / Time				
1 Relinquished By:			Chris A Guesner		Montrose			2-18-19 / 1436								
1 Received By:			Customer		EA			2/18/19 1439								
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record				Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868			Lab No:				Standard:		<input checked="" type="checkbox"/>		4 Day:		3 Day:	
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: 3 of 3				2 Day:		<input type="checkbox"/>		1 Day:		Same Day:	
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other					

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request												Test Instructions / Comments	
Company:		ES Engineering Services, LLC		Name:		Shenandoah Elementary School		<div style="display: flex; flex-direction: row-reverse;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6010B - Lead</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6020 - Arsenic</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8081 - OC Pesticides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8082 - PCBs</div> </div>													
Report To:		Dane Nygaard		Number:		029RC1-191395															
Email:		dnygaard@es-online.com		P.O. #:																	
Address:		1 Park Plaza, Suite 1000		Address:		2450 Shenandoah Street															
		Irvine, CA 92614				Los Angeles, California															
Phone:		714-919-6500		Global ID:																	
Fax:		714-919-6501		Sampled By:		Kris Kern															
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.															
1	SB-30A-0.5	2/18/19	1112	Soil	1 Glass Jar	No	X														
2	SB-30A-1.5		1115				X														
3	SB-30B-0.5		1132				X														
4	SB-30B-1.5		1135				X														
5	SB-30C-0.5		1133				X														
6	SB-30C-1.5		1139				X														
7	SB-15A-0.5		1142				X														
8	SB-15A-1.5		1145				X														
9	SB-15B-0.5		1148				X														
10	SB-15B-1.5		1150				X														
		Signature		Print Name		Company / Title		Date / Time													
1 Relinquished By:				James A. Gueson		Montrose		2-18-19 / 1436													
1 Received By:				Catherine		EA		2/18/19 / 1439													
2 Relinquished By:																					
2 Received By:																					
3 Relinquished By:																					
3 Received By:																					



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: _____

Date Received: 02/18/19Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2)Sample Temp (°C)
(No Cooler) : _____Sample Temp (°C), One from each cooler: #1: 8.7 #2: _____ #3: _____ #4: _____*(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)*

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____Cooler Temp (°C): #1: 2.4 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time: _____
☐ Email (email sent to/on): _____ / _____Project Manager's response: _____


Completed By: _____

Date: 2/18/19

Ranjit Clarke

From: Chris Guesnon
Sent: Tuesday, February 26, 2019 10:13 AM
To: Ranjit Clarke
Cc: dnygaard@montrose-env.com; kkern@montrose-env.com
Subject: RE: Shenandoah Elementary School (02/18/19) - PDF - Enthalpy Analytical Final Report #412566

Hey Ranjit. Yes, please run sample SB-1A-0.for STLC and TCLP.

Please Note: As of January 1, 2019, ES Engineering Services, LLC will be operating as Montrose Environmental. All contact information remains the same, and as shown below.

Thank You.



Chris A. Guesnon
Senior Geologist
Montrose Environmental
1 Park Plaza
Suite 1000
Irvine, CA 92614

t (714) 919-6526
f (714) 919-6501
m (714) 514-9056
cguesnon@montrose-env.com
www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.



Please consider the environment before printing

From: Ranjit Clarke [mailto:ranjit.clarke@enthalpy.com]
Sent: Monday, February 25, 2019 9:09 AM
To: Atis Srihiran; Chris Guesnon; Dane Nygaard; Kristopher Kern; Laura Skow; Sarah King; Sean Mitchell Hyde; Victor Paitimusa
Subject: Shenandoah Elementary School (02/18/19) - PDF - Enthalpy Analytical Final Report #412566

Hi Dane Nygaard,

Attached is your final report #412566. Sample **SB-1A-0.5'** exceeded the STLC and TCLP limits for Lead. Please let me know if you require additional analysis on this sample.



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 414424
Report Date: 05/10/2019
Date Received: 04/17/2019
Client ID: 12860

Comments: Shenandoah Elementary School
029RC1-191395
2450 Shenandoah Street, Los Angeles, CA

Revised Report 2 - STLC and TCLP results are now included where requested.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
414424-001	SB-33-0.5'	414424-027	SB-43-2.5'	414424-053	SB-53-1.5'
414424-002	SB-33-1.5'	414424-028	SB-44-0.5'	414424-054	SB-54-0.5'
414424-003	SB-34-0.5'	414424-029	SB-44-1.5'	414424-055	SB-54-1.5'
414424-004	SB-34-1.5'	414424-030	SB-44-2.5'	414424-056	SB-55-0.5'
414424-005	SB-35-0.5'	414424-031	SB-45-0.5'	414424-057	SB-55-1.5'
414424-006	SB-35-1.5'	414424-032	SB-45-1.5'	414424-058	SB-56-0.5'
414424-007	SB-36-0.5'	414424-033	SB-45-2.5'	414424-059	SB-56-1.5'
414424-008	SB-36-1.5'	414424-034	SB-46-0.5'	414424-060	SB-56-2.5'
414424-009	SB-37-0.5'	414424-035	SB-46-1.5'	414424-061	SB-57-0.5'
414424-010	SB-37-1.5'	414424-036	SB-46-2.5'	414424-062	SB-57-1.5'
414424-011	SB-38-0.5'	414424-037	SB-47-0.5'	414424-063	SB-57-2.5'
414424-012	SB-38-1.5'	414424-038	SB-47-1.5'	414424-064	SB-58-0.5'
414424-013	SB-39-0.5'	414424-039	SB-47-2.5'	414424-065	SB-58-1.5'
414424-014	SB-39-1.5'	414424-040	SB-48-0.5'	414424-066	SB-58-2.5'
414424-015	SB-39-2.5'	414424-041	SB-48-1.5'	414424-067	SB-59-0.5'
414424-016	SB-40-0.5'	414424-042	SB-48-2.5'	414424-068	SB-59-1.5'
414424-017	SB-40-1.5'	414424-043	SB-49-0.5'	414424-069	SB-59-2.5'
414424-018	SB-40-2.5'	414424-044	SB-49-1.5'	414424-070	SB-39-0.5' (DUP)
414424-019	SB-41-0.5'	414424-045	SB-49-2.5'	414424-071	SB-43-0.5' (DUP)
414424-020	SB-41-1.5'	414424-046	SB-50-0.5'	414424-072	SB-47-1.5' (DUP)
414424-021	SB-41-2.5'	414424-047	SB-50-1.5'	414424-073	SB-49-1.5' (DUP)
414424-022	SB-42-0.5'	414424-048	SB-51-0.5'	414424-074	SB-53-0.5' (DUP)
414424-023	SB-42-1.5'	414424-049	SB-51-1.5'	414424-075	SB-55-1.5' (DUP)
414424-024	SB-42-2.5'	414424-050	SB-52-0.5'	414424-076	SB-60-0.5' (DUP)
414424-025	SB-43-0.5'	414424-051	SB-52-1.5'	414424-077	SB-60-0.5'
414424-026	SB-43-1.5'	414424-052	SB-53-0.5'	414424-078	SB-60-1.5'

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves





Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 414424
Report Date: 05/10/2019
Date Received: 04/17/2019
Client ID: 12860

Comments: Shenandoah Elementary School
029RC1-191395
2450 Shenandoah Street, Los Angeles, CA

Revised Report 2 - STLC and TCLP results are now included where requested.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
414424-079	Equipment Blank - Day 1
414424-080	Equipment Blank - Day 2

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves



Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:10	Site:	
Sample #: 414424-001	Client Sample #: SB-33-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201035		
Antimony	1.54 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	122	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.59	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	26.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.6	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.4	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	11.7	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.82 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.3	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.58 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	42.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	60.6	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201038		
Arsenic	14.4	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	2	3.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	2	70	100	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	2	5.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	2	6.8	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	2	5.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	2	8.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	2	2.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	2	4.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	2	18.4	20	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	2	108	200	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		79		50-150				
Tetrachloro-m-xylene TCMX (SUR)		67		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:17	Site:	
Sample #: 414424-002	Client Sample #: SB-33-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201035		
Antimony	1.11 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	107	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.80	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	26.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.6	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.32	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.60 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.7	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.21 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	39.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	51.2	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	5.89	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	63		50-150					
Tetrachloro-m-xylene TCMX (SUR)	57		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 08:53	Site:	
Sample #: 414424-003	Client Sample #: SB-34-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes	
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201035		
Antimony	4.68	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	131	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.37	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	32.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.8	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	14.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	72.2	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.48	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	17.3	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.82 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	47.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	64.4	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	4.03	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201024		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/17/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/17/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/17/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/17/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/17/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/17/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/17/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/17/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/17/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/17/19	04/19/19	MTS
Surrogate		% Recovery		Limits	Notes			
Decachlorobiphenyl DCB (SUR)		93		50-150				
Tetrachloro-m-xylene TCMX (SUR)		69		50-150				
Method: EPA 8082 <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201025		
PCB-1016	ND	1	3	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1221	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1232	ND	1	9.5	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1242	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1248	ND	1	19	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1254	ND	1	20	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1260	ND	1	6.9	50	ug/Kg	04/17/19	04/19/19	MTS
PCB-1262	ND	1	17	50	ug/Kg	04/17/19	04/19/19	MTS

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/17/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	60		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 08:58	Site:	
Sample #: 414424-004	Client Sample #: SB-34-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201035		
Antimony	2.60 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	96.8	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.60	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	23.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	9.88	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	17.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.86	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN	
Molybdenum	1.12	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Nickel	18.1	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	36.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	47.2	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201039		
Arsenic	5.30	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201024		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/17/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/17/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/17/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/17/19	04/19/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	93			50-150					
Tetrachloro-m-xylene TCMX (SUR)	67			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201025		
PCB-1016	ND	1	3	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/17/19	04/19/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 08:58	Site:	
Sample #: <u>414424-004</u>	Client Sample #: SB-34-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/17/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	60			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:30	Site:	
Sample #: <u>414424-005</u>	Client Sample #: SB-35-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201035	
Antimony	1.43 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	138	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.47	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	30.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.4	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	14.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	9.61	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.58 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.89 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	48.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	55.5	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	3.93	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	2	3.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	2	70	100	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	2	5.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	2	6.8	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	2	5.4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	2	8.2	10	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	2	2.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	2	4.6	10	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	2	18.4	20	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	2	108	200	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	84			50-150				
Tetrachloro-m-xylene TCMX (SUR)	69			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:35	Site:	
Sample #: 414424-006	Client Sample #: SB-35-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201035	
Antimony	1.16 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	108	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.84	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	23.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.12	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.60 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.9	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.42 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	38.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	49.5	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	5.91	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	60		50-150					
Tetrachloro-m-xylene TCMX (SUR)	57		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:49	Site:	
Sample #: <u>414424-007</u>	Client Sample #: SB-36-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201035	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	107	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.94	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	26.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	6.16	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.92 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	20.7	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.96 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	40.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	54.7	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	5.44	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	59		50-150					
Tetrachloro-m-xylene TCMX (SUR)	52		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 09:51	Site:	
Sample #: 414424-008	Client Sample #: SB-36-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201035	
Antimony	0.48 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	139	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	2.05	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	38.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	13.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	22.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	7.70	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.19	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	30.7	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.08 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	67.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	79.1	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	7.54	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	65		50-150					
Tetrachloro-m-xylene TCMX (SUR)	59		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:15	Site:	
Sample #: 414424-009	Client Sample #: SB-37-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201035		
Antimony	0.87 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	134	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.79	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.1	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	12.1	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.68	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.91 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	22.1	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.47 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	38.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	51.6	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	5.85	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	60		50-150					
Tetrachloro-m-xylene TCMX (SUR)	60		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:20	Site:	
Sample #: 414424-010	Client Sample #: SB-37-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201035		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	107	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.65	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	29.1	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	10.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	18.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	12.1	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN	
Molybdenum	0.88 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	22.1	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	1.17 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	41.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	60.6	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201039		
Arsenic	14.8	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201031		
4,4'-DDD	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDE	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDT	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
a-BHC	ND	2	3.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Aldrin	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	D2
b-BHC	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Chlordane (technical)	ND	2	70	100	ug/Kg	04/18/19	04/19/19	MTS	D2
d-BHC	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Dieldrin	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan I	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan II	ND	2	5.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan sulfate	ND	2	6.8	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin	ND	2	5.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin aldehyde	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin Ketone	ND	2	8.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor	ND	2	2.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor epoxide	ND	2	4.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Lindane (Gamma-BHC)	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Methoxychlor	ND	2	18.4	20	ug/Kg	04/18/19	04/19/19	MTS	D2
Toxaphene	ND	2	108	200	ug/Kg	04/18/19	04/19/19	MTS	D2
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	62			50-150					
Tetrachloro-m-xylene TCMX (SUR)	61			50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:03	Site:	
Sample #: 414424-011	Client Sample #: SB-38-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	0.95 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	105	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.16	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	27.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.55	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	13.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	47.0	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.96 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	22.3	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	1.94 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	2.06 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	46.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	58.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	6.60	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		117		50-150				
Tetrachloro-m-xylene TCMX (SUR)		82		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:06	Site:	
Sample #: 414424-012	Client Sample #: SB-38-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	104	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	2.06	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.57	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.25	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.93	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	17.5	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	3.94	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	38.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	44.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	6.79	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	63		50-150					
Tetrachloro-m-xylene TCMX (SUR)	64		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:55	Site:	
Sample #: 414424-013	Client Sample #: SB-39-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201081		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	114	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.43	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	20.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	8.65	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	18.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	24.7	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.80 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	16.8	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	0.77 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	38.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	98.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201039		
Arsenic	21.1	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201031		
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS	D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS	D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS	D2
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	112		50-150						
Tetrachloro-m-xylene TCMX (SUR)	86		50-150						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:59	Site:	
Sample #: 414424-014	Client Sample #: SB-39-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201081	
Antimony	1.50 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	105	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.65	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	24.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.37	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.60	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.79 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	18.4	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.00 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	38.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	43.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	6.30	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	61		50-150					
Tetrachloro-m-xylene TCMX (SUR)	59		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:05	Site:	
Sample #: 414424-015	Client Sample #: SB-39-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201081	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	88.6	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.39	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	27.1	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	8.54	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	2.97	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.87 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	18.5	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	46.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	40.7	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201039	
Arsenic	9.61	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201045	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201031	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	61			50-150				
Tetrachloro-m-xylene TCMX (SUR)	60			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:30	Site:	
Sample #: 414424-016	Client Sample #: SB-40-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	0.80 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	154	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.71	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	27.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	7.31	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.93 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.1	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.44 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	44.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	51.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	5.66	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	65		50-150					
Tetrachloro-m-xylene TCMX (SUR)	69		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:37	Site:	
Sample #: 414424-017	Client Sample #: SB-40-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	103	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.58	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.81	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.98	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.75 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.4	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	1.82 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	39.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	38.3	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	5.17	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	64		50-150					
Tetrachloro-m-xylene TCMX (SUR)	63		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:39	Site:	
Sample #: 414424-018	Client Sample #: SB-40-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	3.05	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	99.9	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.57	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	27.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.88	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.62	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.23	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	20.2	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	44.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	46.0	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	7.95	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201045		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	56		50-150					
Tetrachloro-m-xylene TCMX (SUR)	62		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 15:04	Site:	
Sample #: 414424-019	Client Sample #: SB-41-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	0.51 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	106	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.56	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	22.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.57	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.45	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.53 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	16.9	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	36.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	42.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	5.94	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	62		50-150					
Tetrachloro-m-xylene TCMX (SUR)	62		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 15:08	Site:	
Sample #: 414424-020	Client Sample #: SB-41-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	0.74 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	99.4	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.50	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	28.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.59	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.10	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	20.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	49.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	45.8	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201039		
Arsenic	6.76	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)		68		50-150				
Tetrachloro-m-xylene TCMX (SUR)		69		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:12	Site:	
Sample #: 414424-021	Client Sample #: SB-41-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201081		
Antimony	1.12 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	101	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.58	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	35.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	22.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.02	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	1.10	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Nickel	24.2	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	1.25 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	61.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	49.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201039		
Arsenic	8.96	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201031		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	57			50-150					
Tetrachloro-m-xylene TCMX (SUR)	61			50-150					

Matrix: Solid		Client: ES Engineering				Collector: Client				
Sampled: 04/17/2019 09:42		Site:								
Sample #: 414424-022		Client Sample #: SB-42-0.5'				Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By		Notes
Method: EPA 6010B NELAC		Prep Method: EPA 1311/3010A				QCBatchID: QC1201609				
Lead		0.020 J	1	0.005	0.05	mg/L	05/03/19	05/03/19	KLN	B1,J
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201081				
Antimony		0.98 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium		159	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium		ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium		1.45	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium		26.1	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt		11.1	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper		19.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead		110	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum		0.51 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel		18.8	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium		ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver		ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium		0.47 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium		45.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc		69.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6010B NELAC		Prep Method: STLC				QCBatchID: QC1201621				
Lead		0.448	10	0.05	0.15	mg/L	05/03/19	05/03/19	KLN	
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201040				
Arsenic		44.9	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201048				
Mercury		ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201031				
4,4'-DDD		ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	
4,4'-DDE		5.1 J	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	J
4,4'-DDT		11	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	
a-BHC		ND	2	3.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Aldrin		ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	
b-BHC		ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	
Chlordane (technical)		ND	2	70	100	ug/Kg	04/18/19	04/19/19	MTS	
d-BHC		ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	
Dieldrin		ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan I		ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan II		ND	2	5.6	10	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan sulfate		ND	2	6.8	10	ug/Kg	04/18/19	04/19/19	MTS	
Endrin		ND	2	5.4	10	ug/Kg	04/18/19	04/19/19	MTS	
Endrin aldehyde		ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Endrin Ketone		ND	2	8.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor		ND	2	2.6	10	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor epoxide		ND	2	4.6	10	ug/Kg	04/18/19	04/19/19	MTS	
Lindane (Gamma-BHC)		ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	
Methoxychlor		ND	2	18.4	20	ug/Kg	04/18/19	04/19/19	MTS	
Toxaphene		ND	2	108	200	ug/Kg	04/18/19	04/19/19	MTS	
Surrogate		% Recovery		Limits		Notes				
Decachlorobiphenyl DCB (SUR)		72		50-150						
Tetrachloro-m-xylene TCMX (SUR)		74		50-150						

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:46	Site:	
Sample #: 414424-023	Client Sample #: SB-42-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201081	
Antimony	2.29 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	84.8	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.24	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	8.41	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	16.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.86	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.64 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.9	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	37.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	41.7	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	6.77	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	66			50-150				
Tetrachloro-m-xylene TCMX (SUR)	65			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:48	Site:	
Sample #: 414424-024	Client Sample #: SB-42-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	83.4	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.23	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	23.1	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	7.78	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.56	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.89 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.1	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	37.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	41.3	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	9.57	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	72		50-150					
Tetrachloro-m-xylene TCMX (SUR)	71		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:15	Site:	
Sample #: 414424-025	Client Sample #: SB-43-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	1.22 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	107	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.68	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	24.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	8.19	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.42	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.43 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.9	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	40.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	45.7	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	6.15	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)			56		50-150			
Tetrachloro-m-xylene TCMX (SUR)			56		50-150			

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:17	Site:	
Sample #: 414424-026	Client Sample #: SB-43-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201081		
Antimony	0.83 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	94.6	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.58	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	24.0	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	8.24	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	15.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.58	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.49 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	21.8	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	0.76 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	35.2	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	42.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	6.22	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	62		50-150					
Tetrachloro-m-xylene TCMX (SUR)	65		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:20	Site:	
Sample #: 414424-027	Client Sample #: SB-43-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201081	
Antimony	1.24 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	90.8	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.52	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	28.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.99	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.62	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.80 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	20.9	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	45.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	45.5	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	7.31	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	64			50-150				
Tetrachloro-m-xylene TCMX (SUR)	67			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:43	Site:	
Sample #: 414424-028	Client Sample #: SB-44-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201081		
Antimony	3.43	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	201	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.28	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	23.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	21.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	16.5	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.44 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	17.1	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.73 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	43.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	61.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201040		
Arsenic	48.5	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201024		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDT	2.2 J	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	J
a-BHC	ND	1	1.6	5	ug/Kg	04/17/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/17/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/17/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/17/19	04/19/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	82			50-150					
Tetrachloro-m-xylene TCMX (SUR)	57			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201025		
PCB-1016	ND	1	3	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/17/19	04/19/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:43	Site:	
Sample #: <u>414424-028</u>	Client Sample #: SB-44-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/17/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	82			50-150				Surrogate reported from Pesticide run.

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:49	Site:	
Sample #: 414424-029	Client Sample #: SB-44-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201081		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	90.6	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.37	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	20.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	8.58	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	15.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	3.47	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.72 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	16.2	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	33.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	37.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201040		
Arsenic	6.72	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201024		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/17/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/17/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/17/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/17/19	04/19/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	102			50-150					
Tetrachloro-m-xylene TCMX (SUR)	75			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201025		
PCB-1016	ND	1	3	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/17/19	04/19/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:49	Site:	
Sample #: <u>414424-029</u>	Client Sample #: SB-44-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/17/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	57		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:52	Site:	
Sample #: 414424-030	Client Sample #: SB-44-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201081		
Antimony	1.27 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	90.7	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.46	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	26.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	9.15	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	17.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.00	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.70 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	19.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.97 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	41.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	44.0	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201040		
Arsenic	6.75	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201024		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/17/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/17/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/17/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/17/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/17/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/17/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/17/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/17/19	04/19/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	103			50-150					
Tetrachloro-m-xylene TCMX (SUR)	84			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201025		
PCB-1016	ND	1	3	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/17/19	04/19/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/17/19	04/19/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:52	Site:	
Sample #: <u>414424-030</u>	Client Sample #: SB-44-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/17/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	73			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:19	Site:	
Sample #: <u>414424-031</u>	Client Sample #: SB-45-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	1.46 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	90.7	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.48	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	7.90	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	15.4	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	15.0	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.24	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	17.5	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	1.34 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.23 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	39.3	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	27.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	6.02	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	51			50-150				
Tetrachloro-m-xylene TCMX (SUR)	70			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:23	Site:	
Sample #: 414424-032	Client Sample #: SB-45-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	1.72 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	102	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.81	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	23.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.46	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	16.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.60	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.56	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	19.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	1.65 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	3.50	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	37.2	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	47.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	5.00	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	56		50-150					
Tetrachloro-m-xylene TCMX (SUR)	68		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:26	Site:	
Sample #: 414424-033	Client Sample #: SB-45-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	3.01	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	104	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.70	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	32.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	13.2	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	7.64	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	2.24	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	29.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	2.52 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.15 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	58.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	59.8	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	9.83	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	60		50-150					
Tetrachloro-m-xylene TCMX (SUR)	66		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:26	Site:	
Sample #: 414424-034	Client Sample #: SB-46-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	2.53 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	160	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.14	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	21.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	12.8	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	29.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	35.6	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.22 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.7	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.81 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	40.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	87.5	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	2.48	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	6.6	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	4.3 J	1	2	5	ug/Kg	04/18/19	04/19/19	MTS J
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	77		50-150					
Tetrachloro-m-xylene TCMX (SUR)	68		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:29	Site:	
Sample #: 414424-035	Client Sample #: SB-46-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	0.89 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	107	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.85	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	24.7	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.78	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.84 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	38.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	63.5	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	5.17	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	74			50-150				
Tetrachloro-m-xylene TCMX (SUR)	64			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:35	Site:	
Sample #: 414424-036	Client Sample #: SB-46-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	0.64 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	109	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.69	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	31.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.95	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.02	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	24.3	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	53.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	60.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	8.21	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)		77		50-150				
Tetrachloro-m-xylene TCMX (SUR)		68		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:25	Site:	
Sample #: 414424-037	Client Sample #: SB-47-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	1.43 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	152	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.00	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	22.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	12.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	15.0	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.21 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	15.4	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.93 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	44.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	63.3	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	25.9	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201048	
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	78			50-150				
Tetrachloro-m-xylene TCMX (SUR)	65			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:32	Site:	
Sample #: 414424-038	Client Sample #: SB-47-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	2.51 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	86.0	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.47	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	21.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	8.89	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	15.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.38	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.50 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	17.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.50 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	34.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	44.9	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	6.96	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201048		
Mercury	ND	1	0.039	0.14	mg/Kg	04/18/19	04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)		84		50-150				
Tetrachloro-m-xylene TCMX (SUR)		72		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:38	Site:	
Sample #: 414424-039	Client Sample #: SB-47-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	104	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.61	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	29.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	6.18	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.83 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	24.5	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	48.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	62.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	8.97	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	79		50-150					
Tetrachloro-m-xylene TCMX (SUR)	70		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:00	Site:	
Sample #: 414424-040	Client Sample #: SB-48-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	121	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.96	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	30.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.1	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	11.5	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.83 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	20.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	44.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	68.8	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201040		
Arsenic	30.6	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	73		50-150					
Tetrachloro-m-xylene TCMX (SUR)	65		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:03	Site:	
Sample #: 414424-041	Client Sample #: SB-48-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	0.64 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	113	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.82	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.7	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.5	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.20	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.87 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	20.5	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.59 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	40.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	55.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201040	
Arsenic	5.69	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	75			50-150				
Tetrachloro-m-xylene TCMX (SUR)	67			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:05	Site:	
Sample #: 414424-042	Client Sample #: SB-48-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	108	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.88	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	32.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.8	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.95	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.54	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	25.2	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.04 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	51.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	61.8	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201042		
Arsenic	7.14	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		80		50-150				
Tetrachloro-m-xylene TCMX (SUR)		70		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:18	Site:	
Sample #: 414424-043	Client Sample #: SB-49-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	2.32 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	123	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	2.12	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	31.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.8	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	21.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.64	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.91 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	23.2	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	46.2	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	70.1	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	6.46	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	83			50-150				
Tetrachloro-m-xylene TCMX (SUR)	70			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:23	Site:	
Sample #: 414424-044	Client Sample #: SB-49-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	2.45 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	116	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.72	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	29.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	12.2	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.94	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	1.17	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	25.1	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	50.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	63.2	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	6.30	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201072	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	71			50-150				
Tetrachloro-m-xylene TCMX (SUR)	61			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:25	Site:	
Sample #: 414424-045	Client Sample #: SB-49-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	128	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.70	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	35.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.4	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.59	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.87 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	26.9	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	55.2	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	63.0	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3050B				QCBatchID: QC1201042		
Arsenic	8.66	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A NELAC		Prep Method: EPA 3545				QCBatchID: QC1201072		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	66		50-150					
Tetrachloro-m-xylene TCMX (SUR)	56		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:34	Site:	
Sample #: 414424-046	Client Sample #: SB-50-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201036		
Antimony	0.64 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	183	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.52	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	24.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	12.6	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	21.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	21.9	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN	
Molybdenum	0.43 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	19.6	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	1.83 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	46.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	80.0	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201042		
Arsenic	69.0	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QC1201705		
Arsenic	2110	100	13	200	ug/L	05/07/19	05/07/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS	D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS	D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS	D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS	D2
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)			86		50-150				
Tetrachloro-m-xylene TCMX (SUR)			68		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 10:38	Site:	
Sample #: 414424-047	Client Sample #: SB-50-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	179	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	2.24	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	31.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	13.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	683	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	56.4	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.65 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	21.4	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.11 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	43.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	121	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	6.98	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	67			50-150				
Tetrachloro-m-xylene TCMX (SUR)	54			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:11	Site:	
Sample #: 414424-048	Client Sample #: SB-51-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201036	
Antimony	0.96 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	108	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.96	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	23.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.24	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	11.4	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.63 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	18.9	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	35.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	66.2	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311						QCBatchID: QC1201729	
Arsenic	2450	10	3.1	20	ug/L	05/08/19	05/08/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	218	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1201705	
Arsenic	9960	100	13	200	ug/L	05/07/19	05/07/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>
Decachlorobiphenyl DCB (SUR)			70		50-150			
Tetrachloro-m-xylene TCMX (SUR)			59		50-150			

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:16	Site:	
Sample #: 414424-049	Client Sample #: SB-51-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	131	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.78	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	37.7	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	13.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	24.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.18	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.71 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	27.8	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	62.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	72.9	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201042		
Arsenic	10.7	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	65		50-150					
Tetrachloro-m-xylene TCMX (SUR)	53		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:24	Site:	
Sample #: 414424-050	Client Sample #: SB-52-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201036		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	199	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.62	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	27.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	14.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	29.4	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	40.4	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN	
Molybdenum	ND	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Nickel	19.0	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	43.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	123	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311						QC1201729		
Arsenic	2890	10	3.1	20	ug/L	05/08/19	05/08/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201042		
Arsenic	233	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QC1201705		
Arsenic	10400	100	13	200	ug/L	05/07/19	05/07/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDE	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
4,4'-DDT	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
a-BHC	ND	2	3.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Aldrin	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	D2
b-BHC	ND	2	3	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Chlordane (technical)	ND	2	70	100	ug/Kg	04/18/19	04/19/19	MTS	D2
d-BHC	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Dieldrin	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan I	ND	2	2.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan II	ND	2	5.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endosulfan sulfate	ND	2	6.8	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin	ND	2	5.4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin aldehyde	ND	2	4.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Endrin Ketone	ND	2	8.2	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor	ND	2	2.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Heptachlor epoxide	ND	2	4.6	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Lindane (Gamma-BHC)	ND	2	4	10	ug/Kg	04/18/19	04/19/19	MTS	D2
Methoxychlor	ND	2	18.4	20	ug/Kg	04/18/19	04/19/19	MTS	D2
Toxaphene	ND	2	108	200	ug/Kg	04/18/19	04/19/19	MTS	D2
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)			85		50-150				
Tetrachloro-m-xylene TCMX (SUR)			67		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:27	Site:	
Sample #: 414424-051	Client Sample #: SB-52-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B					QCBatchID: QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	136	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.90	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	29.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	12.1	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	5.27	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.71	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	21.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	3.06	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	49.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	53.7	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B					QCBatchID: QC1201042		
Arsenic	6.30	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A					QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545					QCBatchID: QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	66		50-150					
Tetrachloro-m-xylene TCMX (SUR)	59		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:38	Site:	
Sample #: 414424-052	Client Sample #: SB-53-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	1.76 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	127	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.46	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	27.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	28.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.08	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.05	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	1.59	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.82 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	40.8	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	6.79	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	129	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	0.05 J	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/19/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/19/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/19/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/19/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/19/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/19/19	MTS D2
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	110		50-150					
Tetrachloro-m-xylene TCMX (SUR)	78		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:41	Site:	
Sample #: 414424-053	Client Sample #: SB-53-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	110	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.78	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	25.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.88	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.54	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.02	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	17.5	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	39.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	57.9	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201042		
Arsenic	6.61	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	76		50-150					
Tetrachloro-m-xylene TCMX (SUR)	69		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:26	Site:	
Sample #: 414424-054	Client Sample #: SB-54-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201082		
Antimony	1.31 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	146	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	2.28	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	31.7	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	10.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	32.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	23.4	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.87 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	18.9	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.71 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	48.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	88.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311						QC1201729		
Arsenic	1040	10	3.1	20	ug/L	05/08/19	05/08/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201042		
Arsenic	124	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QC1201705		
Arsenic	5090	100	13	200	ug/L	05/07/19	05/07/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS	
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)			76		50-150				
Tetrachloro-m-xylene TCMX (SUR)			65		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:31	Site:	
Sample #: 414424-055	Client Sample #: SB-54-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	115	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.66	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	26.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.10	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	18.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.93	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.56 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	19.5	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.63 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	40.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	50.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	5.59	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	68			50-150				
Tetrachloro-m-xylene TCMX (SUR)	60			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:45	Site:	
Sample #: 414424-056	Client Sample #: SB-55-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	102	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.73	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	23.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	8.61	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	20.0	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	5.85	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.33 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	18.2	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.47 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	36.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	59.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201042		
Arsenic	59.7	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QC1201705		
Arsenic	2610	100	13	200	ug/L	05/07/19	05/07/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)			76		50-150				
Tetrachloro-m-xylene TCMX (SUR)			70		50-150				
Method: EPA 8082 <i>NELAC</i>	Prep Method: EPA 3545						QC1201091		
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:45	Site:	
Sample #: <u>414424-056</u>	Client Sample #: SB-55-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	64		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:53	Site:	
Sample #: 414424-057	Client Sample #: SB-55-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	0.72 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	101	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.53	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	25.5	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	10.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	17.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.48	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.83 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	19.1	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.75 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	41.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	47.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201042		
Arsenic	6.90	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201049		
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	74			50-150					
Tetrachloro-m-xylene TCMX (SUR)	69			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201091		
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:53	Site:	
Sample #: <u>414424-057</u>	Client Sample #: SB-55-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	67			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:16	Site:	
Sample #: <u>414424-058</u>	Client Sample #: SB-56-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	129	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.83	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	32.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	6.05	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.57 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	18.1	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	1.00 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.80 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	48.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	46.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	6.45	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201049	
Mercury	ND	1	0.039	0.14	mg/Kg		04/19/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	81			50-150				
Tetrachloro-m-xylene TCMX (SUR)	71			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:20	Site:	
Sample #: 414424-059	Client Sample #: SB-56-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	98.2	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.49	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	24.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	9.12	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	14.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	3.59	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.15 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	17.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	37.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	40.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	5.90	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	77		50-150					
Tetrachloro-m-xylene TCMX (SUR)	63		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:23	Site:	
Sample #: 414424-060	Client Sample #: SB-56-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	0.67 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	115	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.84	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	34.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.2	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	24.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	6.20	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.21	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	24.8	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.56 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	55.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	58.3	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	7.86	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/19/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/19/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/19/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/19/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/19/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/19/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/19/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/19/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/19/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/19/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	84			50-150				
Tetrachloro-m-xylene TCMX (SUR)	68			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:31	Site:	
Sample #: 414424-061	Client Sample #: SB-57-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	581	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.16	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	8.25	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	17.2	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	19.9	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	7.52	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	ND	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	7.08	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.81 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	32.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	54.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201042	
Arsenic	12.5	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/20/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/20/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/20/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/20/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/20/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/20/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/20/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/20/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/20/19	MTS D2
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>				
Decachlorobiphenyl DCB (SUR)	105		50-150					
Tetrachloro-m-xylene TCMX (SUR)	83		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:36	Site:	
Sample #: 414424-062	Client Sample #: SB-57-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	ND	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	ND	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	ND	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	ND	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.49	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	ND	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	18.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	0.17 J	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN J
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	ND	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	43.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201084		
Arsenic	5.38	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/20/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/20/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/20/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/20/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/20/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/20/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/20/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/20/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/20/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	72		50-150					
Tetrachloro-m-xylene TCMX (SUR)	69		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 10:36	Site:	
Sample #: 414424-063	Client Sample #: SB-57-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	QC Batch ID	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC Batch ID: QC1201082		
Antimony	2.19 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	90.5	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.36	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	27.0	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	9.33	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	16.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.07	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.91 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	19.8	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	44.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	44.6	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC Batch ID: QC1201084		
Arsenic	8.23	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC Batch ID: QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC Batch ID: QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	81			50-150					
Tetrachloro-m-xylene TCMX (SUR)	69			50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:20	Site:	
Sample #: 414424-064	Client Sample #: SB-58-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analyzed By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	103	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.42	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	26.2	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	8.94	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	21.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	16.4	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.95 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	17.4	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	1.29 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	44.3	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	72.0	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	7.17	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	0.05 J	1	0.039	0.14	mg/Kg		04/23/19	JP	J
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	3.9 J	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	J
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	77			50-150					
Tetrachloro-m-xylene TCMX (SUR)	70			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201091		
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:20	Site:	
Sample #: <u>414424-064</u>	Client Sample #: SB-58-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	66			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:40	Site:	
Sample #: 414424-065	Client Sample #: SB-58-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	1.97 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	135	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	2.10	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	35.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.8	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	24.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	16.4	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	1.57	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Nickel	23.6	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	59.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	73.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201084	
Arsenic	9.06	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201093	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDE	16	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	76			50-150				
Tetrachloro-m-xylene TCMX (SUR)	66			50-150				
Method: EPA 8082 <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201091	
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:40	Site:	
Sample #: <u>414424-065</u>	Client Sample #: SB-58-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>			<u>% Recovery</u>					<u>Notes</u>
Decachlorobiphenyl DCB (SUR)			67					50-150

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:47	Site:	
Sample #: 414424-066	Client Sample #: SB-58-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	1.00 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	122	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.93	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	29.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.6	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	21.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.51	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.75 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	20.5	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	47.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	54.4	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	6.36	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	84			50-150					
Tetrachloro-m-xylene TCMX (SUR)	72			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201091		
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 14:47	Site:	
Sample #: <u>414424-066</u>	Client Sample #: SB-58-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	74			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:09	Site:	
Sample #: 414424-067	Client Sample #: SB-59-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	150	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.52	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	26.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.0	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	26.4	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	44.1	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.56 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	18.6	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	41.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	89.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	6.22	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	0.06 J	1	0.039	0.14	mg/Kg		04/23/19	JP	J
Method: EPA 8015B NELAC	Prep Method: EPA 5035A						QC1200658		
TPH (C6 to C12)	ND	0.86	0.20554	2.58	mg/Kg		04/18/19	EW	
Surrogate	% Recovery			Limits					Notes
4-Bromofluorobenzene (SUR)	100			60-140					
Method: EPA 8015M	Prep Method: EPA 3580A						QC1201028		
TPH (C13 to C22)	ND	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
TPH (C23 to C44)	24	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
Surrogate	% Recovery			Limits					Notes
Triacantane (SUR)	126			50-150					
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
4,4'-DDE	65	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
4,4'-DDT	30	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:09	Site:	
Sample #: 414424-067	Client Sample #: SB-59-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	79			50-150				
Tetrachloro-m-xylene TCMX (SUR)	70			50-150				
Method: EPA 8260B NELAC	Prep Method: EPA 5035A						QCBatchID: QC1201001	
1,1,1,2-Tetrachloroethane	ND	0.8	0.192	4	ug/Kg		04/18/19	LZ
1,1,1-Trichloroethane	ND	0.8	0.12	4	ug/Kg		04/18/19	LZ
1,1,2,2-Tetrachloroethane	ND	0.8	0.232	4	ug/Kg		04/18/19	LZ
1,1,2-Trichloroethane	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	0.8	0.592	4	ug/Kg		04/18/19	LZ
1,1-Dichloroethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
1,1-Dichloroethene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,1-Dichloropropene	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
1,2,3-Trichlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,2,3-Trichloropropane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
1,2,4-Trichlorobenzene	ND	0.8	0.264	4	ug/Kg		04/18/19	LZ
1,2,4-Trimethylbenzene	ND	0.8	0.224	4	ug/Kg		04/18/19	LZ
1,2-Dibromo-3-chloropropane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
1,2-Dibromoethane	ND	0.8	0.096	4	ug/Kg		04/18/19	LZ
1,2-Dichlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,2-Dichloroethane	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
1,2-Dichloropropane	ND	0.8	0.272	4	ug/Kg		04/18/19	LZ
1,3,5-Trimethylbenzene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
1,3-Dichlorobenzene	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
1,3-Dichloropropane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
1,4-Dichlorobenzene	ND	0.8	0.192	4	ug/Kg		04/18/19	LZ
2,2-Dichloropropane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
2-Butanone (MEK)	2.2 J	0.8	0.576	80	ug/Kg		04/18/19	LZ J
2-Chloroethyl Vinyl Ether	ND	0.8	0.24	4	ug/Kg		04/18/19	LZ
2-Chlorotoluene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
4-Chlorotoluene	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
4-Isopropyltoluene	ND	0.8	0.216	4	ug/Kg		04/18/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Acetone	ND	0.8	40	80	ug/Kg		04/18/19	LZ
Allyl Chloride	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
Benzene	0.25 J	0.8	0.144	4	ug/Kg		04/18/19	LZ J
Bromobenzene	ND	0.8	0.24	4	ug/Kg		04/18/19	LZ
Bromochloromethane	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Bromodichloromethane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Bromoform	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Bromomethane	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
Carbon Tetrachloride	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Chlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Chlorodibromomethane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Chloroethane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Chloroform	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Chloromethane	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
cis-1,2-Dichloroethene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
cis-1,3-dichloropropene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
cis-1,4-dichloro-2-butene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Dibromomethane	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Dichlorodifluoromethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Di-isopropyl ether (DIPE)	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Ethylbenzene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Ethyl-tertbutylether (ETBE)	ND	0.8	0.336	4	ug/Kg		04/18/19	LZ

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:09	Site:	
Sample #: 414424-067	Client Sample #: SB-59-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Hexachlorobutadiene	ND	0.8	0.336	4	ug/Kg		04/18/19	LZ
Isopropylbenzene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
m and p-Xylene	ND	0.8	0.304	4	ug/Kg		04/18/19	LZ
Methylene chloride	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Methyl-t-butyl Ether (MTBE)	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Naphthalene	ND	0.8	0.128	4	ug/Kg		04/18/19	LZ
N-butylbenzene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
N-propylbenzene	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
o-Xylene	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Sec-butylbenzene	ND	0.8	0.224	4	ug/Kg		04/18/19	LZ
Styrene	ND	0.8	0.104	4	ug/Kg		04/18/19	LZ
t-Butyl alcohol (TBA)	ND	0.8	7.04	8	ug/Kg		04/18/19	LZ
Tert-amylmethylether (TAME)	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Tert-butylbenzene	ND	0.8	0.272	4	ug/Kg		04/18/19	LZ
Tetrachloroethene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Toluene	0.22 J	0.8	0.136	4	ug/Kg		04/18/19	LZ J
trans-1,2-dichloroethene	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
trans-1,3-dichloropropene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
trans-1,4-dichloro-2-butene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Trichloroethene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Trichlorofluoromethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Vinyl Chloride	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
Xylenes (Total)	ND	0.8	0.304	4	ug/Kg		04/18/19	LZ
<u>Surrogate</u>			<u>% Recovery</u>					<u>Notes</u>
1,2-Dichloroethane-d4 (SUR)			119					70-145
4-Bromofluorobenzene (SUR)			110					70-145
Dibromofluoromethane (SUR)			97					70-145
Toluene-d8 (SUR)			100					70-145

Method: EPA 8270C NELAC	Prep Method: EPA 3545	QCBatchID: QC1201027							
1,2,4-Trichlorobenzene	ND	2	44	500	ug/Kg	04/18/19	04/19/19	DDo	D2
1,2-Dichlorobenzene	ND	2	74	500	ug/Kg	04/18/19	04/19/19	DDo	D2
1,3-Dichlorobenzene	ND	2	100	500	ug/Kg	04/18/19	04/19/19	DDo	D2
1,4-Dichlorobenzene	ND	2	62	500	ug/Kg	04/18/19	04/19/19	DDo	D2
1-Methylnaphthalene	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4,5-Trichlorophenol	ND	2	86	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4,6-Trichlorophenol	ND	2	70	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4-Dichlorophenol	ND	2	46	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4-Dimethylphenol	ND	2	200	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4-Dinitrophenol	ND	2	46	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
2,4-Dinitrotoluene	ND	2	28	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2,6-Dinitrotoluene	ND	2	66	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Chloronaphthalene	ND	2	30	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Chlorophenol	ND	2	30	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Methyl-4,6-dinitrophenol	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Methylnaphthalene	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Methylphenol (o-Cresol)	ND	2	62	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Nitroaniline	ND	2	62	500	ug/Kg	04/18/19	04/19/19	DDo	D2
2-Nitrophenol	ND	2	32	500	ug/Kg	04/18/19	04/19/19	DDo	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	2	38	800	ug/Kg	04/18/19	04/19/19	DDo	D2
3,3'-Dichlorobenzidine	ND	2	108	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
3-Nitroaniline	ND	2	74	500	ug/Kg	04/18/19	04/19/19	DDo	D2
4-Bromophenyl phenyl ether	ND	2	48	500	ug/Kg	04/18/19	04/19/19	DDo	D2
4-Chloro-3-methylphenol	ND	2	36	500	ug/Kg	04/18/19	04/19/19	DDo	D2
4-Chloroaniline	ND	2	146	500	ug/Kg	04/18/19	04/19/19	DDo	D2

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:09	Site:	
Sample #: <u>414424-067</u>	Client Sample #: SB-59-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
4-Chlorophenyl phenyl ether	ND	2	38	500	ug/Kg	04/18/19	04/19/19	DDo	D2
4-Nitroaniline	ND	2	296	500	ug/Kg	04/18/19	04/19/19	DDo	D2
4-Nitrophenol	ND	2	234	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Acenaphthene	ND	2	50	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Acenaphthylene	ND	2	40	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Aniline	ND	2	202	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Anthracene	ND	2	46	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Azobenzene	ND	2	134	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benz(a)anthracene	ND	2	44	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzidine	ND	2	46	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzo(a)pyrene	ND	2	50	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzo(b)fluoranthene	ND	2	54	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzo(g,h,i)perylene	ND	2	58	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzo(k)fluoranthene	ND	2	64	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzoic acid	ND	2	72	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
Benzyl alcohol	ND	2	72	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Bis(2-chloroethoxy)methane	ND	2	30	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Bis(2-chloroethyl) Ether	ND	2	50	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
Bis(2-chloroisopropyl) Ether	ND	2	34	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Bis(2-ethylhexyl) phthalate	ND	2	104	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Butylbenzyl Phthalate	ND	2	88	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Carbazole	ND	2	46	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Chrysene	ND	2	40	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Dibenz(a,h)anthracene	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Dibenzofuran	ND	2	28	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Diethyl phthalate	ND	2	48	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Dimethyl phthalate	ND	2	44	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Di-n-butyl phthalate	150 J	2	134	500	ug/Kg	04/18/19	04/19/19	DDo	B1,J,D2
Di-n-octyl phthalate	ND	2	46	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Fluoranthene	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Fluorene	ND	2	54	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Hexachlorobenzene	ND	2	30	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Hexachlorobutadiene	ND	2	78	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Hexachlorocyclopentadiene	ND	2	28	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
Hexachloroethane	ND	2	86	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Indeno(1,2,3-cd)pyrene	ND	2	180	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Isophorone	ND	2	50	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Naphthalene	ND	2	50	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Nitrobenzene	ND	2	42	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
N-Nitrosodimethylamine (NDMA)	ND	2	68	500	ug/Kg	04/18/19	04/19/19	DDo	D2
N-Nitrosodi-n-propylamine (NDPA)	ND	2	52	500	ug/Kg	04/18/19	04/19/19	DDo	D2
N-Nitrosodiphenylamine	ND	2	48	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Pentachlorophenol	ND	2	110	2400	ug/Kg	04/18/19	04/19/19	DDo	D2
Phenanthrene	ND	2	44	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Phenol	ND	2	52	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Pyrene	ND	2	46	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Pyridine	ND	2	42	500	ug/Kg	04/18/19	04/19/19	DDo	D2
Total Cresol	ND	2	800	800	ug/Kg	04/18/19	04/19/19	DDo	D2

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:09	Site:	
Sample #: <u>414424-067</u>	Client Sample #: SB-59-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>				<u>% Recovery</u>				<u>Limits</u> <u>Notes</u>
2,4,6-Tribromophenol (SUR)				78				34-143
2-Fluorobiphenyl (SUR)				80				41-125
2-Fluorophenol (SUR)				65				13-153
Nitrobenzene-d5 (SUR)				73				27-125
p-Terphenyl (SUR)				82				33-155
Phenol-d5 (SUR)				73				10-110

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:17	Site:	
Sample #: 414424-068	Client Sample #: SB-59-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	
Barium	124	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	2.08	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	29.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.3	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	19.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	6.12	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.83 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	21.0	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	47.5	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	50.7	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	6.37	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8015B NELAC	Prep Method: EPA 5035A						QC1200658		
TPH (C6 to C12)	ND	0.81	0.19359	2.43	mg/Kg		04/18/19	EW	
Surrogate	% Recovery			Limits					Notes
4-Bromofluorobenzene (SUR)	100			60-140					
Method: EPA 8015M	Prep Method: EPA 3580A						QC1201028		
TPH (C13 to C22)	ND	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
TPH (C23 to C44)	ND	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
Surrogate	% Recovery			Limits					Notes
Triacantane (SUR)	123			50-150					
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/21/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/21/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/21/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/21/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/21/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/21/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/21/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/21/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/21/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:17	Site:	
Sample #: 414424-068	Client Sample #: SB-59-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	83			50-150				
Tetrachloro-m-xylene TCMX (SUR)	64			50-150				
Method: EPA 8260B NELAC	Prep Method: EPA 5035A					QCBatchID: QC1201001		
1,1,1,2-Tetrachloroethane	ND	0.8	0.192	4	ug/Kg		04/18/19	LZ
1,1,1-Trichloroethane	ND	0.8	0.12	4	ug/Kg		04/18/19	LZ
1,1,2,2-Tetrachloroethane	ND	0.8	0.232	4	ug/Kg		04/18/19	LZ
1,1,2-Trichloroethane	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	0.8	0.592	4	ug/Kg		04/18/19	LZ
1,1-Dichloroethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
1,1-Dichloroethene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,1-Dichloropropene	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
1,2,3-Trichlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,2,3-Trichloropropane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
1,2,4-Trichlorobenzene	ND	0.8	0.264	4	ug/Kg		04/18/19	LZ
1,2,4-Trimethylbenzene	0.82 J	0.8	0.224	4	ug/Kg		04/18/19	LZ J
1,2-Dibromo-3-chloropropane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
1,2-Dibromoethane	ND	0.8	0.096	4	ug/Kg		04/18/19	LZ
1,2-Dichlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
1,2-Dichloroethane	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
1,2-Dichloropropane	ND	0.8	0.272	4	ug/Kg		04/18/19	LZ
1,3,5-Trimethylbenzene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
1,3-Dichlorobenzene	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
1,3-Dichloropropane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
1,4-Dichlorobenzene	ND	0.8	0.192	4	ug/Kg		04/18/19	LZ
2,2-Dichloropropane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
2-Butanone (MEK)	3.3 J	0.8	0.576	80	ug/Kg		04/18/19	LZ J
2-Chloroethyl Vinyl Ether	ND	0.8	0.24	4	ug/Kg		04/18/19	LZ
2-Chlorotoluene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
4-Chlorotoluene	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
4-Isopropyltoluene	ND	0.8	0.216	4	ug/Kg		04/18/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Acetone	ND	0.8	40	80	ug/Kg		04/18/19	LZ
Allyl Chloride	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
Benzene	0.29 J	0.8	0.144	4	ug/Kg		04/18/19	LZ J
Bromobenzene	ND	0.8	0.24	4	ug/Kg		04/18/19	LZ
Bromochloromethane	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Bromodichloromethane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Bromoform	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Bromomethane	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
Carbon Tetrachloride	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Chlorobenzene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
Chlorodibromomethane	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Chloroethane	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Chloroform	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Chloromethane	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
cis-1,2-Dichloroethene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
cis-1,3-dichloropropene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
cis-1,4-dichloro-2-butene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Dibromomethane	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Dichlorodifluoromethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Di-isopropyl ether (DIPE)	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Ethylbenzene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Ethyl-tertbutylether (ETBE)	ND	0.8	0.336	4	ug/Kg		04/18/19	LZ

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:17	Site:	
Sample #: 414424-068	Client Sample #: SB-59-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Hexachlorobutadiene	ND	0.8	0.336	4	ug/Kg		04/18/19	LZ
Isopropylbenzene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
m and p-Xylene	ND	0.8	0.304	4	ug/Kg		04/18/19	LZ
Methylene chloride	ND	0.8	0.168	4	ug/Kg		04/18/19	LZ
Methyl-t-butyl Ether (MTBE)	ND	0.8	0.136	4	ug/Kg		04/18/19	LZ
Naphthalene	ND	0.8	0.128	4	ug/Kg		04/18/19	LZ
N-butylbenzene	ND	0.8	0.2	4	ug/Kg		04/18/19	LZ
N-propylbenzene	ND	0.8	0.176	4	ug/Kg		04/18/19	LZ
o-Xylene	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Sec-butylbenzene	ND	0.8	0.224	4	ug/Kg		04/18/19	LZ
Styrene	ND	0.8	0.104	4	ug/Kg		04/18/19	LZ
t-Butyl alcohol (TBA)	ND	0.8	7.04	8	ug/Kg		04/18/19	LZ
Tert-amylmethylether (TAME)	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
Tert-butylbenzene	ND	0.8	0.272	4	ug/Kg		04/18/19	LZ
Tetrachloroethene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Toluene	0.18 J	0.8	0.136	4	ug/Kg		04/18/19	LZ J
trans-1,2-dichloroethene	ND	0.8	0.152	4	ug/Kg		04/18/19	LZ
trans-1,3-dichloropropene	ND	0.8	0.144	4	ug/Kg		04/18/19	LZ
trans-1,4-dichloro-2-butene	ND	0.8	0.16	4	ug/Kg		04/18/19	LZ
Trichloroethene	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Trichlorofluoromethane	ND	0.8	0.184	4	ug/Kg		04/18/19	LZ
Vinyl Chloride	ND	0.8	0.112	4	ug/Kg		04/18/19	LZ
Xylenes (Total)	ND	0.8	0.304	4	ug/Kg		04/18/19	LZ
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
1,2-Dichloroethane-d4 (SUR)	118		70-145					
4-Bromofluorobenzene (SUR)	111		70-145					
Dibromofluoromethane (SUR)	98		70-145					
Toluene-d8 (SUR)	99		70-145					

Method: EPA 8270C NELAC	Prep Method: EPA 3545	QCBatchID: QC1201027						
1,2,4-Trichlorobenzene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
1,2-Dichlorobenzene	ND	1	37	250	ug/Kg	04/18/19	04/19/19	DDo
1,3-Dichlorobenzene	ND	1	50	250	ug/Kg	04/18/19	04/19/19	DDo
1,4-Dichlorobenzene	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
1-Methylnaphthalene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2,4,5-Trichlorophenol	ND	1	43	250	ug/Kg	04/18/19	04/19/19	DDo
2,4,6-Trichlorophenol	ND	1	35	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dichlorophenol	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dimethylphenol	ND	1	100	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dinitrophenol	ND	1	23	1200	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dinitrotoluene	ND	1	14	250	ug/Kg	04/18/19	04/19/19	DDo
2,6-Dinitrotoluene	ND	1	33	250	ug/Kg	04/18/19	04/19/19	DDo
2-Chloronaphthalene	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
2-Chlorophenol	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methyl-4,6-dinitrophenol	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methylnaphthalene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methylphenol (o-Cresol)	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
2-Nitroaniline	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
2-Nitrophenol	ND	1	16	250	ug/Kg	04/18/19	04/19/19	DDo
3 and 4-Methylphenol (m and p-Cresol)	ND	1	19	400	ug/Kg	04/18/19	04/19/19	DDo
3,3'-Dichlorobenzidine	ND	1	54	1200	ug/Kg	04/18/19	04/19/19	DDo
3-Nitroaniline	ND	1	37	250	ug/Kg	04/18/19	04/19/19	DDo
4-Bromophenyl phenyl ether	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
4-Chloro-3-methylphenol	ND	1	18	250	ug/Kg	04/18/19	04/19/19	DDo
4-Chloroaniline	ND	1	73	250	ug/Kg	04/18/19	04/19/19	DDo

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:17	Site:	
Sample #: <u>414424-068</u>	Client Sample #: SB-59-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
4-Chlorophenyl phenyl ether	ND	1	19	250	ug/Kg	04/18/19	04/19/19	DDo
4-Nitroaniline	ND	1	148	250	ug/Kg	04/18/19	04/19/19	DDo
4-Nitrophenol	ND	1	117	250	ug/Kg	04/18/19	04/19/19	DDo
Acenaphthene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Acenaphthylene	ND	1	20	250	ug/Kg	04/18/19	04/19/19	DDo
Aniline	ND	1	101	250	ug/Kg	04/18/19	04/19/19	DDo
Anthracene	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Azobenzene	ND	1	67	250	ug/Kg	04/18/19	04/19/19	DDo
Benz(a)anthracene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Benzidine	ND	1	23	1200	ug/Kg	04/18/19	04/19/19	DDo
Benzo(a)pyrene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(b)fluoranthene	ND	1	27	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(g,h,i)perylene	ND	1	29	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(k)fluoranthene	ND	1	32	250	ug/Kg	04/18/19	04/19/19	DDo
Benzoic acid	ND	1	36	1200	ug/Kg	04/18/19	04/19/19	DDo
Benzyl alcohol	ND	1	36	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroethoxy)methane	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroethyl) Ether	ND	1	25	1200	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroisopropyl) Ether	ND	1	17	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-ethylhexyl) phthalate	ND	1	52	250	ug/Kg	04/18/19	04/19/19	DDo
Butylbenzyl Phthalate	ND	1	44	250	ug/Kg	04/18/19	04/19/19	DDo
Carbazole	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Chrysene	ND	1	20	250	ug/Kg	04/18/19	04/19/19	DDo
Dibenz(a,h)anthracene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Dibenzofuran	ND	1	14	250	ug/Kg	04/18/19	04/19/19	DDo
Diethyl phthalate	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
Dimethyl phthalate	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Di-n-butyl phthalate	130 J	1	67	250	ug/Kg	04/18/19	04/19/19	DDo B1,J
Di-n-octyl phthalate	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Fluoranthene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Fluorene	ND	1	27	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorobenzene	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorobutadiene	ND	1	39	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorocyclopentadiene	ND	1	14	1200	ug/Kg	04/18/19	04/19/19	DDo
Hexachloroethane	ND	1	43	250	ug/Kg	04/18/19	04/19/19	DDo
Indeno(1,2,3-cd)pyrene	ND	1	90	250	ug/Kg	04/18/19	04/19/19	DDo
Isophorone	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Naphthalene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Nitrobenzene	ND	1	21	1200	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodimethylamine (NDMA)	ND	1	34	250	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodi-n-propylamine (NDPA)	ND	1	26	250	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodiphenylamine	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
Pentachlorophenol	ND	1	55	1200	ug/Kg	04/18/19	04/19/19	DDo
Phenanthrene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Phenol	ND	1	26	250	ug/Kg	04/18/19	04/19/19	DDo
Pyrene	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Pyridine	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Total Cresol	ND	1	400	400	ug/Kg	04/18/19	04/19/19	DDo

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:17	Site:	
Sample #: <u>414424-068</u>	Client Sample #: SB-59-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>								<u>Notes</u>
2,4,6-Tribromophenol (SUR)		86		34-143				
2-Fluorobiphenyl (SUR)		78		41-125				
2-Fluorophenol (SUR)		64		13-153				
Nitrobenzene-d5 (SUR)		71		27-125				
p-Terphenyl (SUR)		88		33-155				
Phenol-d5 (SUR)		74		10-110				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:23	Site:	
Sample #: 414424-069	Client Sample #: SB-59-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201082		
Antimony	0.61 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	128	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	2.08	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	32.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.6	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	20.4	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.75	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.79 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	23.3	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	52.0	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	56.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	6.83	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8015B NELAC	Prep Method: EPA 5035A						QC1200658		
TPH (C6 to C12)	ND	0.86	0.20554	2.58	mg/Kg		04/18/19	EW	
Surrogate	% Recovery			Limits					Notes
4-Bromofluorobenzene (SUR)	100			60-140					
Method: EPA 8015M	Prep Method: EPA 3580A						QC1201028		
TPH (C13 to C22)	ND	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
TPH (C23 to C44)	ND	1	10	10	mg/Kg	04/18/19	04/19/19	DXN	
Surrogate	% Recovery			Limits					Notes
Triacantane (SUR)	118			50-150					
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201080		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/18/19	04/21/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/18/19	04/21/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/18/19	04/21/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/18/19	04/21/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/18/19	04/21/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/18/19	04/21/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/18/19	04/21/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/18/19	04/21/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/18/19	04/21/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/18/19	04/21/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/18/19	04/21/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/18/19	04/21/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:23	Site:	
Sample #: 414424-069	Client Sample #: SB-59-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	76			50-150				
Tetrachloro-m-xylene TCMX (SUR)	62			50-150				
Method: EPA 8260B NELAC	Prep Method: EPA 5035A					QCBatchID: QC1201001		
1,1,1,2-Tetrachloroethane	ND	0.9	0.216	4.5	ug/Kg		04/18/19	LZ
1,1,1,1-Trichloroethane	ND	0.9	0.135	4.5	ug/Kg		04/18/19	LZ
1,1,1,2,2-Tetrachloroethane	ND	0.9	0.261	4.5	ug/Kg		04/18/19	LZ
1,1,1,2-Trichloroethane	ND	0.9	0.198	4.5	ug/Kg		04/18/19	LZ
1,1,1,2-Trichlorotrifluoroethane	ND	0.9	0.666	4.5	ug/Kg		04/18/19	LZ
1,1-Dichloroethane	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
1,1-Dichloroethene	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
1,1-Dichloropropene	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
1,2,3-Trichlorobenzene	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
1,2,3-Trichloropropane	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
1,2,4-Trichlorobenzene	ND	0.9	0.297	4.5	ug/Kg		04/18/19	LZ
1,2,4-Trimethylbenzene	ND	0.9	0.252	4.5	ug/Kg		04/18/19	LZ
1,2-Dibromo-3-chloropropane	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
1,2-Dibromoethane	ND	0.9	0.108	4.5	ug/Kg		04/18/19	LZ
1,2-Dichlorobenzene	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
1,2-Dichloroethane	ND	0.9	0.126	4.5	ug/Kg		04/18/19	LZ
1,2-Dichloropropane	ND	0.9	0.306	4.5	ug/Kg		04/18/19	LZ
1,3,5-Trimethylbenzene	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
1,3-Dichlorobenzene	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
1,3-Dichloropropane	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
1,4-Dichlorobenzene	ND	0.9	0.216	4.5	ug/Kg		04/18/19	LZ
2,2-Dichloropropane	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
2-Butanone (MEK)	3.2 J	0.9	0.648	90	ug/Kg		04/18/19	LZ J
2-Chloroethyl Vinyl Ether	ND	0.9	0.27	4.5	ug/Kg		04/18/19	LZ
2-Chlorotoluene	ND	0.9	0.225	4.5	ug/Kg		04/18/19	LZ
4-Chlorotoluene	ND	0.9	0.198	4.5	ug/Kg		04/18/19	LZ
4-Isopropyltoluene	ND	0.9	0.243	4.5	ug/Kg		04/18/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	0.9	0.153	4.5	ug/Kg		04/18/19	LZ
Acetone	ND	0.9	45	90	ug/Kg		04/18/19	LZ
Allyl Chloride	ND	0.9	0.126	4.5	ug/Kg		04/18/19	LZ
Benzene	0.34 J	0.9	0.162	4.5	ug/Kg		04/18/19	LZ J
Bromobenzene	ND	0.9	0.27	4.5	ug/Kg		04/18/19	LZ
Bromochloromethane	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
Bromodichloromethane	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
Bromoform	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
Bromomethane	ND	0.9	0.198	4.5	ug/Kg		04/18/19	LZ
Carbon Tetrachloride	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
Chlorobenzene	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
Chlorodibromomethane	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
Chloroethane	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
Chloroform	ND	0.9	0.153	4.5	ug/Kg		04/18/19	LZ
Chloromethane	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
cis-1,2-Dichloroethene	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
cis-1,3-dichloropropene	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
cis-1,4-dichloro-2-butene	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
Dibromomethane	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
Dichlorodifluoromethane	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
Di-isopropyl ether (DIPE)	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
Ethylbenzene	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
Ethyl-tertbutylether (ETBE)	ND	0.9	0.378	4.5	ug/Kg		04/18/19	LZ

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:23	Site:	
Sample #: 414424-069	Client Sample #: SB-59-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Hexachlorobutadiene	ND	0.9	0.378	4.5	ug/Kg		04/18/19	LZ
Isopropylbenzene	ND	0.9	0.225	4.5	ug/Kg		04/18/19	LZ
m and p-Xylene	ND	0.9	0.342	4.5	ug/Kg		04/18/19	LZ
Methylene chloride	ND	0.9	0.189	4.5	ug/Kg		04/18/19	LZ
Methyl-t-butyl Ether (MTBE)	ND	0.9	0.153	4.5	ug/Kg		04/18/19	LZ
Naphthalene	ND	0.9	0.144	4.5	ug/Kg		04/18/19	LZ
N-butylbenzene	ND	0.9	0.225	4.5	ug/Kg		04/18/19	LZ
N-propylbenzene	ND	0.9	0.198	4.5	ug/Kg		04/18/19	LZ
o-Xylene	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
Sec-butylbenzene	ND	0.9	0.252	4.5	ug/Kg		04/18/19	LZ
Styrene	ND	0.9	0.117	4.5	ug/Kg		04/18/19	LZ
t-Butyl alcohol (TBA)	ND	0.9	7.92	9	ug/Kg		04/18/19	LZ
Tert-amylmethylether (TAME)	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
Tert-butylbenzene	ND	0.9	0.306	4.5	ug/Kg		04/18/19	LZ
Tetrachloroethene	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
Toluene	ND	0.9	0.153	4.5	ug/Kg		04/18/19	LZ
trans-1,2-dichloroethene	ND	0.9	0.171	4.5	ug/Kg		04/18/19	LZ
trans-1,3-dichloropropene	ND	0.9	0.162	4.5	ug/Kg		04/18/19	LZ
trans-1,4-dichloro-2-butene	ND	0.9	0.18	4.5	ug/Kg		04/18/19	LZ
Trichloroethene	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
Trichlorofluoromethane	ND	0.9	0.207	4.5	ug/Kg		04/18/19	LZ
Vinyl Chloride	ND	0.9	0.126	4.5	ug/Kg		04/18/19	LZ
Xylenes (Total)	ND	0.9	0.342	4.5	ug/Kg		04/18/19	LZ
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>		
1,2-Dichloroethane-d4 (SUR)		116		70-145				
4-Bromofluorobenzene (SUR)		108		70-145				
Dibromofluoromethane (SUR)		98		70-145				
Toluene-d8 (SUR)		98		70-145				

Method: EPA 8270C NELAC	Prep Method: EPA 3545						QCBatchID: QC1201027	
1,2,4-Trichlorobenzene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
1,2-Dichlorobenzene	ND	1	37	250	ug/Kg	04/18/19	04/19/19	DDo
1,3-Dichlorobenzene	ND	1	50	250	ug/Kg	04/18/19	04/19/19	DDo
1,4-Dichlorobenzene	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
1-Methylnaphthalene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2,4,5-Trichlorophenol	ND	1	43	250	ug/Kg	04/18/19	04/19/19	DDo
2,4,6-Trichlorophenol	ND	1	35	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dichlorophenol	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dimethylphenol	ND	1	100	250	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dinitrophenol	ND	1	23	1200	ug/Kg	04/18/19	04/19/19	DDo
2,4-Dinitrotoluene	ND	1	14	250	ug/Kg	04/18/19	04/19/19	DDo
2,6-Dinitrotoluene	ND	1	33	250	ug/Kg	04/18/19	04/19/19	DDo
2-Chloronaphthalene	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
2-Chlorophenol	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methyl-4,6-dinitrophenol	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methylnaphthalene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
2-Methylphenol (o-Cresol)	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
2-Nitroaniline	ND	1	31	250	ug/Kg	04/18/19	04/19/19	DDo
2-Nitrophenol	ND	1	16	250	ug/Kg	04/18/19	04/19/19	DDo
3 and 4-Methylphenol (m and p-Cresol)	ND	1	19	400	ug/Kg	04/18/19	04/19/19	DDo
3,3'-Dichlorobenzidine	ND	1	54	1200	ug/Kg	04/18/19	04/19/19	DDo
3-Nitroaniline	ND	1	37	250	ug/Kg	04/18/19	04/19/19	DDo
4-Bromophenyl phenyl ether	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
4-Chloro-3-methylphenol	ND	1	18	250	ug/Kg	04/18/19	04/19/19	DDo
4-Chloroaniline	ND	1	73	250	ug/Kg	04/18/19	04/19/19	DDo

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:23	Site:	
Sample #: <u>414424-069</u>	Client Sample #: SB-59-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
4-Chlorophenyl phenyl ether	ND	1	19	250	ug/Kg	04/18/19	04/19/19	DDo
4-Nitroaniline	ND	1	148	250	ug/Kg	04/18/19	04/19/19	DDo
4-Nitrophenol	ND	1	117	250	ug/Kg	04/18/19	04/19/19	DDo
Acenaphthene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Acenaphthylene	ND	1	20	250	ug/Kg	04/18/19	04/19/19	DDo
Aniline	ND	1	101	250	ug/Kg	04/18/19	04/19/19	DDo
Anthracene	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Azobenzene	ND	1	67	250	ug/Kg	04/18/19	04/19/19	DDo
Benz(a)anthracene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Benzidine	ND	1	23	1200	ug/Kg	04/18/19	04/19/19	DDo
Benzo(a)pyrene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(b)fluoranthene	ND	1	27	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(g,h,i)perylene	ND	1	29	250	ug/Kg	04/18/19	04/19/19	DDo
Benzo(k)fluoranthene	ND	1	32	250	ug/Kg	04/18/19	04/19/19	DDo
Benzoic acid	ND	1	36	1200	ug/Kg	04/18/19	04/19/19	DDo
Benzyl alcohol	ND	1	36	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroethoxy)methane	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroethyl) Ether	ND	1	25	1200	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-chloroisopropyl) Ether	ND	1	17	250	ug/Kg	04/18/19	04/19/19	DDo
Bis(2-ethylhexyl) phthalate	ND	1	52	250	ug/Kg	04/18/19	04/19/19	DDo
Butylbenzyl Phthalate	ND	1	44	250	ug/Kg	04/18/19	04/19/19	DDo
Carbazole	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Chrysene	ND	1	20	250	ug/Kg	04/18/19	04/19/19	DDo
Dibenz(a,h)anthracene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Dibenzofuran	ND	1	14	250	ug/Kg	04/18/19	04/19/19	DDo
Diethyl phthalate	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
Dimethyl phthalate	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Di-n-butyl phthalate	140 J	1	67	250	ug/Kg	04/18/19	04/19/19	DDo B1,J
Di-n-octyl phthalate	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Fluoranthene	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Fluorene	ND	1	27	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorobenzene	ND	1	15	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorobutadiene	ND	1	39	250	ug/Kg	04/18/19	04/19/19	DDo
Hexachlorocyclopentadiene	ND	1	14	1200	ug/Kg	04/18/19	04/19/19	DDo
Hexachloroethane	ND	1	43	250	ug/Kg	04/18/19	04/19/19	DDo
Indeno(1,2,3-cd)pyrene	ND	1	90	250	ug/Kg	04/18/19	04/19/19	DDo
Isophorone	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Naphthalene	ND	1	25	250	ug/Kg	04/18/19	04/19/19	DDo
Nitrobenzene	ND	1	21	1200	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodimethylamine (NDMA)	ND	1	34	250	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodi-n-propylamine (NDPA)	ND	1	26	250	ug/Kg	04/18/19	04/19/19	DDo
N-Nitrosodiphenylamine	ND	1	24	250	ug/Kg	04/18/19	04/19/19	DDo
Pentachlorophenol	ND	1	55	1200	ug/Kg	04/18/19	04/19/19	DDo
Phenanthrene	ND	1	22	250	ug/Kg	04/18/19	04/19/19	DDo
Phenol	ND	1	26	250	ug/Kg	04/18/19	04/19/19	DDo
Pyrene	ND	1	23	250	ug/Kg	04/18/19	04/19/19	DDo
Pyridine	ND	1	21	250	ug/Kg	04/18/19	04/19/19	DDo
Total Cresol	ND	1	400	400	ug/Kg	04/18/19	04/19/19	DDo

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 11:23	Site:	
Sample #: <u>414424-069</u>	Client Sample #: SB-59-2.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>				<u>% Recovery</u>				<u>Limits</u>
2,4,6-Tribromophenol (SUR)				81				34-143
2-Fluorobiphenyl (SUR)				78				41-125
2-Fluorophenol (SUR)				66				13-153
Nitrobenzene-d5 (SUR)				75				27-125
p-Terphenyl (SUR)				88				33-155
Phenol-d5 (SUR)				72				10-110

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:55	Site:	
Sample #: 414424-070	Client Sample #: SB-39-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201082	
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	76.0	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.27	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	19.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	7.61	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	14.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	12.1	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.33 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	13.3	1	0.2	1.5	mg/Kg	04/18/19	04/22/19	KLN
Selenium	1.04 J	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN B1,J
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	1.53 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	32.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	53.1	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201084	
Arsenic	7.98	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201080	
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/18/19	04/21/19	MTS D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/18/19	04/21/19	MTS D2
a-BHC	ND	5	8	25	ug/Kg	04/18/19	04/21/19	MTS D2
Aldrin	ND	5	7.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
b-BHC	ND	5	7.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/18/19	04/21/19	MTS D2
d-BHC	ND	5	6	25	ug/Kg	04/18/19	04/21/19	MTS D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endosulfan I	ND	5	6	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endosulfan II	ND	5	14	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endrin	ND	5	13.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/18/19	04/21/19	MTS D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/18/19	04/21/19	MTS D2
Methoxychlor	ND	5	46	50	ug/Kg	04/18/19	04/21/19	MTS D2
Toxaphene	ND	5	270	500	ug/Kg	04/18/19	04/21/19	MTS D2
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	91			50-150				
Tetrachloro-m-xylene TCMX (SUR)	78			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:15	Site:	
Sample #: 414424-071	Client Sample #: SB-43-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201083	
Antimony	1.08 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	105	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.54	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	22.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	15.6	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.82	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.31 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	17.2	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	0.45 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN J
Vanadium	34.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	43.8	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1201084	
Arsenic	6.76	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QCBatchID: QC1201093	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>				<u>Notes</u>
Decachlorobiphenyl DCB (SUR)	75			50-150				
Tetrachloro-m-xylene TCMX (SUR)	68			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 09:32	Site:	
Sample #: 414424-072	Client Sample #: SB-47-1.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201083		
Antimony	ND	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN
Barium	96.6	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.55	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	26.6	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	11.5	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	17.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	4.69	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN
Molybdenum	0.64 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	21.7	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	45.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	54.5	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B				QCBatchID: QC1201084		
Arsenic	6.38	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A <i>NELAC</i>		Prep Method: EPA 7471A				QCBatchID: QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A <i>NELAC</i>		Prep Method: EPA 3545				QCBatchID: QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>		<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	76		50-150					
Tetrachloro-m-xylene TCMX (SUR)	69		50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 08:23	Site:	
Sample #: 414424-073	Client Sample #: SB-49-1.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	QC Batch ID	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC Batch ID: QC1201083		
Antimony	0.85 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	121	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.87	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	28.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	10.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	19.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	4.15	1	0.32	1	mg/Kg	04/18/19	04/19/19	KLN	
Molybdenum	0.84 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	21.5	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	43.9	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	55.4	1	0.28	5	mg/Kg	04/18/19	04/19/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC Batch ID: QC1201084		
Arsenic	5.32	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC Batch ID: QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC Batch ID: QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	80			50-150					
Tetrachloro-m-xylene TCMX (SUR)	71			50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:38	Site:	
Sample #: 414424-074	Client Sample #: SB-53-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QC1201083		
Antimony	2.47 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	166	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.67	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	32.9	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	11.7	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	35.7	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	44.1	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	1.17	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Nickel	19.4	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	1.64 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	47.4	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	146	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311						QC1201729		
Arsenic	3020	10	3.1	20	ug/L	05/08/19	05/08/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QC1201084		
Arsenic	252	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC						QC1201705		
Arsenic	12900	100	13	200	ug/L	05/07/19	05/07/19	SBW	
Method: EPA 7471A <i>NELAC</i>	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A <i>NELAC</i>	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	5	10.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
4,4'-DDE	ND	5	10	25	ug/Kg	04/19/19	04/20/19	MTS	D2
4,4'-DDT	ND	5	10	25	ug/Kg	04/19/19	04/20/19	MTS	D2
a-BHC	ND	5	8	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Aldrin	ND	5	7.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
b-BHC	ND	5	7.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Chlordane (technical)	ND	5	175	250	ug/Kg	04/19/19	04/20/19	MTS	D2
d-BHC	ND	5	6	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Dieldrin	ND	5	10.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endosulfan I	ND	5	6	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endosulfan II	ND	5	14	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endosulfan sulfate	ND	5	17	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endrin	ND	5	13.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endrin aldehyde	ND	5	10.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Endrin Ketone	ND	5	20.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Heptachlor	ND	5	6.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Heptachlor epoxide	ND	5	11.5	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Lindane (Gamma-BHC)	ND	5	10	25	ug/Kg	04/19/19	04/20/19	MTS	D2
Methoxychlor	ND	5	46	50	ug/Kg	04/19/19	04/20/19	MTS	D2
Toxaphene	ND	5	270	500	ug/Kg	04/19/19	04/20/19	MTS	D2
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>	
Decachlorobiphenyl DCB (SUR)			104		50-150				
Tetrachloro-m-xylene TCMX (SUR)			86		50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:53	Site:	
Sample #: 414424-075	Client Sample #: SB-55-1.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201083		
Antimony	0.49 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	88.4	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.22	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	26.4	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	9.15	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	17.3	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	2.40	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.69 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	16.4	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.45 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	40.7	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	49.0	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	6.16	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	66			50-150					
Tetrachloro-m-xylene TCMX (SUR)	59			50-150					
Method: EPA 8082 NELAC	Prep Method: EPA 3545						QC1201091		
PCB-1016	ND	1	3	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1221	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1232	ND	1	9.5	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1242	ND	1	14	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1248	ND	1	19	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1254	ND	1	20	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1260	ND	1	6.9	50	ug/Kg	04/19/19	04/20/19	MTS	
PCB-1262	ND	1	17	50	ug/Kg	04/19/19	04/20/19	MTS	

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:53	Site:	
Sample #: <u>414424-075</u>	Client Sample #: SB-55-1.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1268	ND	1	8.6	50	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	60			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:56	Site:	
Sample #: <u>414424-076</u>	Client Sample #: SB-60-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QCBatchID: QC1201083	
Antimony	2.49 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN J
Barium	123	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN
Cadmium	1.08	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN
Chromium	35.8	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN
Cobalt	10.9	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN
Copper	20.8	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN
Lead	8.64	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN
Molybdenum	0.21 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN J
Nickel	20.6	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN
Vanadium	40.1	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN
Zinc	58.2	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QCBatchID: QC1201084	
Arsenic	8.06	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QCBatchID: QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QCBatchID: QC1201093	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS
Chlordane (technical)	210	1	35	50	ug/Kg	04/19/19	04/20/19	MTS
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	84			50-150				
Tetrachloro-m-xylene TCMX (SUR)	73			50-150				

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 12:56	Site:	
Sample #: 414424-077	Client Sample #: SB-60-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Analized By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201083		
Antimony	1.05 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	160	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.68	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	33.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	12.4	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	21.2	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	41.1	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	1.10	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Nickel	19.2	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	0.89 J	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	J
Vanadium	53.2	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	71.0	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084		
Arsenic	8.51	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051		
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093		
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	160	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	78			50-150					
Tetrachloro-m-xylene TCMX (SUR)	72			50-150					

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 13:05	Site:	
Sample #: 414424-078	Client Sample #: SB-60-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	QC Batch ID	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B						QC1201083	QC1201083	
Antimony	1.84 J	1	0.37	3	mg/Kg	04/18/19	04/19/19	KLN	J
Barium	129	1	0.23	1	mg/Kg	04/18/19	04/19/19	KLN	
Beryllium	ND	1	0.17	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Cadmium	1.88	1	0.21	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Chromium	28.3	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	
Cobalt	10.4	1	0.19	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Copper	20.1	1	0.31	1	mg/Kg	04/18/19	04/19/19	KLN	
Lead	3.25	1	0.32	1	mg/Kg	04/18/19	04/22/19	KLN	
Molybdenum	0.77 J	1	0.13	1	mg/Kg	04/18/19	04/19/19	KLN	J
Nickel	16.4	1	0.2	1.5	mg/Kg	04/18/19	04/19/19	KLN	
Selenium	ND	1	0.72	3	mg/Kg	04/18/19	04/19/19	KLN	
Silver	ND	1	0.13	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Thallium	ND	1	0.42	3	mg/Kg	04/18/19	04/19/19	KLN	
Vanadium	42.6	1	0.37	0.5	mg/Kg	04/18/19	04/19/19	KLN	
Zinc	51.8	1	0.28	5	mg/Kg	04/18/19	04/22/19	KLN	
Method: EPA 6020 NELAC	Prep Method: EPA 3050B						QC1201084	QC1201084	
Arsenic	5.98	1	0.108	0.3	mg/Kg	04/18/19	04/19/19	SBW	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A						QC1201051	QC1201051	
Mercury	ND	1	0.039	0.14	mg/Kg		04/23/19	JP	
Method: EPA 8081A NELAC	Prep Method: EPA 3545						QC1201093	QC1201093	
4,4'-DDD	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDE	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
4,4'-DDT	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
a-BHC	ND	1	1.6	5	ug/Kg	04/19/19	04/20/19	MTS	
Aldrin	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
b-BHC	ND	1	1.5	5	ug/Kg	04/19/19	04/20/19	MTS	
Chlordane (technical)	ND	1	35	50	ug/Kg	04/19/19	04/20/19	MTS	
d-BHC	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Dieldrin	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan I	ND	1	1.2	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan II	ND	1	2.8	5	ug/Kg	04/19/19	04/20/19	MTS	
Endosulfan sulfate	ND	1	3.4	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin	ND	1	2.7	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin aldehyde	ND	1	2.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Endrin Ketone	ND	1	4.1	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor	ND	1	1.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Heptachlor epoxide	ND	1	2.3	5	ug/Kg	04/19/19	04/20/19	MTS	
Lindane (Gamma-BHC)	ND	1	2	5	ug/Kg	04/19/19	04/20/19	MTS	
Methoxychlor	ND	1	9.2	10	ug/Kg	04/19/19	04/20/19	MTS	
Toxaphene	ND	1	54	100	ug/Kg	04/19/19	04/20/19	MTS	
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)	81			50-150					
Tetrachloro-m-xylene TCMX (SUR)	69			50-150					

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:51	Site:	
Sample #: 414424-079	Client Sample #: Equipment Blank - Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 3010A				QCBatchID: QC1201107		
Antimony	ND	1	0.014	0.04	mg/L	04/19/19	04/24/19	KLN
Barium	ND	1	0.002	0.01	mg/L	04/19/19	04/23/19	KLN
Beryllium	ND	1	0.001	0.005	mg/L	04/19/19	04/23/19	KLN
Cadmium	ND	1	0.001	0.005	mg/L	04/19/19	04/24/19	KLN
Chromium	ND	1	0.002	0.01	mg/L	04/19/19	04/23/19	KLN
Cobalt	ND	1	0.001	0.005	mg/L	04/19/19	04/23/19	KLN
Copper	0.037	1	0.004	0.01	mg/L	04/19/19	04/23/19	KLN
Lead	ND	1	0.005	0.01	mg/L	04/19/19	04/24/19	KLN
Molybdenum	ND	1	0.005	0.01	mg/L	04/19/19	04/24/19	KLN
Nickel	ND	1	0.003	0.02	mg/L	04/19/19	04/24/19	KLN
Selenium	ND	1	0.016	0.03	mg/L	04/19/19	04/24/19	KLN
Silver	ND	1	0.003	0.005	mg/L	04/19/19	04/23/19	KLN
Thallium	ND	1	0.009	0.05	mg/L	04/19/19	04/24/19	KLN
Vanadium	ND	1	0.002	0.005	mg/L	04/19/19	04/23/19	KLN
Zinc	ND	1	0.007	0.05	mg/L	04/19/19	04/24/19	KLN
Method: EPA 6020 NELAC		Prep Method: EPA 3010A				QCBatchID: QC1201118		
Arsenic	ND	1	0.31	2	ug/L	04/19/19	04/22/19	SBW
Method: EPA 7470A NELAC		Prep Method: Method				QCBatchID: QC1201220		
Mercury	ND	1	0.094	0.4	ug/L	04/23/19	04/23/19	JP
Method: EPA 8015B NELAC		Prep Method: EPA 3510C				QCBatchID: QC1201041		
TPH (C13 to C22)	ND	1	0.04	0.2	mg/L	04/18/19	04/19/19	DXN
TPH (C23 to C44)	ND	1	0.07	0.3	mg/L	04/18/19	04/19/19	DXN
TPH (C6 to C12)	ND	1	0.06	0.3	mg/L	04/18/19	04/19/19	DXN
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>			
Triacontane (SUR)		65		50-150				
Method: EPA 8081A NELAC		Prep Method: EPA 3510C				QCBatchID: QC1201088		
4,4'-DDD	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
4,4'-DDE	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
4,4'-DDT	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
a-BHC	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Aldrin	ND	1	0.007	0.1	ug/L	04/19/19	04/21/19	MTS
b-BHC	ND	1	0.003	0.1	ug/L	04/19/19	04/21/19	MTS
Chlordane (technical)	ND	1	0.27	1	ug/L	04/19/19	04/21/19	MTS
d-BHC	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
Dieldrin	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan I	ND	1	0.004	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan II	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan sulfate	ND	1	0.012	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin	ND	1	0.008	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin aldehyde	ND	1	0.009	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin Ketone	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
Heptachlor	ND	1	0.003	0.1	ug/L	04/19/19	04/21/19	MTS
Heptachlor epoxide	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Lindane (Gamma-BHC)	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Methoxychlor	ND	1	0.055	0.1	ug/L	04/19/19	04/21/19	MTS
Toxaphene	ND	1	0.48	2	ug/L	04/19/19	04/21/19	MTS
<u>Surrogate</u>		<u>% Recovery</u>		<u>Limits</u>	<u>Notes</u>			
Decachlorobiphenyl DCB (SUR)		67		50-150				
Tetrachloro-m-xylene TCMX (SUR)		62		50-150				
Method: EPA 8082 NELAC		Prep Method: EPA 3510C				QCBatchID: QC1201090		
PCB-1016	ND	1	0.058	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1221	ND	1	0.253	0.5	ug/L	04/19/19	04/20/19	MTS

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:51	Site:	
Sample #: 414424-079	Client Sample #: Equipment Blank - Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1232	ND	1	0.196	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1242	ND	1	0.169	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1248	ND	1	0.1	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1254	ND	1	0.054	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1260	ND	1	0.08	0.5	ug/L	04/19/19	04/20/19	MTS L
PCB-1262	ND	1	0.045	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1268	ND	1	0.062	0.5	ug/L	04/19/19	04/20/19	MTS

Surrogate

% Recovery

Limits

Notes

Decachlorobiphenyl DCB (SUR)

58

50-150

Method:	EPA 8260B <i>NELAC</i>	Prep Method:	EPA 5030B				QC	BatchID:	QC1201026
1,1,1,2-Tetrachloroethane		ND	1	0.25	5	ug/L		04/18/19	LZ
1,1,1-Trichloroethane		ND	1	0.38	5	ug/L		04/18/19	LZ
1,1,2,2-Tetrachloroethane		ND	1	0.25	5	ug/L		04/18/19	LZ
1,1,2-Trichloroethane		ND	1	0.25	5	ug/L		04/18/19	LZ
1,1,2-Trichlorotrifluoroethane		ND	1	0.29	5	ug/L		04/18/19	LZ
1,1-Dichloroethane		ND	1	0.32	5	ug/L		04/18/19	LZ
1,1-Dichloroethene		ND	1	0.3	5	ug/L		04/18/19	LZ
1,1-Dichloropropene		ND	1	0.25	5	ug/L		04/18/19	LZ
1,2,3-Trichlorobenzene		ND	1	0.28	5	ug/L		04/18/19	LZ
1,2,3-Trichloropropane		ND	1	0.16	5	ug/L		04/18/19	LZ
1,2,4-Trichlorobenzene		ND	1	0.27	5	ug/L		04/18/19	LZ
1,2,4-Trimethylbenzene		ND	1	0.28	5	ug/L		04/18/19	LZ
1,2-Dibromo-3-chloropropane		ND	1	0.12	5	ug/L		04/18/19	LZ
1,2-Dibromoethane		ND	1	0.19	5	ug/L		04/18/19	LZ
1,2-Dichlorobenzene		ND	1	0.26	5	ug/L		04/18/19	LZ
1,2-Dichloroethane		ND	1	0.2	5	ug/L		04/18/19	LZ
1,2-Dichloropropane		ND	1	0.36	5	ug/L		04/18/19	LZ
1,3,5-Trimethylbenzene		ND	1	0.24	5	ug/L		04/18/19	LZ
1,3-Dichlorobenzene		ND	1	0.34	5	ug/L		04/18/19	LZ
1,3-Dichloropropane		ND	1	0.19	5	ug/L		04/18/19	LZ
1,4-Dichlorobenzene		ND	1	0.43	5	ug/L		04/18/19	LZ
2,2-Dichloropropane		ND	1	0.32	5	ug/L		04/18/19	LZ
2-Butanone (MEK)		1.3 J	1	0.78	100	ug/L		04/18/19	LZ J
2-Chloroethyl Vinyl Ether		ND	1	0.23	10	ug/L		04/18/19	LZ
2-Chlorotoluene		ND	1	0.33	5	ug/L		04/18/19	LZ
4-Chlorotoluene		ND	1	0.31	5	ug/L		04/18/19	LZ
4-Isopropyltoluene		ND	1	0.32	5	ug/L		04/18/19	LZ
4-Methyl-2-pentanone (MIBK)		ND	1	0.12	5	ug/L		04/18/19	LZ
Acetone		ND	1	50	100	ug/L		04/18/19	LZ
Allyl Chloride		ND	1	0.19	5	ug/L		04/18/19	LZ
Benzene		ND	1	0.18	1	ug/L		04/18/19	LZ
Bromobenzene		ND	1	0.53	5	ug/L		04/18/19	LZ
Bromochloromethane		ND	1	0.17	5	ug/L		04/18/19	LZ
Bromodichloromethane		ND	1	0.31	5	ug/L		04/18/19	LZ
Bromoform		ND	1	0.13	5	ug/L		04/18/19	LZ
Bromomethane		ND	1	0.68	5	ug/L		04/18/19	LZ
Carbon Tetrachloride		ND	1	0.27	5	ug/L		04/18/19	LZ
Chlorobenzene		ND	1	0.19	5	ug/L		04/18/19	LZ
Chlorodibromomethane		ND	1	0.21	5	ug/L		04/18/19	LZ
Chloroethane		ND	1	0.45	5	ug/L		04/18/19	LZ
Chloroform		ND	1	0.18	5	ug/L		04/18/19	LZ
Chloromethane		ND	1	0.27	5	ug/L		04/18/19	LZ
cis-1,2-Dichloroethene		ND	1	0.27	5	ug/L		04/18/19	LZ
cis-1,3-dichloropropene		ND	1	0.25	5	ug/L		04/18/19	LZ

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:51	Site:	
Sample #: 414424-079	Client Sample #: Equipment Blank - Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
cis-1,4-dichloro-2-butene	ND	1	0.17	5	ug/L		04/18/19	LZ
Dibromomethane	ND	1	0.23	5	ug/L		04/18/19	LZ
Dichlorodifluoromethane	ND	1	0.33	5	ug/L		04/18/19	LZ
Di-isopropyl ether (DIPE)	ND	1	0.17	1	ug/L		04/18/19	LZ
Ethylbenzene	ND	1	0.21	5	ug/L		04/18/19	LZ
Ethyl-tertbutylether (ETBE)	ND	1	0.23	1	ug/L		04/18/19	LZ
Hexachlorobutadiene	ND	1	0.51	5	ug/L		04/18/19	LZ
Isopropylbenzene	ND	1	0.24	5	ug/L		04/18/19	LZ
m and p-Xylene	ND	1	0.45	5	ug/L		04/18/19	LZ
Methylene chloride	1.1 J	1	0.16	5	ug/L		04/18/19	LZ B1,J
Methyl-t-butyl Ether (MTBE)	ND	1	0.19	1	ug/L		04/18/19	LZ
Naphthalene	ND	1	0.25	5	ug/L		04/18/19	LZ
N-butylbenzene	ND	1	0.25	5	ug/L		04/18/19	LZ
N-propylbenzene	ND	1	0.31	5	ug/L		04/18/19	LZ
o-Xylene	ND	1	0.29	5	ug/L		04/18/19	LZ
Sec-butylbenzene	ND	1	0.32	5	ug/L		04/18/19	LZ
Styrene	ND	1	0.22	5	ug/L		04/18/19	LZ
t-Butyl alcohol (TBA)	ND	1	5.2	10	ug/L		04/18/19	LZ
Tert-amylmethylether (TAME)	ND	1	0.19	5	ug/L		04/18/19	LZ
Tert-butylbenzene	ND	1	0.4	5	ug/L		04/18/19	LZ
Tetrachloroethene	ND	1	0.8	5	ug/L		04/18/19	LZ
Toluene	ND	1	0.24	5	ug/L		04/18/19	LZ
trans-1,2-dichloroethene	ND	1	0.33	5	ug/L		04/18/19	LZ
trans-1,3-dichloropropene	ND	1	0.23	5	ug/L		04/18/19	LZ
trans-1,4-dichloro-2-butene	ND	1	0.17	5	ug/L		04/18/19	LZ
Trichloroethene	ND	1	0.39	5	ug/L		04/18/19	LZ
Trichlorofluoromethane	ND	1	0.25	5	ug/L		04/18/19	LZ
Vinyl Chloride	ND	1	0.18	5	ug/L		04/18/19	LZ
Xylenes (Total)	ND	1	0.45	5	ug/L		04/18/19	LZ
<u>Surrogate</u>			<u>% Recovery</u>		<u>Limits</u>			<u>Notes</u>
1,2-Dichloroethane-d4 (SUR)			108		70-145			
4-Bromofluorobenzene (SUR)			108		70-145			
Dibromofluoromethane (SUR)			115		70-145			
Toluene-d8 (SUR)			100		70-145			

Method: EPA 8270C <i>NELAC</i>	Prep Method: EPA 3510C						QCBatchID: QC1201086	
1,2,4-Trichlorobenzene	ND	0.9	1.71	9	ug/L	04/19/19	04/19/19	DDo
1,2-Dichlorobenzene	ND	0.9	1.62	9	ug/L	04/19/19	04/19/19	DDo
1,3-Dichlorobenzene	ND	0.9	1.71	9	ug/L	04/19/19	04/19/19	DDo
1,4-Dichlorobenzene	ND	0.9	1.62	9	ug/L	04/19/19	04/19/19	DDo
2,4,5-Trichlorophenol	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
2,4,6-Trichlorophenol	ND	0.9	0.504	9	ug/L	04/19/19	04/19/19	DDo
2,4-Dichlorophenol	ND	0.9	1.26	9	ug/L	04/19/19	04/19/19	DDo
2,4-Dimethylphenol	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
2,4-Dinitrophenol	ND	0.9	0.504	45	ug/L	04/19/19	04/19/19	DDo
2,4-Dinitrotoluene	ND	0.9	0.369	9	ug/L	04/19/19	04/19/19	DDo
2,6-Dinitrotoluene	ND	0.9	0.495	9	ug/L	04/19/19	04/19/19	DDo
2-Chloronaphthalene	ND	0.9	1.26	9	ug/L	04/19/19	04/19/19	DDo
2-Chlorophenol	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
2-Methyl-4,6-dinitrophenol	ND	0.9	0.351	45	ug/L	04/19/19	04/19/19	DDo
2-Methylnaphthalene	ND	0.9	1.35	9	ug/L	04/19/19	04/19/19	DDo
2-Methylphenol (o-Cresol)	ND	0.9	0.675	9	ug/L	04/19/19	04/19/19	DDo
2-Nitroaniline	ND	0.9	0.45	45	ug/L	04/19/19	04/19/19	DDo
2-Nitrophenol	ND	0.9	0.873	9	ug/L	04/19/19	04/19/19	DDo
3 and 4-Methylphenol (m and p-Cresol)	ND	0.9	0.81	9	ug/L	04/19/19	04/19/19	DDo

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:51	Site:	
Sample #: 414424-079	Client Sample #: Equipment Blank - Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
3,3'-Dichlorobenzidine	ND	0.9	0.576	22.5	ug/L	04/19/19	04/19/19	DDo
3-Nitroaniline	ND	0.9	0.495	9	ug/L	04/19/19	04/19/19	DDo
4-Bromophenyl phenyl ether	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
4-Chloro-3-methylphenol	ND	0.9	0.693	9	ug/L	04/19/19	04/19/19	DDo
4-Chloroaniline	ND	0.9	0.36	9	ug/L	04/19/19	04/19/19	DDo
4-Chlorophenyl phenyl ether	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
4-Nitroaniline	ND	0.9	0.603	9	ug/L	04/19/19	04/19/19	DDo
4-Nitrophenol	ND	0.9	0.684	9	ug/L	04/19/19	04/19/19	DDo
Acenaphthene	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Acenaphthylene	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Aniline	ND	0.9	0.738	9	ug/L	04/19/19	04/19/19	DDo
Anthracene	ND	0.9	0.855	9	ug/L	04/19/19	04/19/19	DDo
Azobenzene	ND	0.9	0.9	9	ug/L	04/19/19	04/19/19	DDo
Benz(a)anthracene	ND	0.9	0.585	9	ug/L	04/19/19	04/19/19	DDo
Benzidine	ND	0.9	1.17	45	ug/L	04/19/19	04/19/19	DDo
Benzo(a)pyrene	ND	0.9	0.612	9	ug/L	04/19/19	04/19/19	DDo
Benzo(b)fluoranthene	ND	0.9	0.522	9	ug/L	04/19/19	04/19/19	DDo
Benzo(g,h,i)perylene	ND	0.9	0.864	9	ug/L	04/19/19	04/19/19	DDo
Benzo(k)fluoranthene	ND	0.9	0.711	9	ug/L	04/19/19	04/19/19	DDo
Benzoic acid	ND	0.9	0.333	45	ug/L	04/19/19	04/19/19	DDo
Benzyl alcohol	ND	0.9	7.2	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroethoxy)methane	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroethyl) Ether	ND	0.9	1.17	22.5	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroisopropyl) Ether	ND	0.9	1.17	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-ethylhexyl) phthalate	ND	0.9	0.891	9	ug/L	04/19/19	04/19/19	DDo
Butylbenzyl Phthalate	ND	0.9	0.774	9	ug/L	04/19/19	04/19/19	DDo
Carbazole	ND	0.9	0.63	9	ug/L	04/19/19	04/19/19	DDo
Chrysene	ND	0.9	0.657	9	ug/L	04/19/19	04/19/19	DDo
Dibenz(a,h)anthracene	ND	0.9	0.72	9	ug/L	04/19/19	04/19/19	DDo
Dibenzofuran	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
Diethyl phthalate	ND	0.9	0.63	9	ug/L	04/19/19	04/19/19	DDo
Dimethyl phthalate	ND	0.9	0.747	9	ug/L	04/19/19	04/19/19	DDo
Di-n-butyl phthalate	3.9 J	0.9	0.819	9	ug/L	04/19/19	04/19/19	DDo B1,J
Di-n-octyl phthalate	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
Fluoranthene	ND	0.9	0.684	9	ug/L	04/19/19	04/19/19	DDo
Fluorene	ND	0.9	0.9	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorobenzene	ND	0.9	0.756	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorobutadiene	ND	0.9	1.89	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorocyclopentadiene	ND	0.9	1.71	22.5	ug/L	04/19/19	04/19/19	DDo
Hexachloroethane	ND	0.9	1.8	9	ug/L	04/19/19	04/19/19	DDo
Indeno(1,2,3-cd)pyrene	ND	0.9	0.783	9	ug/L	04/19/19	04/19/19	DDo
Isophorone	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Naphthalene	ND	0.9	1.17	9	ug/L	04/19/19	04/19/19	DDo
Nitrobenzene	ND	0.9	1.08	22.5	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodimethylamine (NDMA)	ND	0.9	0.216	9	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodi-n-propylamine (NDPA)	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodiphenylamine	ND	0.9	0.891	9	ug/L	04/19/19	04/19/19	DDo
Pentachlorophenol	ND	0.9	1.17	22.5	ug/L	04/19/19	04/19/19	DDo
Phenanthrene	ND	0.9	0.729	9	ug/L	04/19/19	04/19/19	DDo
Phenol	ND	0.9	0.342	9	ug/L	04/19/19	04/19/19	DDo
Pyrene	ND	0.9	0.801	9	ug/L	04/19/19	04/19/19	DDo
Pyridine	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/16/2019 15:51	Site:	
Sample #: <u>414424-079</u>	Client Sample #: Equipment Blank - Day 1	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>								<u>Notes</u>
2,4,6-Tribromophenol (SUR)		54		39-137				
2-Fluorobiphenyl (SUR)		49		37-102				
2-Fluorophenol (SUR)		29		23-76				
Nitrobenzene-d5 (SUR)		50		30-115				
p-Terphenyl (SUR)		69		61-121				
Phenol-d5 (SUR)		18		17-56				

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 12:16	Site:	
Sample #: 414424-080	Client Sample #: Equipment Blank - Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	QC Batch ID	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3010A						QC1201107	
Antimony	ND	1	0.014	0.04	mg/L	04/19/19	04/24/19	KLN
Barium	ND	1	0.002	0.01	mg/L	04/19/19	04/23/19	KLN
Beryllium	ND	1	0.001	0.005	mg/L	04/19/19	04/23/19	KLN
Cadmium	ND	1	0.001	0.005	mg/L	04/19/19	04/24/19	KLN
Chromium	ND	1	0.002	0.01	mg/L	04/19/19	04/23/19	KLN
Cobalt	ND	1	0.001	0.005	mg/L	04/19/19	04/23/19	KLN
Copper	0.032	1	0.004	0.01	mg/L	04/19/19	04/23/19	KLN
Lead	ND	1	0.005	0.01	mg/L	04/19/19	04/24/19	KLN
Molybdenum	ND	1	0.005	0.01	mg/L	04/19/19	04/24/19	KLN
Nickel	ND	1	0.003	0.02	mg/L	04/19/19	04/24/19	KLN
Selenium	ND	1	0.016	0.03	mg/L	04/19/19	04/24/19	KLN
Silver	ND	1	0.003	0.005	mg/L	04/19/19	04/23/19	KLN
Thallium	ND	1	0.009	0.05	mg/L	04/19/19	04/24/19	KLN
Vanadium	ND	1	0.002	0.005	mg/L	04/19/19	04/23/19	KLN
Zinc	ND	1	0.007	0.05	mg/L	04/19/19	04/24/19	KLN
Method: EPA 6020 NELAC	Prep Method: EPA 3010A						QC1201118	
Arsenic	ND	1	0.31	2	ug/L	04/19/19	04/22/19	SBW
Method: EPA 7470A NELAC	Prep Method: Method						QC1201220	
Mercury	ND	1	0.094	0.4	ug/L	04/23/19	04/23/19	JP
Method: EPA 8015B NELAC	Prep Method: EPA 3510C						QC1201041	
TPH (C13 to C22)	ND	1	0.04	0.2	mg/L	04/18/19	04/19/19	DXN
TPH (C23 to C44)	ND	1	0.07	0.3	mg/L	04/18/19	04/19/19	DXN
TPH (C6 to C12)	ND	1	0.06	0.3	mg/L	04/18/19	04/19/19	DXN
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Triacontane (SUR)	74			50-150				
Method: EPA 8081A NELAC	Prep Method: EPA 3510C						QC1201088	
4,4'-DDD	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
4,4'-DDE	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
4,4'-DDT	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
a-BHC	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Aldrin	ND	1	0.007	0.1	ug/L	04/19/19	04/21/19	MTS
b-BHC	ND	1	0.003	0.1	ug/L	04/19/19	04/21/19	MTS
Chlordane (technical)	ND	1	0.27	1	ug/L	04/19/19	04/21/19	MTS
d-BHC	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
Dieldrin	ND	1	0.006	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan I	ND	1	0.004	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan II	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
Endosulfan sulfate	ND	1	0.012	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin	ND	1	0.008	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin aldehyde	ND	1	0.009	0.1	ug/L	04/19/19	04/21/19	MTS
Endrin Ketone	ND	1	0.011	0.1	ug/L	04/19/19	04/21/19	MTS
Heptachlor	ND	1	0.003	0.1	ug/L	04/19/19	04/21/19	MTS
Heptachlor epoxide	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Lindane (Gamma-BHC)	ND	1	0.002	0.1	ug/L	04/19/19	04/21/19	MTS
Methoxychlor	ND	1	0.055	0.1	ug/L	04/19/19	04/21/19	MTS
Toxaphene	ND	1	0.48	2	ug/L	04/19/19	04/21/19	MTS
<u>Surrogate</u>	<u>% Recovery</u>			<u>Limits</u>		<u>Notes</u>		
Decachlorobiphenyl DCB (SUR)	70			50-150				
Tetrachloro-m-xylene TCMX (SUR)	60			50-150				
Method: EPA 8082 NELAC	Prep Method: EPA 3510C						QC1201090	
PCB-1016	ND	1	0.058	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1221	ND	1	0.253	0.5	ug/L	04/19/19	04/20/19	MTS

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 12:16	Site:	
Sample #: 414424-080	Client Sample #: Equipment Blank - Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
PCB-1232	ND	1	0.196	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1242	ND	1	0.169	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1248	ND	1	0.1	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1254	ND	1	0.054	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1260	ND	1	0.08	0.5	ug/L	04/19/19	04/20/19	MTS L
PCB-1262	ND	1	0.045	0.5	ug/L	04/19/19	04/20/19	MTS
PCB-1268	ND	1	0.062	0.5	ug/L	04/19/19	04/20/19	MTS

Surrogate

% Recovery

Limits

Notes

Decachlorobiphenyl DCB (SUR)

61

50-150

Method: EPA 8260B NELAC	Prep Method: EPA 5030B					QCBatchID: QC1201026	
1,1,1,2-Tetrachloroethane	ND	1	0.25	5	ug/L	04/18/19	LZ
1,1,1-Trichloroethane	ND	1	0.38	5	ug/L	04/18/19	LZ
1,1,2,2-Tetrachloroethane	ND	1	0.25	5	ug/L	04/18/19	LZ
1,1,2-Trichloroethane	ND	1	0.25	5	ug/L	04/18/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	0.29	5	ug/L	04/18/19	LZ
1,1-Dichloroethane	ND	1	0.32	5	ug/L	04/18/19	LZ
1,1-Dichloroethene	ND	1	0.3	5	ug/L	04/18/19	LZ
1,1-Dichloropropene	ND	1	0.25	5	ug/L	04/18/19	LZ
1,2,3-Trichlorobenzene	ND	1	0.28	5	ug/L	04/18/19	LZ
1,2,3-Trichloropropane	ND	1	0.16	5	ug/L	04/18/19	LZ
1,2,4-Trichlorobenzene	ND	1	0.27	5	ug/L	04/18/19	LZ
1,2,4-Trimethylbenzene	ND	1	0.28	5	ug/L	04/18/19	LZ
1,2-Dibromo-3-chloropropane	ND	1	0.12	5	ug/L	04/18/19	LZ
1,2-Dibromoethane	ND	1	0.19	5	ug/L	04/18/19	LZ
1,2-Dichlorobenzene	ND	1	0.26	5	ug/L	04/18/19	LZ
1,2-Dichloroethane	ND	1	0.2	5	ug/L	04/18/19	LZ
1,2-Dichloropropane	ND	1	0.36	5	ug/L	04/18/19	LZ
1,3,5-Trimethylbenzene	ND	1	0.24	5	ug/L	04/18/19	LZ
1,3-Dichlorobenzene	ND	1	0.34	5	ug/L	04/18/19	LZ
1,3-Dichloropropane	ND	1	0.19	5	ug/L	04/18/19	LZ
1,4-Dichlorobenzene	ND	1	0.43	5	ug/L	04/18/19	LZ
2,2-Dichloropropane	ND	1	0.32	5	ug/L	04/18/19	LZ
2-Butanone (MEK)	ND	1	0.78	100	ug/L	04/18/19	LZ
2-Chloroethyl Vinyl Ether	ND	1	0.23	10	ug/L	04/18/19	LZ
2-Chlorotoluene	ND	1	0.33	5	ug/L	04/18/19	LZ
4-Chlorotoluene	ND	1	0.31	5	ug/L	04/18/19	LZ
4-Isopropyltoluene	ND	1	0.32	5	ug/L	04/18/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	1	0.12	5	ug/L	04/18/19	LZ
Acetone	ND	1	50	100	ug/L	04/18/19	LZ
Allyl Chloride	ND	1	0.19	5	ug/L	04/18/19	LZ
Benzene	ND	1	0.18	1	ug/L	04/18/19	LZ
Bromobenzene	ND	1	0.53	5	ug/L	04/18/19	LZ
Bromochloromethane	ND	1	0.17	5	ug/L	04/18/19	LZ
Bromodichloromethane	ND	1	0.31	5	ug/L	04/18/19	LZ
Bromoform	ND	1	0.13	5	ug/L	04/18/19	LZ
Bromomethane	ND	1	0.68	5	ug/L	04/18/19	LZ
Carbon Tetrachloride	ND	1	0.27	5	ug/L	04/18/19	LZ
Chlorobenzene	ND	1	0.19	5	ug/L	04/18/19	LZ
Chlorodibromomethane	ND	1	0.21	5	ug/L	04/18/19	LZ
Chloroethane	ND	1	0.45	5	ug/L	04/18/19	LZ
Chloroform	ND	1	0.18	5	ug/L	04/18/19	LZ
Chloromethane	ND	1	0.27	5	ug/L	04/18/19	LZ
cis-1,2-Dichloroethene	ND	1	0.27	5	ug/L	04/18/19	LZ
cis-1,3-dichloropropene	ND	1	0.25	5	ug/L	04/18/19	LZ

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 12:16	Site:	
Sample #: 414424-080	Client Sample #: Equipment Blank - Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
cis-1,4-dichloro-2-butene	ND	1	0.17	5	ug/L		04/18/19	LZ
Dibromomethane	ND	1	0.23	5	ug/L		04/18/19	LZ
Dichlorodifluoromethane	ND	1	0.33	5	ug/L		04/18/19	LZ
Di-isopropyl ether (DIPE)	ND	1	0.17	1	ug/L		04/18/19	LZ
Ethylbenzene	ND	1	0.21	5	ug/L		04/18/19	LZ
Ethyl-tertbutylether (ETBE)	ND	1	0.23	1	ug/L		04/18/19	LZ
Hexachlorobutadiene	ND	1	0.51	5	ug/L		04/18/19	LZ
Isopropylbenzene	ND	1	0.24	5	ug/L		04/18/19	LZ
m and p-Xylene	ND	1	0.45	5	ug/L		04/18/19	LZ
Methylene chloride	1.3 J	1	0.16	5	ug/L		04/18/19	LZ B1,J
Methyl-t-butyl Ether (MTBE)	ND	1	0.19	1	ug/L		04/18/19	LZ
Naphthalene	ND	1	0.25	5	ug/L		04/18/19	LZ
N-butylbenzene	ND	1	0.25	5	ug/L		04/18/19	LZ
N-propylbenzene	ND	1	0.31	5	ug/L		04/18/19	LZ
o-Xylene	ND	1	0.29	5	ug/L		04/18/19	LZ
Sec-butylbenzene	ND	1	0.32	5	ug/L		04/18/19	LZ
Styrene	ND	1	0.22	5	ug/L		04/18/19	LZ
t-Butyl alcohol (TBA)	ND	1	5.2	10	ug/L		04/18/19	LZ
Tert-amylmethylether (TAME)	ND	1	0.19	5	ug/L		04/18/19	LZ
Tert-butylbenzene	ND	1	0.4	5	ug/L		04/18/19	LZ
Tetrachloroethene	ND	1	0.8	5	ug/L		04/18/19	LZ
Toluene	ND	1	0.24	5	ug/L		04/18/19	LZ
trans-1,2-dichloroethene	ND	1	0.33	5	ug/L		04/18/19	LZ
trans-1,3-dichloropropene	ND	1	0.23	5	ug/L		04/18/19	LZ
trans-1,4-dichloro-2-butene	ND	1	0.17	5	ug/L		04/18/19	LZ
Trichloroethene	ND	1	0.39	5	ug/L		04/18/19	LZ
Trichlorofluoromethane	ND	1	0.25	5	ug/L		04/18/19	LZ
Vinyl Chloride	ND	1	0.18	5	ug/L		04/18/19	LZ
Xylenes (Total)	ND	1	0.45	5	ug/L		04/18/19	LZ

<u>Surrogate</u>	<u>% Recovery</u>	<u>Limits</u>	<u>Notes</u>
1,2-Dichloroethane-d4 (SUR)	124	70-145	
4-Bromofluorobenzene (SUR)	107	70-145	
Dibromofluoromethane (SUR)	113	70-145	
Toluene-d8 (SUR)	100	70-145	

Method: EPA 8270C NELAC	Prep Method: EPA 3510C	QC Batch ID: QC1201086
1,2,4-Trichlorobenzene	ND	0.9 1.71 9 ug/L 04/19/19 04/19/19 DDo
1,2-Dichlorobenzene	ND	0.9 1.62 9 ug/L 04/19/19 04/19/19 DDo
1,3-Dichlorobenzene	ND	0.9 1.71 9 ug/L 04/19/19 04/19/19 DDo
1,4-Dichlorobenzene	ND	0.9 1.62 9 ug/L 04/19/19 04/19/19 DDo
2,4,5-Trichlorophenol	ND	0.9 0.99 9 ug/L 04/19/19 04/19/19 DDo
2,4,6-Trichlorophenol	ND	0.9 0.504 9 ug/L 04/19/19 04/19/19 DDo
2,4-Dichlorophenol	ND	0.9 1.26 9 ug/L 04/19/19 04/19/19 DDo
2,4-Dimethylphenol	ND	0.9 1.08 9 ug/L 04/19/19 04/19/19 DDo
2,4-Dinitrophenol	ND	0.9 0.504 45 ug/L 04/19/19 04/19/19 DDo
2,4-Dinitrotoluene	ND	0.9 0.369 9 ug/L 04/19/19 04/19/19 DDo
2,6-Dinitrotoluene	ND	0.9 0.495 9 ug/L 04/19/19 04/19/19 DDo
2-Chloronaphthalene	ND	0.9 1.26 9 ug/L 04/19/19 04/19/19 DDo
2-Chlorophenol	ND	0.9 0.99 9 ug/L 04/19/19 04/19/19 DDo
2-Methyl-4,6-dinitrophenol	ND	0.9 0.351 45 ug/L 04/19/19 04/19/19 DDo
2-Methylnaphthalene	ND	0.9 1.35 9 ug/L 04/19/19 04/19/19 DDo
2-Methylphenol (o-Cresol)	ND	0.9 0.675 9 ug/L 04/19/19 04/19/19 DDo
2-Nitroaniline	ND	0.9 0.45 45 ug/L 04/19/19 04/19/19 DDo
2-Nitrophenol	ND	0.9 0.873 9 ug/L 04/19/19 04/19/19 DDo
3 and 4-Methylphenol (m and p-Cresol)	ND	0.9 0.81 9 ug/L 04/19/19 04/19/19 DDo

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 12:16	Site:	
Sample #: 414424-080	Client Sample #: Equipment Blank - Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
3,3'-Dichlorobenzidine	ND	0.9	0.576	22.5	ug/L	04/19/19	04/19/19	DDo
3-Nitroaniline	ND	0.9	0.495	9	ug/L	04/19/19	04/19/19	DDo
4-Bromophenyl phenyl ether	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
4-Chloro-3-methylphenol	ND	0.9	0.693	9	ug/L	04/19/19	04/19/19	DDo
4-Chloroaniline	ND	0.9	0.36	9	ug/L	04/19/19	04/19/19	DDo
4-Chlorophenyl phenyl ether	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
4-Nitroaniline	ND	0.9	0.603	9	ug/L	04/19/19	04/19/19	DDo
4-Nitrophenol	ND	0.9	0.684	9	ug/L	04/19/19	04/19/19	DDo
Acenaphthene	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Acenaphthylene	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Aniline	ND	0.9	0.738	9	ug/L	04/19/19	04/19/19	DDo
Anthracene	ND	0.9	0.855	9	ug/L	04/19/19	04/19/19	DDo
Azobenzene	ND	0.9	0.9	9	ug/L	04/19/19	04/19/19	DDo
Benz(a)anthracene	ND	0.9	0.585	9	ug/L	04/19/19	04/19/19	DDo
Benzidine	ND	0.9	1.17	45	ug/L	04/19/19	04/19/19	DDo
Benzo(a)pyrene	ND	0.9	0.612	9	ug/L	04/19/19	04/19/19	DDo
Benzo(b)fluoranthene	ND	0.9	0.522	9	ug/L	04/19/19	04/19/19	DDo
Benzo(g,h,i)perylene	ND	0.9	0.864	9	ug/L	04/19/19	04/19/19	DDo
Benzo(k)fluoranthene	ND	0.9	0.711	9	ug/L	04/19/19	04/19/19	DDo
Benzoic acid	ND	0.9	0.333	45	ug/L	04/19/19	04/19/19	DDo
Benzyl alcohol	ND	0.9	7.2	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroethoxy)methane	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroethyl) Ether	ND	0.9	1.17	22.5	ug/L	04/19/19	04/19/19	DDo
Bis(2-chloroisopropyl) Ether	ND	0.9	1.17	9	ug/L	04/19/19	04/19/19	DDo
Bis(2-ethylhexyl) phthalate	ND	0.9	0.891	9	ug/L	04/19/19	04/19/19	DDo
Butylbenzyl Phthalate	ND	0.9	0.774	9	ug/L	04/19/19	04/19/19	DDo
Carbazole	ND	0.9	0.63	9	ug/L	04/19/19	04/19/19	DDo
Chrysene	ND	0.9	0.657	9	ug/L	04/19/19	04/19/19	DDo
Dibenz(a,h)anthracene	ND	0.9	0.72	9	ug/L	04/19/19	04/19/19	DDo
Dibenzofuran	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
Diethyl phthalate	ND	0.9	0.63	9	ug/L	04/19/19	04/19/19	DDo
Dimethyl phthalate	ND	0.9	0.747	9	ug/L	04/19/19	04/19/19	DDo
Di-n-butyl phthalate	3.6 J	0.9	0.819	9	ug/L	04/19/19	04/19/19	DDo B1,J
Di-n-octyl phthalate	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
Fluoranthene	ND	0.9	0.684	9	ug/L	04/19/19	04/19/19	DDo
Fluorene	ND	0.9	0.9	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorobenzene	ND	0.9	0.756	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorobutadiene	ND	0.9	1.89	9	ug/L	04/19/19	04/19/19	DDo
Hexachlorocyclopentadiene	ND	0.9	1.71	22.5	ug/L	04/19/19	04/19/19	DDo
Hexachloroethane	ND	0.9	1.8	9	ug/L	04/19/19	04/19/19	DDo
Indeno(1,2,3-cd)pyrene	ND	0.9	0.783	9	ug/L	04/19/19	04/19/19	DDo
Isophorone	ND	0.9	1.08	9	ug/L	04/19/19	04/19/19	DDo
Naphthalene	ND	0.9	1.17	9	ug/L	04/19/19	04/19/19	DDo
Nitrobenzene	ND	0.9	1.08	22.5	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodimethylamine (NDMA)	ND	0.9	0.216	9	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodi-n-propylamine (NDPA)	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo
N-Nitrosodiphenylamine	ND	0.9	0.891	9	ug/L	04/19/19	04/19/19	DDo
Pentachlorophenol	ND	0.9	1.17	22.5	ug/L	04/19/19	04/19/19	DDo
Phenanthrene	ND	0.9	0.729	9	ug/L	04/19/19	04/19/19	DDo
Phenol	ND	0.9	0.342	9	ug/L	04/19/19	04/19/19	DDo
Pyrene	ND	0.9	0.801	9	ug/L	04/19/19	04/19/19	DDo
Pyridine	ND	0.9	0.99	9	ug/L	04/19/19	04/19/19	DDo

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 04/17/2019 12:16	Site:	
Sample #: <u>414424-080</u>	Client Sample #: Equipment Blank - Day 2	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
<u>Surrogate</u>								<u>Notes</u>
2,4,6-Tribromophenol (SUR)		58		39-137				
2-Fluorobiphenyl (SUR)		58		37-102				
2-Fluorophenol (SUR)		32		23-76				
Nitrobenzene-d5 (SUR)		57		30-115				
p-Terphenyl (SUR)		76		61-121				
Phenol-d5 (SUR)		19		17-56				

QCBatchID: <u>QC1200658</u>	Analyst: TWu	Method: EPA 8015B
Matrix: Solid	Analyzed: 04/18/2019	Instrument: VOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1200658MB1						
TPH (C6 to C12)	ND	mg/Kg	0.239	3		
TPH Gasoline	ND	mg/Kg	0.239	3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1200658LCS1, QC1200658LCSD1											
TPH (C6 to C12)	5	5	5.3	5.6	mg/Kg	106	112	6	70-130	20	
TPH Gasoline	5	5	5.5	5.7	mg/Kg	110	114	4	70-130	20	

QCBatchID: QC1201001

Analyst: TWu

Method: EPA 8260B

Matrix: Solid

Analyzed: 04/17/2019

Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201001MB1					
1,1,1,2-Tetrachloroethane	ND	ug/Kg	0.24	5	
1,1,1-Trichloroethane	ND	ug/Kg	0.15	5	
1,1,2,2-Tetrachloroethane	ND	ug/Kg	0.29	5	
1,1,2-Trichloroethane	ND	ug/Kg	0.22	5	
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg	0.74	5	
1,1-Dichloroethane	ND	ug/Kg	0.23	5	
1,1-Dichloroethene	ND	ug/Kg	0.18	5	
1,1-Dichloropropene	ND	ug/Kg	0.21	5	
1,2,3-Trichlorobenzene	ND	ug/Kg	0.18	5	
1,2,3-Trichloropropane	ND	ug/Kg	0.2	5	
1,2,4-Trichlorobenzene	ND	ug/Kg	0.33	5	
1,2,4-Trimethylbenzene	ND	ug/Kg	0.28	5	
1,2-Dibromo-3-chloropropane	ND	ug/Kg	0.2	5	
1,2-Dibromoethane	ND	ug/Kg	0.12	5	
1,2-Dichlorobenzene	ND	ug/Kg	0.18	5	
1,2-Dichloroethane	ND	ug/Kg	0.14	5	
1,2-Dichloropropane	ND	ug/Kg	0.34	5	
1,3,5-Trimethylbenzene	ND	ug/Kg	0.23	5	
1,3-Dichlorobenzene	ND	ug/Kg	0.21	5	
1,3-Dichloropropane	ND	ug/Kg	0.19	5	
1,4-Dichlorobenzene	ND	ug/Kg	0.24	5	
2,2-Dichloropropane	ND	ug/Kg	0.19	5	
2-Butanone (MEK)	ND	ug/Kg	0.72	100	
2-Chloroethyl Vinyl Ether	ND	ug/Kg	0.3	5	
2-Chlorotoluene	ND	ug/Kg	0.25	5	
4-Chlorotoluene	ND	ug/Kg	0.22	5	
4-Isopropyltoluene	ND	ug/Kg	0.27	5	
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg	0.17	5	
Acetone	ND	ug/Kg	50	100	
Allyl Chloride	ND	ug/Kg	0.14	5	
Benzene	ND	ug/Kg	0.18	5	
Bromobenzene	ND	ug/Kg	0.3	5	
Bromochloromethane	ND	ug/Kg	0.18	5	
Bromodichloromethane	ND	ug/Kg	0.2	5	
Bromoform	ND	ug/Kg	0.19	5	
Bromomethane	ND	ug/Kg	0.22	5	
Carbon Tetrachloride	ND	ug/Kg	0.18	5	
Chlorobenzene	ND	ug/Kg	0.18	5	
Chlorodibromomethane	ND	ug/Kg	0.19	5	
Chloroethane	ND	ug/Kg	0.2	5	
Chloroform	ND	ug/Kg	0.17	5	
Chloromethane	ND	ug/Kg	0.21	5	
cis-1,2-Dichloroethene	ND	ug/Kg	0.2	5	
cis-1,3-dichloropropene	ND	ug/Kg	0.2	5	
cis-1,4-dichloro-2-butene	ND	ug/Kg	0.2	5	
Dibromomethane	ND	ug/Kg	0.23	5	
Dichlorodifluoromethane	ND	ug/Kg	0.23	5	
Di-isopropyl ether (DIPE)	ND	ug/Kg	0.21	5	
Ethylbenzene	ND	ug/Kg	0.25	5	
Ethyl-tertbutylether (ETBE)	ND	ug/Kg	0.42	5	
Hexachlorobutadiene	ND	ug/Kg	0.38	5	
Isopropylbenzene	ND	ug/Kg	0.17	5	

QCBatchID: QC1201001	Analyst: TWu	Method: EPA 8260B
Matrix: Solid	Analyzed: 04/17/2019	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201001MB1					
m and p-Xylene	ND	ug/Kg	0.21	5	
Methylene chloride	0.49 J	ug/Kg	0.22	5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg	0.25	5	
Naphthalene	ND	ug/Kg	0.28	5	
N-butylbenzene	ND	ug/Kg	0.16	5	
N-propylbenzene	ND	ug/Kg	0.19	5	
o-Xylene	ND	ug/Kg	0.13	5	
Sec-butylbenzene	ND	ug/Kg	0.34	5	
Styrene	ND	ug/Kg	0.23	5	
t-Butyl alcohol (TBA)	ND	ug/Kg	8.8	10	
Tert-amylmethylether (TAME)	ND	ug/Kg	0.19	5	
Tert-butylbenzene	ND	ug/Kg	0.18	5	
Tetrachloroethene	ND	ug/Kg	0.2	5	
Toluene	ND	ug/Kg	0.23	5	
trans-1,2-dichloroethene	ND	ug/Kg	0.23	5	
trans-1,3-dichloropropene	ND	ug/Kg	0.14	5	
trans-1,4-dichloro-2-butene	ND	ug/Kg	0.38	5	
Trichloroethene	ND	ug/Kg	0.39	5	
Trichlorofluoromethane	ND	ug/Kg	0.25	5	
Vinyl Chloride	ND	ug/Kg	0.18	5	
Xylenes (Total)	ND	ug/Kg	0.45	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201001LCS1											
1,1-Dichloroethene	50		47		ug/Kg	94			59-172		
Benzene	50		49		ug/Kg	98			62-137		
Chlorobenzene	50		46		ug/Kg	92			60-133		
Methyl-t-butyl Ether (MTBE)	50		48		ug/Kg	96			62-137		
Toluene	50		48		ug/Kg	96			59-139		
Trichloroethene	50		49		ug/Kg	98			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201001MS1, QC1201001MSD1												Source: 414416-012
1,1-Dichloroethene	ND	50	50	48	48	ug/Kg	96	96	0.0	59-172	22	
Benzene	ND	50	50	50	49	ug/Kg	100	98	2.0	62-137	24	
Chlorobenzene	ND	50	50	48	45	ug/Kg	96	90	6.5	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	54	51	ug/Kg	108	102	5.7	62-137	21	
Toluene	ND	50	50	49	47	ug/Kg	98	94	4.2	59-139	21	
Trichloroethene	ND	50	50	50	49	ug/Kg	100	98	2.0	66-142	21	

Source: 414416-012

QCBatchID: QC1201024	Analyst: bmorris	Method: EPA 8081A
Matrix: Solid	Analyzed: 01/01/1900	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201024MB1						
4,4'-DDD	ND	ug/Kg	2.1	5		
4,4'-DDE	ND	ug/Kg	2	5		
4,4'-DDT	ND	ug/Kg	2	5		
a-BHC	ND	ug/Kg	1.6	5		
Aldrin	ND	ug/Kg	1.5	5		
b-BHC	ND	ug/Kg	1.5	5		
Chlordane (technical)	ND	ug/Kg	35	50		
d-BHC	ND	ug/Kg	1.2	5		
Dieldrin	ND	ug/Kg	2.1	5		
Endosulfan I	ND	ug/Kg	1.2	5		
Endosulfan II	ND	ug/Kg	2.8	5		
Endosulfan sulfate	ND	ug/Kg	3.4	5		
Endrin	ND	ug/Kg	2.7	5		
Endrin aldehyde	ND	ug/Kg	2.1	5		
Endrin Ketone	ND	ug/Kg	4.1	5		
Heptachlor	ND	ug/Kg	1.3	5		
Heptachlor epoxide	ND	ug/Kg	2.3	5		
Lindane (Gamma-BHC)	ND	ug/Kg	2	5		
Methoxychlor	ND	ug/Kg	9.2	10		
Toxaphene	ND	ug/Kg	54	100		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201024LCS1											
4,4'-DDD	50		45		ug/Kg	90			43-172		
4,4'-DDE	50		43		ug/Kg	86			44-163		
4,4'-DDT	50		33		ug/Kg	66			40-158		
a-BHC	50		39		ug/Kg	78			45-150		
Aldrin	50		37		ug/Kg	74			46-142		
b-BHC	50		40		ug/Kg	80			42-156		
d-BHC	50		28		ug/Kg	56			37-161		
Dieldrin	50		40		ug/Kg	80			47-151		
Endosulfan I	50		39		ug/Kg	78			47-141		
Endosulfan II	50		41		ug/Kg	82			44-156		
Endosulfan sulfate	50		35		ug/Kg	70			43-157		
Endrin	50		43		ug/Kg	86			47-160		
Endrin aldehyde	50		17		ug/Kg	34			32-127		
Endrin Ketone	50		41		ug/Kg	82			48-159		
Heptachlor	50		40		ug/Kg	80			50-144		
Heptachlor epoxide	50		40		ug/Kg	80			48-145		
Lindane (Gamma-BHC)	50		39		ug/Kg	78			47-151		
Methoxychlor	50		40		ug/Kg	80			36-182		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1201024MS1, QC1201024MSD1											Source: 414404-010	
4,4'-DDD	ND	50	50	41	36	ug/Kg	82	72	13.0	43-172	20	
4,4'-DDE	ND	50	50	41	36	ug/Kg	82	72	13.0	44-163	20	
4,4'-DDT	ND	50	50	44	41	ug/Kg	88	82	7.1	40-158	20	
a-BHC	ND	50	50	36	32	ug/Kg	72	64	11.8	45-150	20	

QCBatchID: QC1201024	Analyst: bmorris	Method: EPA 8081A
Matrix: Solid	Analyzed: 01/01/1900	Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201024MS1, QC1201024MSD1											Source: 414404-010	
Aldrin	ND	50	50	40	39	ug/Kg	80	78	2.5	46-142	20	
b-BHC	ND	50	50	39	36	ug/Kg	78	72	8.0	42-156	20	
d-BHC	ND	50	50	30	27	ug/Kg	60	54	10.5	37-161	20	
Dieldrin	ND	50	50	37	33	ug/Kg	74	66	11.4	47-151	20	
Endosulfan I	ND	50	50	37	33	ug/Kg	74	66	11.4	47-141	20	
Endosulfan II	ND	50	50	40	36	ug/Kg	80	72	10.5	44-156	20	
Endosulfan sulfate	ND	50	50	40	37	ug/Kg	80	74	7.8	43-157	20	
Endrin	ND	50	50	42	37	ug/Kg	84	74	12.7	47-160	20	
Endrin aldehyde	ND	50	50	37	33	ug/Kg	74	66	11.4	32-127	20	
Endrin Ketone	ND	50	50	43	39	ug/Kg	86	78	9.8	48-159	20	
Heptachlor	ND	50	50	37	33	ug/Kg	74	66	11.4	50-144	20	
Heptachlor epoxide	ND	50	50	38	34	ug/Kg	76	68	11.1	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	37	33	ug/Kg	74	66	11.4	47-151	20	
Methoxychlor	ND	50	50	46	41	ug/Kg	92	82	11.5	36-182	20	

QCBatchID: QC1201025	Analyst: bmorris	Method: EPA 8082
Matrix: Solid	Analyzed: 01/01/1900	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201025MB1						
PCB-1016	ND	ug/Kg	3	50		
PCB-1221	ND	ug/Kg	14	50		
PCB-1232	ND	ug/Kg	9.5	50		
PCB-1242	ND	ug/Kg	14	50		
PCB-1248	ND	ug/Kg	19	50		
PCB-1254	ND	ug/Kg	20	50		
PCB-1260	ND	ug/Kg	6.9	50		
PCB-1262	ND	ug/Kg	17	50		
PCB-1268	ND	ug/Kg	8.6	50		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201025LCS1											
PCB-1016	500		410		ug/Kg	82			70-130		
PCB-1260	500		420		ug/Kg	84			70-130		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201025MS1, QC1201025MSD1											Source: 414404-010	
PCB-1016	ND	500	500	380	330	ug/Kg	76	66	14.1	70-130	20	M
PCB-1260	ND	500	500	370	320	ug/Kg	74	64	14.5	70-130	20	M

QCBatchID: QC1201026

Analyst: TWu

Method: EPA 8260B

Matrix: Water

Analyzed: 04/18/2019

Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201026MB1					
1,1,1,2-Tetrachloroethane	ND	ug/L	0.25	5	
1,1,1-Trichloroethane	ND	ug/L	0.38	5	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.25	5	
1,1,2-Trichloroethane	ND	ug/L	0.25	5	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	0.29	5	
1,1-Dichloroethane	ND	ug/L	0.32	5	
1,1-Dichloroethene	ND	ug/L	0.3	5	
1,1-Dichloropropene	ND	ug/L	0.25	5	
1,2,3-Trichlorobenzene	ND	ug/L	0.28	5	
1,2,3-Trichloropropane	ND	ug/L	0.16	5	
1,2,4-Trichlorobenzene	ND	ug/L	0.27	5	
1,2,4-Trimethylbenzene	ND	ug/L	0.28	5	
1,2-Dibromo-3-chloropropane	ND	ug/L	0.12	5	
1,2-Dibromoethane	ND	ug/L	0.19	5	
1,2-Dichlorobenzene	ND	ug/L	0.26	5	
1,2-Dichloroethane	ND	ug/L	0.2	5	
1,2-Dichloropropane	ND	ug/L	0.36	5	
1,3,5-Trimethylbenzene	ND	ug/L	0.24	5	
1,3-Dichlorobenzene	ND	ug/L	0.34	5	
1,3-Dichloropropane	ND	ug/L	0.19	5	
1,4-Dichlorobenzene	ND	ug/L	0.43	5	
2,2-Dichloropropane	ND	ug/L	0.32	5	
2-Butanone (MEK)	ND	ug/L	0.78	100	
2-Chloroethyl Vinyl Ether	ND	ug/L	0.23	10	
2-Chlorotoluene	ND	ug/L	0.33	5	
4-Chlorotoluene	ND	ug/L	0.31	5	
4-Isopropyltoluene	ND	ug/L	0.32	5	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	0.12	5	
Acetone	ND	ug/L	50	100	
Allyl Chloride	ND	ug/L	0.19	5	
Benzene	ND	ug/L	0.18	1	
Bromobenzene	ND	ug/L	0.53	5	
Bromochloromethane	ND	ug/L	0.17	5	
Bromodichloromethane	ND	ug/L	0.31	5	
Bromoform	ND	ug/L	0.13	5	
Bromomethane	ND	ug/L	0.68	5	
Carbon Tetrachloride	ND	ug/L	0.27	5	
Chlorobenzene	ND	ug/L	0.19	5	
Chlorodibromomethane	ND	ug/L	0.21	5	
Chloroethane	ND	ug/L	0.45	5	
Chloroform	ND	ug/L	0.18	5	
Chloromethane	ND	ug/L	0.27	5	
cis-1,2-Dichloroethene	ND	ug/L	0.27	5	
cis-1,3-dichloropropene	ND	ug/L	0.25	5	
cis-1,4-dichloro-2-butene	ND	ug/L	0.17	5	
Dibromomethane	ND	ug/L	0.23	5	
Dichlorodifluoromethane	ND	ug/L	0.33	5	
Di-isopropyl ether (DIPE)	ND	ug/L	0.17	1	
Ethylbenzene	ND	ug/L	0.21	5	
Ethyl-tertbutylether (ETBE)	ND	ug/L	0.23	1	
Hexachlorobutadiene	ND	ug/L	0.51	5	
Isopropylbenzene	ND	ug/L	0.24	5	

QCBatchID: QC1201026	Analyst: TWu	Method: EPA 8260B
Matrix: Water	Analyzed: 04/18/2019	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201026MB1					
m and p-Xylene	ND	ug/L	0.45	5	
Methylene chloride	1.1 J	ug/L	0.16	5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L	0.19	1	
Naphthalene	ND	ug/L	0.25	5	
N-butylbenzene	ND	ug/L	0.25	5	
N-propylbenzene	ND	ug/L	0.31	5	
o-Xylene	ND	ug/L	0.29	5	
Sec-butylbenzene	ND	ug/L	0.32	5	
Styrene	ND	ug/L	0.22	5	
t-Butyl alcohol (TBA)	ND	ug/L	5.2	10	
Tert-amylmethylether (TAME)	ND	ug/L	0.19	5	
Tert-butylbenzene	ND	ug/L	0.4	5	
Tetrachloroethene	ND	ug/L	0.8	5	
Toluene	ND	ug/L	0.24	5	
trans-1,2-dichloroethene	ND	ug/L	0.33	5	
trans-1,3-dichloropropene	ND	ug/L	0.23	5	
trans-1,4-dichloro-2-butene	ND	ug/L	0.17	5	
Trichloroethene	ND	ug/L	0.39	5	
Trichlorofluoromethane	ND	ug/L	0.25	5	
Vinyl Chloride	ND	ug/L	0.18	5	
Xylenes (Total)	ND	ug/L	0.45	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201026LCS1											
1,1-Dichloroethene	50		45		ug/L	90			59-172		
Benzene	50		46		ug/L	92			62-137		
Chlorobenzene	50		44		ug/L	88			60-133		
Methyl-t-butyl Ether (MTBE)	50		55		ug/L	110			62-137		
Toluene	50		47		ug/L	94			59-139		
Trichloroethene	50		47		ug/L	94			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201026MS1, QC1201026MSD1												
Source: 414409-001												
1,1-Dichloroethene	ND	50	50	39	38	ug/L	78	76	2.6	59-172	22	
Benzene	ND	50	50	47	46	ug/L	94	92	2.2	62-137	24	
Chlorobenzene	ND	50	50	45	44	ug/L	90	88	2.2	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	46	45	ug/L	92	90	2.2	62-137	21	
Toluene	ND	50	50	43	41	ug/L	86	82	4.8	59-139	21	
Trichloroethene	ND	50	50	46	46	ug/L	92	92	0.0	66-142	21	

Source: 414409-001

QCBatchID: QC1201027

Analyst: Jarriaga

Method: EPA 8270C

Matrix: Solid

Analyzed: 04/18/2019

Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201027MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg	22	250	
1,2-Dichlorobenzene	ND	ug/Kg	37	250	
1,3-Dichlorobenzene	ND	ug/Kg	50	250	
1,4-Dichlorobenzene	ND	ug/Kg	31	250	
1-Methylnaphthalene	ND	ug/Kg	21	250	
2,4,5-Trichlorophenol	ND	ug/Kg	43	250	
2,4,6-Trichlorophenol	ND	ug/Kg	35	250	
2,4-Dichlorophenol	ND	ug/Kg	23	250	
2,4-Dimethylphenol	ND	ug/Kg	100	250	
2,4-Dinitrophenol	ND	ug/Kg	23	1200	
2,4-Dinitrotoluene	ND	ug/Kg	14	250	
2,6-Dinitrotoluene	ND	ug/Kg	33	250	
2-Chloronaphthalene	ND	ug/Kg	15	250	
2-Chlorophenol	ND	ug/Kg	15	250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg	21	250	
2-Methylnaphthalene	ND	ug/Kg	21	250	
2-Methylphenol (o-Cresol)	ND	ug/Kg	31	250	
2-Nitroaniline	ND	ug/Kg	31	250	
2-Nitrophenol	ND	ug/Kg	16	250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg	19	400	
3,3'-Dichlorobenzidine	ND	ug/Kg	54	1200	
3-Nitroaniline	ND	ug/Kg	37	250	
4-Bromophenyl phenyl ether	ND	ug/Kg	24	250	
4-Chloro-3-methylphenol	ND	ug/Kg	18	250	
4-Chloroaniline	ND	ug/Kg	73	250	
4-Chlorophenyl phenyl ether	ND	ug/Kg	19	250	
4-Nitroaniline	ND	ug/Kg	148	250	
4-Nitrophenol	ND	ug/Kg	117	250	
Acenaphthene	ND	ug/Kg	25	250	
Acenaphthylene	ND	ug/Kg	20	250	
Aniline	ND	ug/Kg	101	250	
Anthracene	ND	ug/Kg	23	250	
Azobenzene	ND	ug/Kg	67	250	
Benz(a)anthracene	ND	ug/Kg	22	250	
Benzidine	ND	ug/Kg	23	1200	
Benzo(a)pyrene	ND	ug/Kg	25	250	
Benzo(b)fluoranthene	ND	ug/Kg	27	250	
Benzo(g,h,i)perylene	ND	ug/Kg	29	250	
Benzo(k)fluoranthene	ND	ug/Kg	32	250	
Benzoic acid	ND	ug/Kg	36	1200	
Benzyl alcohol	ND	ug/Kg	36	250	
Bis(2-chloroethoxy)methane	ND	ug/Kg	15	250	
Bis(2-chloroethyl) Ether	ND	ug/Kg	25	1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg	17	250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg	52	250	
Butylbenzyl Phthalate	ND	ug/Kg	44	250	
Carbazole	ND	ug/Kg	23	250	
Chrysene	ND	ug/Kg	20	250	
Dibenz(a,h)anthracene	ND	ug/Kg	21	250	
Dibenzofuran	ND	ug/Kg	14	250	
Diethyl phthalate	ND	ug/Kg	24	250	
Dimethyl phthalate	ND	ug/Kg	22	250	

QCBatchID: QC1201027	Analyst: Jarriaga	Method: EPA 8270C
Matrix: Solid	Analyzed: 04/18/2019	Instrument: SVOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201027MB1					
Di-n-butyl phthalate	150 J	ug/Kg	67	250	
Di-n-octyl phthalate	ND	ug/Kg	23	250	
Fluoranthene	ND	ug/Kg	21	250	
Fluorene	ND	ug/Kg	27	250	
Hexachlorobenzene	ND	ug/Kg	15	250	
Hexachlorobutadiene	ND	ug/Kg	39	250	
Hexachlorocyclopentadiene	ND	ug/Kg	14	1200	
Hexachloroethane	ND	ug/Kg	43	250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg	90	250	
Isophorone	ND	ug/Kg	25	250	
Naphthalene	ND	ug/Kg	25	250	
Nitrobenzene	ND	ug/Kg	21	1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg	34	250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg	26	250	
N-Nitrosodiphenylamine	ND	ug/Kg	24	250	
Pentachlorophenol	ND	ug/Kg	55	1200	
Phenanthrene	ND	ug/Kg	22	250	
Phenol	ND	ug/Kg	26	250	
Pyrene	ND	ug/Kg	23	250	
Pyridine	ND	ug/Kg	21	250	
Total Cresol	ND	ug/Kg	400	400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201027LCS1											
1,2,4-Trichlorobenzene	2000		1600		ug/Kg	80			43-111		
1,4-Dichlorobenzene	2000		1300		ug/Kg	65			30-116		
2,4,5-Trichlorophenol	2000		2200		ug/Kg	110			57-125		
2,4-Dimethylphenol	2000		1800		ug/Kg	90			50-112		
2,4-Dinitrotoluene	2000		2100		ug/Kg	105			57-124		
2-Chlorophenol	2000		1600		ug/Kg	80			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1900		ug/Kg	95			56-124		
4-Chloro-3-methylphenol	2000		2000		ug/Kg	100			61-122		
4-Nitrophenol	2000		2400		ug/Kg	120			54-126		
Acenaphthene	2000		1600		ug/Kg	80			53-112		
Benzo(b)fluoranthene	2000		1700		ug/Kg	85			61-125		
Chrysene	2000		1800		ug/Kg	90			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1900		ug/Kg	95			54-110		
Pentachlorophenol	2000		1800		ug/Kg	90			41-103		
Phenol	2000		1600		ug/Kg	80			51-111		
Pyrene	2000		1900		ug/Kg	95			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201027MS1, QC1201027MSD1												Source: 414406-001
1,2,4-Trichlorobenzene	ND	2000	2000	950	1100	ug/Kg	48	55	14.6	35-93	30	
1,4-Dichlorobenzene	ND	2000	2000	850	1000	ug/Kg	43	50	16.2	39-95	30	
2,4,5-Trichlorophenol	ND	2000	2000	1000	1300	ug/Kg	50	65	26.1	44-108	30	
2,4-Dimethylphenol	ND	2000	2000	880	1100	ug/Kg	44	55	22.2	37-105	30	
2,4-Dinitrotoluene	ND	2000	2000	720	940	ug/Kg	36	47	26.5	48-109	30	M
2-Chlorophenol	ND	2000	2000	890	1000	ug/Kg	45	50	11.6	42-102	30	

Source: 414406-001

QCBatchID: QC1201027	Analyst: Jarriaga	Method: EPA 8270C
Matrix: Solid	Analyzed: 04/18/2019	Instrument: SVOA-MS (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201027MS1, QC1201027MSD1											Source: 414406-001	
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	950	1200	ug/Kg	48	60	23.3	33-116	30	
4-Chloro-3-methylphenol	ND	2000	2000	1100	1300	ug/Kg	55	65	16.7	33-120	30	
4-Nitrophenol	ND	2000	2000	950	1100	ug/Kg	48	55	14.6	37-107	30	
Acenaphthene	ND	2000	2000	1000	1200	ug/Kg	50	60	18.2	57-99	30	M
Benzo(b)fluoranthene	ND	2000	2000	1700	2500	ug/Kg	85	125	38.1	59-126	30	M
Chrysene	ND	2000	2000	1800	2600	ug/Kg	90	130	36.4	68-120	30	M
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	980	1100	ug/Kg	49	55	11.5	41-127	30	
Pentachlorophenol	ND	2000	2000	4300	4400	ug/Kg	215	220	2.3	43-120	30	M
Phenol	ND	2000	2000	940	1100	ug/Kg	47	55	15.7	46-116	30	
Pyrene	ND	2000	2000	2200	3000	ug/Kg	110	150	30.8	53-129	30	M

Duplicate Summary						
Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1201027DUP1						Source: 414406-001
1,2,4-Trichlorobenzene	ND	0.0	ug/Kg	0.0	20	
1,2-Dichlorobenzene	ND	0.0	ug/Kg	0.0	20	
1,3-Dichlorobenzene	ND	0.0	ug/Kg	0.0	20	
1,4-Dichlorobenzene	ND	0.0	ug/Kg	0.0	20	
1-Methylnaphthalene	ND	0.0	ug/Kg	0.0	20	
2,4,5-Trichlorophenol	ND	0.0	ug/Kg	0.0	20	
2,4,6-Trichlorophenol	ND	0.0	ug/Kg	0.0	20	
2,4-Dichlorophenol	ND	0.0	ug/Kg	0.0	20	
2,4-Dimethylphenol	ND	0.0	ug/Kg	0.0	20	
2,4-Dinitrophenol	ND	0.0	ug/Kg	0.0	20	
2,4-Dinitrotoluene	ND	0.0	ug/Kg	0.0	20	
2,6-Dinitrotoluene	ND	0.0	ug/Kg	0.0	20	
2-Chloronaphthalene	ND	0.0	ug/Kg	0.0	20	
2-Chlorophenol	ND	0.0	ug/Kg	0.0	20	
2-Methyl-4,6-dinitrophenol	ND	0.0	ug/Kg	0.0	20	
2-Methylnaphthalene	ND	0.0	ug/Kg	0.0	20	
2-Methylphenol (o-Cresol)	ND	0.0	ug/Kg	0.0	20	
2-Nitroaniline	ND	ND	ug/Kg	0.0	20	
2-Nitrophenol	ND	0.0	ug/Kg	0.0	20	
3 and 4-Methylphenol (m and p-Cresol)	ND	0.0	ug/Kg	0.0	20	
3,3'-Dichlorobenzidine	ND	0.0	ug/Kg	0.0	20	
3-Nitroaniline	ND	ND	ug/Kg	0.0	20	
4-Bromophenyl phenyl ether	ND	0.0	ug/Kg	0.0	20	
4-Chloro-3-methylphenol	ND	0.0	ug/Kg	0.0	20	
4-Chloroaniline	ND	0.0	ug/Kg	0.0	20	
4-Chlorophenyl phenyl ether	ND	0.0	ug/Kg	0.0	20	
4-Nitroaniline	ND	0.0	ug/Kg	0.0	20	
4-Nitrophenol	ND	ND	ug/Kg	0.0	20	
Acenaphthene	ND	0.0	ug/Kg	0.0	20	
Acenaphthylene	ND	0.0	ug/Kg	0.0	20	
Aniline	ND	0.0	ug/Kg	0.0	20	
Anthracene	ND	ND	ug/Kg	0.0	20	
Azobenzene	ND	0.0	ug/Kg	0.0	20	
Benz(a)anthracene	ND	ND	ug/Kg	0.0	20	
Benzidine	ND	0.0	ug/Kg	0.0	20	
Benzo(a)pyrene	ND	ND	ug/Kg	0.0	20	
Benzo(b)fluoranthene	ND	ND	ug/Kg	0.0	20	
Benzo(g,h,i)perylene	ND	ND	ug/Kg	0.0	20	

QCBatchID: QC1201027

Analyst: Jarriaga

Method: EPA 8270C

Matrix: Solid

Analyzed: 04/18/2019

Instrument: SVOA-MS (group)

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1201027DUP1						Source: 414406-001
Benzo(k)fluoranthene	ND	ND	ug/Kg	0.0	20	
Benzoic acid	ND	0.0	ug/Kg	0.0	20	
Benzyl alcohol	ND	0.0	ug/Kg	0.0	20	
Bis(2-chloroethoxy)methane	ND	0.0	ug/Kg	0.0	20	
Bis(2-chloroethyl) Ether	ND	0.0	ug/Kg	0.0	20	
Bis(2-chloroisopropyl) Ether	ND	0.0	ug/Kg	0.0	20	
Bis(2-ethylhexyl) phthalate	4000	750	ug/Kg	136.8	20	D
Butylbenzyl Phthalate	ND	ND	ug/Kg	0.0	20	
Carbazole	ND	ND	ug/Kg	0.0	20	
Chrysene	ND	ND	ug/Kg	0.0	20	
Dibenz(a,h)anthracene	ND	ND	ug/Kg	0.0	20	
Dibenzofuran	ND	0.0	ug/Kg	0.0	20	
Diethyl phthalate	ND	ND	ug/Kg	0.0	20	
Dimethyl phthalate	ND	ND	ug/Kg	0.0	20	
Di-n-butyl phthalate	ND	ND	ug/Kg	0.0	20	
Di-n-octyl phthalate	ND	0.0	ug/Kg	0.0	20	
Fluoranthene	ND	ND	ug/Kg	0.0	20	
Fluorene	ND	0.0	ug/Kg	0.0	20	
Hexachlorobenzene	ND	0.0	ug/Kg	0.0	20	
Hexachlorobutadiene	ND	0.0	ug/Kg	0.0	20	
Hexachlorocyclopentadiene	ND	0.0	ug/Kg	0.0	20	
Hexachloroethane	ND	0.0	ug/Kg	0.0	20	
Indeno(1,2,3-cd)pyrene	ND	ND	ug/Kg	0.0	20	
Isophorone	ND	0.0	ug/Kg	0.0	20	
Naphthalene	ND	0.0	ug/Kg	0.0	20	
Nitrobenzene	ND	0.0	ug/Kg	0.0	20	
N-Nitrosodimethylamine (NDMA)	ND	0.0	ug/Kg	0.0	20	
N-Nitrosodi-n-propylamine (NDPA)	ND	ND	ug/Kg	0.0	20	
N-Nitrosodiphenylamine	ND	0.0	ug/Kg	0.0	20	
Pentachlorophenol	ND	0.0	ug/Kg	0.0	20	
Phenanthrene	ND	ND	ug/Kg	0.0	20	
Phenol	ND	0.0	ug/Kg	0.0	20	
Pyrene	ND	ND	ug/Kg	0.0	20	
Pyridine	ND	0.0	ug/Kg	0.0	20	
Total Cresol	ND	ND	ug/Kg	0.0	20	

QCBatchID: QC1201028	Analyst: DNguyen	Method: EPA 8015M
Matrix: Solid	Analyzed: 04/18/2019	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201028MB1						
TPH (C10 to C28)	ND	mg/Kg	10	10		
TPH (C13 to C22)	ND	mg/Kg	10	10		
TPH (C23 to C40)	ND	mg/Kg	10	10		
TPH (C23 to C44)	ND	mg/Kg	10	10		
TPH (C6 to C12)	ND	mg/Kg	10	10		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201028LCS1											
TPH (C10 to C28)	250		220		mg/Kg	88			60-133		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201028MS1, QC1201028MSD1											Source: 414414-003	
TPH (C10 to C28)	18	250	250	220	220	mg/Kg	81	81	0.0	70-130	20	

QCBatchID: QC1201031	Analyst: MSolanki	Method: EPA 8081A
Matrix: Solid	Analyzed: 04/18/2019	Instrument: SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201031MB1					
4,4'-DDD	ND	ug/Kg	2.1	5	
4,4'-DDE	ND	ug/Kg	2	5	
4,4'-DDT	ND	ug/Kg	2	5	
a-BHC	ND	ug/Kg	1.6	5	
Aldrin	ND	ug/Kg	1.5	5	
b-BHC	ND	ug/Kg	1.5	5	
Chlordane (technical)	ND	ug/Kg	35	50	
d-BHC	ND	ug/Kg	1.2	5	
Dieldrin	ND	ug/Kg	2.1	5	
Endosulfan I	ND	ug/Kg	1.2	5	
Endosulfan II	ND	ug/Kg	2.8	5	
Endosulfan sulfate	ND	ug/Kg	3.4	5	
Endrin	ND	ug/Kg	2.7	5	
Endrin aldehyde	ND	ug/Kg	2.1	5	
Endrin Ketone	ND	ug/Kg	4.1	5	
Heptachlor	ND	ug/Kg	1.3	5	
Heptachlor epoxide	ND	ug/Kg	2.3	5	
Lindane (Gamma-BHC)	ND	ug/Kg	2	5	
Methoxychlor	ND	ug/Kg	9.2	10	
Toxaphene	ND	ug/Kg	54	100	

Lab Control Spike/ Lab Control Spike Duplicate Summary
--

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201031LCS1											
4,4'-DDD	50		50		ug/Kg	100			43-172		
4,4'-DDE	50		42		ug/Kg	84			44-163		
4,4'-DDT	50		48		ug/Kg	96			40-158		
a-BHC	50		41		ug/Kg	82			45-150		
Aldrin	50		39		ug/Kg	78			46-142		
b-BHC	50		39		ug/Kg	78			42-156		
d-BHC	50		32		ug/Kg	64			37-161		
Dieldrin	50		41		ug/Kg	82			47-151		
Endosulfan I	50		39		ug/Kg	78			47-141		
Endosulfan II	50		43		ug/Kg	86			44-156		
Endosulfan sulfate	50		42		ug/Kg	84			43-157		
Endrin	50		47		ug/Kg	94			47-160		
Endrin aldehyde	50		29		ug/Kg	58			32-127		
Endrin Ketone	50		44		ug/Kg	88			48-159		
Heptachlor	50		34		ug/Kg	68			50-144		
Heptachlor epoxide	50		39		ug/Kg	78			48-145		
Lindane (Gamma-BHC)	50		39		ug/Kg	78			47-151		
Methoxychlor	50		62		ug/Kg	124			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201031MS1, QC1201031MSD1												Source: 414424-001
4,4'-DDD	ND	50	50	46	49	ug/Kg	92	98	6.3	43-172	20	
4,4'-DDE	ND	50	50	43	49	ug/Kg	86	98	13.0	44-163	20	
4,4'-DDT	ND	50	50	56	55	ug/Kg	112	110	1.8	40-158	20	
a-BHC	ND	50	50	45	44	ug/Kg	90	88	2.2	45-150	20	

QCBatchID: **QC1201031**

Analyst: MSolanki

Method: EPA 8081A

Matrix: Solid

Analyzed: 04/18/2019

Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201031MS1, QC1201031MSD1											Source: 414424-001	
Aldrin	ND	50	50	47	49	ug/Kg	94	98	4.2	46-142	20	
b-BHC	ND	50	50	41	41	ug/Kg	82	82	0.0	42-156	20	
d-BHC	ND	50	50	35	36	ug/Kg	70	72	2.8	37-161	20	
Dieldrin	ND	50	50	44	45	ug/Kg	88	90	2.2	47-151	20	
Endosulfan I	ND	50	50	42	43	ug/Kg	84	86	2.4	47-141	20	
Endosulfan II	ND	50	50	47	45	ug/Kg	94	90	4.3	44-156	20	
Endosulfan sulfate	ND	50	50	44	50	ug/Kg	88	100	12.8	43-157	20	
Endrin	ND	50	50	51	54	ug/Kg	102	108	5.7	47-160	20	
Endrin aldehyde	ND	50	50	41	43	ug/Kg	82	86	4.8	32-127	20	
Endrin Ketone	ND	50	50	49	51	ug/Kg	98	102	4.0	48-159	20	
Heptachlor	ND	50	50	38	39	ug/Kg	76	78	2.6	50-144	20	
Heptachlor epoxide	ND	50	50	42	44	ug/Kg	84	88	4.7	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	43	41	ug/Kg	86	82	4.8	47-151	20	
Methoxychlor	ND	50	50	70	75	ug/Kg	140	150	6.9	36-182	20	

QCBatchID: <u>QC1201035</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201035MB1					
Antimony	ND	mg/Kg	0.37	3	
Arsenic	ND	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	ND	mg/Kg	0.32	1	
Molybdenum	ND	mg/Kg	0.13	1	
Nickel	ND	mg/Kg	0.2	1.5	
Selenium	2.18 J	mg/Kg	0.72	3	
Silver	0.23 J	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	ND	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201035LCS1											
Antimony	100		111		mg/Kg	111			80-120		
Arsenic	100		93.6		mg/Kg	94			80-120		
Barium	100		99.2		mg/Kg	99			80-120		
Beryllium	100		94.7		mg/Kg	95			80-120		
Cadmium	100		105		mg/Kg	105			80-120		
Chromium	100		96.7		mg/Kg	97			80-120		
Cobalt	100		102		mg/Kg	102			80-120		
Copper	100		94.4		mg/Kg	94			80-120		
Lead	100		103		mg/Kg	103			80-120		
Molybdenum	100		99.5		mg/Kg	100			80-120		
Nickel	100		103		mg/Kg	103			80-120		
Selenium	100		95.0		mg/Kg	95			80-120		
Silver	100		99.0		mg/Kg	99			80-120		
Thallium	100		93.5		mg/Kg	94			80-120		
Vanadium	100		97.7		mg/Kg	98			80-120		
Zinc	100		105		mg/Kg	105			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201035MS1, QC1201035MSD1												Source: 414414-018
Antimony	ND	100	100	54.9	52.5	mg/Kg	55	53	4.5	75-125	20	M
Arsenic	6.65	100	100	95.4	96.3	mg/Kg	89	90	0.9	75-125	20	
Barium	127	100	100	272	229	mg/Kg	145	102	17.2	75-125	20	M
Beryllium	ND	100	100	87.6	91.0	mg/Kg	88	91	3.8	75-125	20	
Cadmium	0.52	100	100	91.8	95.2	mg/Kg	91	95	3.6	75-125	20	
Chromium	12.0	100	100	102	103	mg/Kg	90	91	1.0	75-125	20	
Cobalt	10.3	100	100	106	102	mg/Kg	96	92	3.8	75-125	20	
Copper	18.4	100	100	103	108	mg/Kg	85	90	4.7	75-125	20	
Lead	9.49	100	100	103	103	mg/Kg	94	94	0.0	75-125	20	
Molybdenum	0.66	100	100	92.0	92.8	mg/Kg	91	92	0.9	75-125	20	

QCBatchID: <u>QC1201035</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201035MS1, QC1201035MSD1											Source: 414414-018	
Nickel	11.0	100	100	104	103	mg/Kg	93	92	1.0	75-125	20	
Selenium	ND	100	100	89.3	90.8	mg/Kg	89	91	1.7	75-125	20	
Silver	ND	100	100	88.6	90.2	mg/Kg	89	90	1.8	75-125	20	
Thallium	5.06	100	100	85.2	88.2	mg/Kg	80	83	3.5	75-125	20	
Vanadium	33.3	100	100	141	128	mg/Kg	108	95	9.7	75-125	20	
Zinc	54.9	100	100	148	144	mg/Kg	93	89	2.7	75-125	20	

QCBatchID: QC1201036	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201036MB1					
Antimony	ND	mg/Kg	0.37	3	
Arsenic	ND	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	ND	mg/Kg	0.32	1	
Molybdenum	ND	mg/Kg	0.13	1	
Nickel	ND	mg/Kg	0.2	1.5	
Selenium	ND	mg/Kg	0.72	3	
Silver	0.19 J	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	ND	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201036LCS1											
Antimony	100		119		mg/Kg	119			80-120		
Arsenic	100		98.5		mg/Kg	99			80-120		
Barium	100		102		mg/Kg	102			80-120		
Beryllium	100		101		mg/Kg	101			80-120		
Cadmium	100		108		mg/Kg	108			80-120		
Chromium	100		102		mg/Kg	102			80-120		
Cobalt	100		107		mg/Kg	107			80-120		
Copper	100		98.5		mg/Kg	99			80-120		
Lead	100		111		mg/Kg	111			80-120		
Molybdenum	100		107		mg/Kg	107			80-120		
Nickel	100		111		mg/Kg	111			80-120		
Selenium	100		101		mg/Kg	101			80-120		
Silver	100		102		mg/Kg	102			80-120		
Thallium	100		101		mg/Kg	101			80-120		
Vanadium	100		102		mg/Kg	102			80-120		
Zinc	100		107		mg/Kg	107			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201036MS1, QC1201036MSD1												Source: 414424-031
Antimony	1.46	100	100	40.6	41.2	mg/Kg	39	40	1.5	75-125	20	M
Arsenic	6.05	100	100	99.8	100	mg/Kg	94	94	0.2	75-125	20	
Barium	90.7	100	100	206	195	mg/Kg	115	104	5.5	75-125	20	
Beryllium	ND	100	100	94.8	88.9	mg/Kg	95	89	6.4	75-125	20	
Cadmium	1.48	100	100	104	93.9	mg/Kg	103	92	10.2	75-125	20	
Chromium	25.3	100	100	125	116	mg/Kg	100	91	7.5	75-125	20	
Cobalt	7.90	100	100	109	99.3	mg/Kg	101	91	9.3	75-125	20	
Copper	15.4	100	100	113	105	mg/Kg	98	90	7.3	75-125	20	
Lead	15.0	100	100	116	153	mg/Kg	101	138	27.5	75-125	20	M
Molybdenum	1.24	100	100	96.2	94.4	mg/Kg	95	93	1.9	75-125	20	

QCBatchID: <u>QC1201036</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201036MS1, QC1201036MSD1											Source: 414424-031	
Nickel	17.5	100	100	120	119	mg/Kg	103	102	0.8	75-125	20	
Selenium	1.34	100	100	97.5	94.7	mg/Kg	96	93	2.9	75-125	20	
Silver	ND	100	100	96.2	88.6	mg/Kg	96	89	8.2	75-125	20	
Thallium	1.23	100	100	90.1	90.7	mg/Kg	89	89	0.7	75-125	20	
Vanadium	39.3	100	100	146	135	mg/Kg	107	96	7.8	75-125	20	
Zinc	27.4	100	100	169	159	mg/Kg	142	132	6.1	75-125	20	M

QCBatchID: QC1201038	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201038MB1						
Arsenic	ND	mg/Kg	0.108	0.3		
Thallium	ND	mg/Kg	0.128	0.5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201038LCS1											
Arsenic	50		51.4		mg/Kg	103			80-120		
Thallium	50		52.5		mg/Kg	105			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1201038MS1, QC1201038MSD1											Source: 414404-001	
Arsenic	0.569	50	50	45.6	51.6	mg/Kg	90	102	12.3	75-125	20	
Thallium	ND	50	50	50.7	53.6	mg/Kg	101	107	5.6	75-125	20	

QCBatchID: <u>QC1201039</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201039MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201039LCS1											
Arsenic	50		51.3		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201039MS1, QC1201039MSD1												Source: 414424-002
Arsenic	5.89	50	50	51.8	52.6	mg/Kg	92	93	1.5	75-125	20	

QCBatchID: <u>QC1201040</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201040MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201040LCS1											
Arsenic	50		52.7		mg/Kg	105			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201040MS1, QC1201040MSD1												Source: 414424-022
Arsenic	44.9	50	50	87.9	80.9	mg/Kg	86	72	8.3	75-125	20	M

QCBatchID: <u>QC1201041</u>	Analyst: Abanh	Method: EPA 8015B
Matrix: Water	Analyzed: 04/18/2019	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201041MB1						
TPH (C13 to C22)	ND	mg/L	0.04	0.2		
TPH (C23 to C44)	ND	mg/L	0.07	0.3		
TPH (C6 to C12)	0.07 J	mg/L	0.06	0.3		
TPH Diesel	ND	mg/L	0.04	0.1		
TPH Motor Oil	ND	mg/L	0.07	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201041LCS1, QC1201041LCSD1											
TPH Diesel	1	1	0.78	0.76	mg/L	78	76	3	70-130	20	

QCBatchID: <u>QC1201042</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201042MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201042LCS1											
Arsenic	50		51.4		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201042MS1, QC1201042MSD1											Source: 414424-042	
Arsenic	7.14	50	50	40.7	43.3	mg/Kg	67	72	6.2	75-125	20	M

QCBatchID: <u>QC1201045</u>	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201045MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201045LCS1											
Mercury	0.83		0.97		mg/Kg	117			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201045MS1, QC1201045MSD1											Source: 414424-011	
Mercury	ND	0.83	0.83	0.97	0.89	mg/Kg	117	107	8.6	75-125	20	

QCBatchID: QC1201048	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201048MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201048LCS1											
Mercury	0.83		0.96		mg/Kg	116			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201048MS1, QC1201048MSD1											Source: 414424-031	
Mercury	ND	0.83	0.83	0.87	0.89	mg/Kg	105	107	2.3	75-125	20	

QCBatchID: QC1201049	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201049MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201049LCS1											
Mercury	0.83		0.91		mg/Kg	110			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201049MS1, QC1201049MSD1											Source: 414424-051	
Mercury	ND	0.83	0.83	0.88	0.88	mg/Kg	106	106	0.0	75-125	20	

QCBatchID: <u>QC1201051</u>	Analyst: sbailey-woo	Method: EPA 7471A
Matrix: Solid	Analyzed: 04/18/2019	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201051MB1						
Mercury	ND	mg/Kg	0.039	0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201051LCS1											
Mercury	0.83		0.85		mg/Kg	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201051MS1, QC1201051MSD1											Source: 414424-059	
Mercury	ND	0.83	0.83	0.85	0.87	mg/Kg	102	105	2.3	75-125	20	

QCBatchID: QC1201072	Analyst: bmorris	Method: EPA 8081A
Matrix: Solid	Analyzed: 04/19/2019	Instrument: SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201072MB1					
4,4'-DDD	ND	ug/Kg	2.1	5	
4,4'-DDE	ND	ug/Kg	2	5	
4,4'-DDT	ND	ug/Kg	2	5	
a-BHC	ND	ug/Kg	1.6	5	
Aldrin	ND	ug/Kg	1.5	5	
b-BHC	ND	ug/Kg	1.5	5	
Chlordane (technical)	ND	ug/Kg	35	50	
d-BHC	ND	ug/Kg	1.2	5	
Dieldrin	ND	ug/Kg	2.1	5	
Endosulfan I	ND	ug/Kg	1.2	5	
Endosulfan II	ND	ug/Kg	2.8	5	
Endosulfan sulfate	ND	ug/Kg	3.4	5	
Endrin	ND	ug/Kg	2.7	5	
Endrin aldehyde	ND	ug/Kg	2.1	5	
Endrin Ketone	ND	ug/Kg	4.1	5	
Heptachlor	ND	ug/Kg	1.3	5	
Heptachlor epoxide	ND	ug/Kg	2.3	5	
Lindane (Gamma-BHC)	ND	ug/Kg	2	5	
Methoxychlor	ND	ug/Kg	9.2	10	
Toxaphene	ND	ug/Kg	54	100	

Lab Control Spike/ Lab Control Spike Duplicate Summary
--

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201072LCS1											
4,4'-DDD	50		45		ug/Kg	90			43-172		
4,4'-DDE	50		42		ug/Kg	84			44-163		
4,4'-DDT	50		51		ug/Kg	102			40-158		
a-BHC	50		40		ug/Kg	80			45-150		
Aldrin	50		41		ug/Kg	82			46-142		
b-BHC	50		43		ug/Kg	86			42-156		
d-BHC	50		33		ug/Kg	66			37-161		
Dieldrin	50		40		ug/Kg	80			47-151		
Endosulfan I	50		39		ug/Kg	78			47-141		
Endosulfan II	50		37		ug/Kg	74			44-156		
Endosulfan sulfate	50		39		ug/Kg	78			43-157		
Endrin	50		47		ug/Kg	94			47-160		
Endrin aldehyde	50		35		ug/Kg	70			32-127		
Endrin Ketone	50		42		ug/Kg	84			48-159		
Heptachlor	50		34		ug/Kg	68			50-144		
Heptachlor epoxide	50		38		ug/Kg	76			48-145		
Lindane (Gamma-BHC)	50		39		ug/Kg	78			47-151		
Methoxychlor	50		50		ug/Kg	100			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201072MS1, QC1201072MSD1												Source: 414424-023
4,4'-DDD	ND	50	50	39	43	ug/Kg	78	86	9.8	43-172	20	
4,4'-DDE	ND	50	50	35	41	ug/Kg	70	82	15.8	44-163	20	
4,4'-DDT	ND	50	50	46	55	ug/Kg	92	110	17.8	40-158	20	
a-BHC	ND	50	50	34	36	ug/Kg	68	72	5.7	45-150	20	

QCBatchID: **QC1201072**

Analyst: bmorris

Method: EPA 8081A

Matrix: Solid

Analyzed: 04/19/2019

Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201072MS1, QC1201072MSD1											Source: 414424-023	
Aldrin	ND	50	50	39	42	ug/Kg	78	84	7.4	46-142	20	D
b-BHC	ND	50	50	36	40	ug/Kg	72	80	10.5	42-156	20	
d-BHC	ND	50	50	29	32	ug/Kg	58	64	9.8	37-161	20	
Dieldrin	ND	50	50	35	38	ug/Kg	70	76	8.2	47-151	20	
Endosulfan I	ND	50	50	33	37	ug/Kg	66	74	11.4	47-141	20	
Endosulfan II	ND	50	50	31	35	ug/Kg	62	70	12.1	44-156	20	
Endosulfan sulfate	ND	50	50	35	39	ug/Kg	70	78	10.8	43-157	20	
Endrin	ND	50	50	39	46	ug/Kg	78	92	16.5	47-160	20	
Endrin aldehyde	ND	50	50	31	34	ug/Kg	62	68	9.2	32-127	20	
Endrin Ketone	ND	50	50	32	40	ug/Kg	64	80	22.2	48-159	20	
Heptachlor	ND	50	50	31	34	ug/Kg	62	68	9.2	50-144	20	
Heptachlor epoxide	ND	50	50	33	36	ug/Kg	66	72	8.7	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	34	38	ug/Kg	68	76	11.1	47-151	20	
Methoxychlor	ND	50	50	47	46	ug/Kg	94	92	2.2	36-182	20	

QCBatchID: QC1201080	Analyst: bmorris	Method: EPA 8081A
Matrix: Solid	Analyzed: 01/01/1900	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201080MB1						
4,4'-DDD	ND	ug/Kg	2.1	5		
4,4'-DDE	ND	ug/Kg	2	5		
4,4'-DDT	ND	ug/Kg	2	5		
a-BHC	ND	ug/Kg	1.6	5		
Aldrin	ND	ug/Kg	1.5	5		
b-BHC	ND	ug/Kg	1.5	5		
Chlordane (technical)	ND	ug/Kg	35	50		
d-BHC	ND	ug/Kg	1.2	5		
Dieldrin	ND	ug/Kg	2.1	5		
Endosulfan I	ND	ug/Kg	1.2	5		
Endosulfan II	ND	ug/Kg	2.8	5		
Endosulfan sulfate	ND	ug/Kg	3.4	5		
Endrin	ND	ug/Kg	2.7	5		
Endrin aldehyde	ND	ug/Kg	2.1	5		
Endrin Ketone	ND	ug/Kg	4.1	5		
Heptachlor	ND	ug/Kg	1.3	5		
Heptachlor epoxide	ND	ug/Kg	2.3	5		
Lindane (Gamma-BHC)	ND	ug/Kg	2	5		
Methoxychlor	ND	ug/Kg	9.2	10		
Toxaphene	ND	ug/Kg	54	100		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201080LCS1											
4,4'-DDD	50		44		ug/Kg	88			43-172		
4,4'-DDE	50		45		ug/Kg	90			44-163		
4,4'-DDT	50		50		ug/Kg	100			40-158		
a-BHC	50		44		ug/Kg	88			45-150		
Aldrin	50		48		ug/Kg	96			46-142		
b-BHC	50		43		ug/Kg	86			42-156		
d-BHC	50		38		ug/Kg	76			37-161		
Dieldrin	50		45		ug/Kg	90			47-151		
Endosulfan I	50		43		ug/Kg	86			47-141		
Endosulfan II	50		45		ug/Kg	90			44-156		
Endosulfan sulfate	50		45		ug/Kg	90			43-157		
Endrin	50		48		ug/Kg	96			47-160		
Endrin aldehyde	50		43		ug/Kg	86			32-127		
Endrin Ketone	50		47		ug/Kg	94			48-159		
Heptachlor	50		43		ug/Kg	86			50-144		
Heptachlor epoxide	50		45		ug/Kg	90			48-145		
Lindane (Gamma-BHC)	50		42		ug/Kg	84			47-151		
Methoxychlor	50		50		ug/Kg	100			36-182		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1201080MS1, QC1201080MSD1										Source: 414424-046		
4,4'-DDD	ND	50	50	47	49	ug/Kg	94	98	4.2	43-172	20	
4,4'-DDE	ND	50	50	52	51	ug/Kg	104	102	1.9	44-163	20	
4,4'-DDT	ND	50	50	46	45	ug/Kg	92	90	2.2	40-158	20	
a-BHC	ND	50	50	45	43	ug/Kg	90	86	4.5	45-150	20	

QCBatchID: QC1201080	Analyst: bmorris	Method: EPA 8081A
Matrix: Solid	Analyzed: 01/01/1900	Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201080MS1, QC1201080MSD1							Source: 414424-046					
Aldrin	ND	50	50	56	54	ug/Kg	112	108	3.6	46-142	20	
b-BHC	ND	50	50	46	53	ug/Kg	92	106	14.1	42-156	20	
d-BHC	ND	50	50	39	39	ug/Kg	78	78	0.0	37-161	20	
Dieldrin	ND	50	50	50	47	ug/Kg	100	94	6.2	47-151	20	
Endosulfan I	ND	50	50	51	47	ug/Kg	102	94	8.2	47-141	20	
Endosulfan II	ND	50	50	49	49	ug/Kg	98	98	0.0	44-156	20	
Endosulfan sulfate	ND	50	50	49	48	ug/Kg	98	96	2.1	43-157	20	
Endrin	ND	50	50	51	52	ug/Kg	102	104	1.9	47-160	20	
Endrin aldehyde	ND	50	50	49	47	ug/Kg	98	94	4.2	32-127	20	
Endrin Ketone	ND	50	50	54	47	ug/Kg	108	94	13.9	48-159	20	
Heptachlor	ND	50	50	46	46	ug/Kg	92	92	0.0	50-144	20	
Heptachlor epoxide	ND	50	50	50	49	ug/Kg	100	98	2.0	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	46	45	ug/Kg	92	90	2.2	47-151	20	
Methoxychlor	ND	50	50	54	48	ug/Kg	108	96	11.8	36-182	20	

QCBatchID: <u>QC1201081</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201081MB1						
Antimony	ND	mg/Kg	0.37	3		
Arsenic	ND	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	ND	mg/Kg	0.31	1		
Lead	ND	mg/Kg	0.32	1		
Molybdenum	ND	mg/Kg	0.13	1		
Nickel	ND	mg/Kg	0.2	1.5		
Selenium	1.57 J	mg/Kg	0.72	3		
Silver	ND	mg/Kg	0.13	0.5		
Thallium	ND	mg/Kg	0.42	3		
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	ND	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201081LCS1											
Antimony	100		110		mg/Kg	110			80-120		
Arsenic	100		89.8		mg/Kg	90			80-120		
Barium	100		103		mg/Kg	103			80-120		
Beryllium	100		94.4		mg/Kg	94			80-120		
Cadmium	100		106		mg/Kg	106			80-120		
Chromium	100		102		mg/Kg	102			80-120		
Cobalt	100		106		mg/Kg	106			80-120		
Copper	100		100		mg/Kg	100			80-120		
Lead	100		102		mg/Kg	102			80-120		
Molybdenum	100		96.9		mg/Kg	97			80-120		
Nickel	100		102		mg/Kg	102			80-120		
Selenium	100		91.5		mg/Kg	92			80-120		
Silver	100		102		mg/Kg	102			80-120		
Thallium	100		93.4		mg/Kg	93			80-120		
Vanadium	100		101		mg/Kg	101			80-120		
Zinc	100		100		mg/Kg	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201081MS1, QC1201081MSD1										Source: 414424-011		
Antimony	0.95	100	100	28.7	29.5	mg/Kg	28	29	2.7	75-125	20	M
Arsenic	6.22	100	100	99.9	101	mg/Kg	94	95	1.1	75-125	20	
Barium	105	100	100	212	201	mg/Kg	107	96	5.3	75-125	20	
Beryllium	ND	100	100	87.1	92.7	mg/Kg	87	93	6.2	75-125	20	
Cadmium	1.16	100	100	95.8	92.7	mg/Kg	95	92	3.3	75-125	20	
Chromium	27.9	100	100	124	119	mg/Kg	96	91	4.1	75-125	20	
Cobalt	9.55	100	100	104	102	mg/Kg	94	92	1.9	75-125	20	
Copper	13.8	100	100	109	108	mg/Kg	95	94	0.9	75-125	20	
Lead	47.0	100	100	131	160	mg/Kg	84	113	19.9	75-125	20	
Molybdenum	0.96	100	100	89.9	96.1	mg/Kg	89	95	6.7	75-125	20	

QCBatchID: <u>QC1201081</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201081MS1, QC1201081MSD1											Source: 414424-011	
Nickel	22.3	100	100	103	114	mg/Kg	81	92	10.1	75-125	20	
Selenium	1.94	100	100	87.9	95.4	mg/Kg	86	93	8.2	75-125	20	
Silver	ND	100	100	92.5	91.8	mg/Kg	93	92	0.8	75-125	20	
Thallium	2.06	100	100	85.0	91.8	mg/Kg	83	90	7.7	75-125	20	
Vanadium	46.0	100	100	147	141	mg/Kg	101	95	4.2	75-125	20	
Zinc	58.6	100	100	146	154	mg/Kg	87	95	5.3	75-125	20	

QCBatchID: <u>QC1201082</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201082MB1					
Antimony	ND	mg/Kg	0.37	3	
Arsenic	ND	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	ND	mg/Kg	0.32	1	
Molybdenum	ND	mg/Kg	0.13	1	
Nickel	ND	mg/Kg	0.2	1.5	
Selenium	1.41 J	mg/Kg	0.72	3	
Silver	ND	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	ND	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201082LCS1											
Antimony	100		116		mg/Kg	116			80-120		
Arsenic	100		104		mg/Kg	104			80-120		
Barium	100		106		mg/Kg	106			80-120		
Beryllium	100		96.3		mg/Kg	96			80-120		
Cadmium	100		110		mg/Kg	110			80-120		
Chromium	100		105		mg/Kg	105			80-120		
Cobalt	100		110		mg/Kg	110			80-120		
Copper	100		104		mg/Kg	104			80-120		
Lead	100		106		mg/Kg	106			80-120		
Molybdenum	100		111		mg/Kg	111			80-120		
Nickel	100		92.6		mg/Kg	93			80-120		
Selenium	100		103		mg/Kg	103			80-120		
Silver	100		106		mg/Kg	106			80-120		
Thallium	100		106		mg/Kg	106			80-120		
Vanadium	100		105		mg/Kg	105			80-120		
Zinc	100		114		mg/Kg	114			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201082MS1, QC1201082MSD1												Source: 414424-051
Antimony	ND	100	100	45.0	43.8	mg/Kg	45	44	2.7	75-125	20	M
Arsenic	8.99	100	100	99.1	102	mg/Kg	90	93	2.9	75-125	20	
Barium	136	100	100	211	223	mg/Kg	75	87	5.5	75-125	20	
Beryllium	ND	100	100	89.0	92.2	mg/Kg	89	92	3.5	75-125	20	
Cadmium	1.90	100	100	95.7	102	mg/Kg	94	100	6.4	75-125	20	
Chromium	29.4	100	100	124	134	mg/Kg	95	105	7.8	75-125	20	
Cobalt	12.1	100	100	103	110	mg/Kg	91	98	6.6	75-125	20	
Copper	19.6	100	100	110	116	mg/Kg	90	96	5.3	75-125	20	
Lead	5.27	100	100	96.3	98.9	mg/Kg	91	94	2.7	75-125	20	
Molybdenum	1.71	100	100	91.0	93.4	mg/Kg	89	92	2.6	75-125	20	

QCBatchID: <u>QC1201082</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201082MS1, QC1201082MSD1											Source: 414424-051	
Nickel	21.0	100	100	99.9	103	mg/Kg	79	82	3.1	75-125	20	
Selenium	ND	100	100	87.8	91.0	mg/Kg	88	91	3.6	75-125	20	
Silver	ND	100	100	90.4	93.6	mg/Kg	90	94	3.5	75-125	20	
Thallium	3.06	100	100	84.9	89.3	mg/Kg	82	86	5.1	75-125	20	
Vanadium	49.8	100	100	147	160	mg/Kg	97	110	8.5	75-125	20	
Zinc	53.7	100	100	121	126	mg/Kg	67	72	4.0	75-125	20	M

QCBatchID: <u>QC1201083</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201083MB1					
Antimony	ND	mg/Kg	0.37	3	
Arsenic	ND	mg/Kg	0.36	1	
Barium	ND	mg/Kg	0.23	1	
Beryllium	ND	mg/Kg	0.17	0.5	
Cadmium	ND	mg/Kg	0.21	0.5	
Chromium	ND	mg/Kg	0.13	1	
Cobalt	ND	mg/Kg	0.19	0.5	
Copper	ND	mg/Kg	0.31	1	
Lead	ND	mg/Kg	0.32	1	
Molybdenum	ND	mg/Kg	0.13	1	
Nickel	ND	mg/Kg	0.2	1.5	
Selenium	ND	mg/Kg	0.72	3	
Silver	ND	mg/Kg	0.13	0.5	
Thallium	ND	mg/Kg	0.42	3	
Vanadium	ND	mg/Kg	0.37	0.5	
Zinc	ND	mg/Kg	0.28	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201083LCS1											
Antimony	100		98.3		mg/Kg	98			80-120		
Arsenic	100		91.7		mg/Kg	92			80-120		
Barium	100		101		mg/Kg	101			80-120		
Beryllium	100		97.1		mg/Kg	97			80-120		
Cadmium	100		95.8		mg/Kg	96			80-120		
Chromium	100		100		mg/Kg	100			80-120		
Cobalt	100		101		mg/Kg	101			80-120		
Copper	100		103		mg/Kg	103			80-120		
Lead	100		92.6		mg/Kg	93			80-120		
Molybdenum	100		92.4		mg/Kg	92			80-120		
Nickel	100		98.6		mg/Kg	99			80-120		
Selenium	100		88.9		mg/Kg	89			80-120		
Silver	100		91.4		mg/Kg	91			80-120		
Thallium	100		95.6		mg/Kg	96			80-120		
Vanadium	100		103		mg/Kg	103			80-120		
Zinc	100		99.0		mg/Kg	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary
--

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201083MS1, QC1201083MSD1												Source: 414424-071
Antimony	1.08	100	100	67.7	73.1	mg/Kg	67	72	7.7	75-125	20	M
Arsenic	9.10	100	100	112	118	mg/Kg	103	109	5.2	75-125	20	
Barium	105	100	100	201	213	mg/Kg	96	108	5.8	75-125	20	
Beryllium	ND	100	100	98.8	107	mg/Kg	99	107	8.0	75-125	20	
Cadmium	1.54	100	100	110	116	mg/Kg	108	114	5.3	75-125	20	
Chromium	22.8	100	100	129	138	mg/Kg	106	115	6.7	75-125	20	
Cobalt	10.5	100	100	114	122	mg/Kg	104	112	6.8	75-125	20	
Copper	15.6	100	100	115	123	mg/Kg	99	107	6.7	75-125	20	
Lead	4.82	100	100	118	122	mg/Kg	113	117	3.3	75-125	20	
Molybdenum	0.31	100	100	109	113	mg/Kg	109	113	3.6	75-125	20	

QCBatchID: <u>QC1201083</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201083MS1, QC1201083MSD1											Source: 414424-071	
Nickel	17.2	100	100	131	134	mg/Kg	114	117	2.3	75-125	20	
Selenium	ND	100	100	102	108	mg/Kg	102	108	5.7	75-125	20	
Silver	ND	100	100	87.3	92.8	mg/Kg	87	93	6.1	75-125	20	
Thallium	0.45	100	100	102	107	mg/Kg	102	107	4.8	75-125	20	
Vanadium	34.7	100	100	146	154	mg/Kg	111	119	5.3	75-125	20	
Zinc	43.8	100	100	143	148	mg/Kg	99	104	3.4	75-125	20	

QCBatchID: <u>QC1201084</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201084MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201084LCS1											
Arsenic	50		50.6		mg/Kg	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201084MS1, QC1201084MSD1											Source: 414424-062	
Arsenic	5.38	50	50	44.2	42.5	mg/Kg	78	74	3.9	75-125	20	M

QCBatchID: QC1201086

Analyst: Abanh

Method: EPA 8270C

Matrix: Water

Analyzed: 04/19/2019

Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201086MB1					
1,2,4-Trichlorobenzene	ND	ug/L	1.9	10	
1,2-Dichlorobenzene	ND	ug/L	1.8	10	
1,2-Diphenylhydrazine	ND	ug/L	1	10	
1,3-Dichlorobenzene	ND	ug/L	1.9	10	
1,4-Dichlorobenzene	ND	ug/L	1.8	10	
1-Methylnaphthalene	ND	ug/L	1.5	10	
2,4,5-Trichlorophenol	ND	ug/L	1.1	10	
2,4,6-Trichlorophenol	ND	ug/L	0.56	10	
2,4-Dichlorophenol	ND	ug/L	1.4	10	
2,4-Dimethylphenol	ND	ug/L	1.2	10	
2,4-Dinitrophenol	ND	ug/L	0.56	50	
2,4-Dinitrotoluene	ND	ug/L	0.41	10	
2,6-Dinitrotoluene	ND	ug/L	0.55	10	
2-Chloronaphthalene	ND	ug/L	1.4	10	
2-Chlorophenol	ND	ug/L	1.1	10	
2-Methyl-4,6-dinitrophenol	ND	ug/L	0.39	50	
2-Methylnaphthalene	ND	ug/L	1.5	10	
2-Methylphenol (o-Cresol)	ND	ug/L	0.75	10	
2-Nitroaniline	ND	ug/L	0.5	50	
2-Nitrophenol	ND	ug/L	0.97	10	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/L	0.9	10	
3,3'-Dichlorobenzidine	ND	ug/L	0.64	25	
3-Nitroaniline	ND	ug/L	0.55	10	
4-Bromophenyl phenyl ether	ND	ug/L	1.1	10	
4-Chloro-3-methylphenol	ND	ug/L	0.77	10	
4-Chloroaniline	ND	ug/L	0.4	10	
4-Chlorophenyl phenyl ether	ND	ug/L	1.2	10	
4-Nitroaniline	ND	ug/L	0.67	10	
4-Nitrophenol	ND	ug/L	0.76	10	
Acenaphthene	ND	ug/L	1.2	10	
Acenaphthylene	ND	ug/L	1.2	10	
Aniline	ND	ug/L	0.82	10	
Anthracene	ND	ug/L	0.95	10	
Azobenzene	ND	ug/L	1	10	
Benz(a)anthracene	ND	ug/L	0.65	10	
Benztidine	ND	ug/L	1.3	50	
Benzo(a)pyrene	ND	ug/L	0.68	10	
Benzo(b)fluoranthene	ND	ug/L	0.58	10	
Benzo(g,h,i)perylene	ND	ug/L	0.96	10	
Benzo(k)fluoranthene	ND	ug/L	0.79	10	
Benzoic acid	ND	ug/L	0.37	50	
Benzyl alcohol	ND	ug/L	8	10	
Bis(2-chloroethoxy)methane	ND	ug/L	1.2	10	
Bis(2-chloroethyl) Ether	ND	ug/L	1.3	25	
Bis(2-chloroisopropyl) Ether	ND	ug/L	1.3	10	
Bis(2-ethylhexyl) Adipate	ND	ug/L		10	
Bis(2-ethylhexyl) phthalate	ND	ug/L	0.99	10	
Butylbenzyl Phthalate	ND	ug/L	0.86	10	
Carbazole	ND	ug/L	0.7	10	
Chrysene	ND	ug/L	0.73	10	
Dibenz(a,h)anthracene	ND	ug/L	0.8	10	
Dibenzofuran	ND	ug/L	1.1	10	

QCBatchID: QC1201086	Analyst: Abanh	Method: EPA 8270C
Matrix: Water	Analyzed: 04/19/2019	Instrument: SVOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201086MB1					
Diethyl phthalate	ND	ug/L	0.7	10	
Dimethyl phthalate	ND	ug/L	0.83	10	
Di-n-butyl phthalate	4.0 J	ug/L	0.91	10	
Di-n-octyl phthalate	ND	ug/L	1.1	10	
Fluoranthene	ND	ug/L	0.76	10	
Fluorene	ND	ug/L	1	10	
Hexachlorobenzene	ND	ug/L	0.84	10	
Hexachlorobutadiene	ND	ug/L	2.1	10	
Hexachlorocyclopentadiene	ND	ug/L	1.9	25	
Hexachloroethane	ND	ug/L	2	10	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.87	10	
Isophorone	ND	ug/L	1.2	10	
Naphthalene	ND	ug/L	1.3	10	
Nitrobenzene	ND	ug/L	1.2	25	
N-Nitrosodimethylamine (NDMA)	ND	ug/L	0.24	10	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/L	1.1	10	
N-Nitrosodiphenylamine	ND	ug/L	0.99	10	
Pentachlorophenol	ND	ug/L	1.3	25	
Phenanthrene	ND	ug/L	0.81	10	
Phenol	ND	ug/L	0.38	10	
Pyrene	ND	ug/L	0.89	10	
Pyridine	ND	ug/L	1.1	10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201086LCS1, QC1201086LCSD1											
1,2,4-Trichlorobenzene	40	40	27	26	ug/L	68	65	4	40-102	25	
1,4-Dichlorobenzene	40	40	25	24	ug/L	63	60	4	54-90	25	
2,4,5-Trichlorophenol	40	40	33	35	ug/L	83	88	6	57-117	25	
2,4-Dimethylphenol	40	40	32	32	ug/L	80	80	0	52-90	46	
2,4-Dinitrotoluene	40	40	34	37	ug/L	85	93	8	64-111	25	
2-Chlorophenol	40	40	32	31	ug/L	80	78	3	55-105	25	
3 and 4-Methylphenol (m and p-Cresol)	40	40	27	28	ug/L	68	70	4	45-96	25	
4-Chloro-3-methylphenol	40	40	34	35	ug/L	85	88	3	42-120	25	
4-Nitrophenol	40	40	15	16	ug/L	38	40	6	29-115	25	
Acenaphthene	40	40	30	31	ug/L	75	78	3	59-102	25	
Benzo(b)fluoranthene	40	40	32	34	ug/L	80	85	6	61-133	25	
Chrysene	40	40	31	33	ug/L	78	83	6	67-126	25	
N-Nitrosodi-n-propylamine (NDPA)	40	40	34	34	ug/L	85	85	0	35-115	25	
Pentachlorophenol	40	40	31	34	ug/L	78	85	9	37-120	25	
Phenol	40	40	15	16	ug/L	38	40	6	37-79	25	
Pyrene	40	40	33	36	ug/L	83	90	9	68-132	33	

QCBatchID: QC1201088	Analyst: Jarriaga	Method: EPA 8081A
Matrix: Water	Analyzed: 04/20/2019	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201088MB1						
4,4'-DDD	ND	ug/L	0.011	0.1		
4,4'-DDE	ND	ug/L	0.006	0.1		
4,4'-DDT	ND	ug/L	0.011	0.1		
a-BHC	ND	ug/L	0.002	0.1		
Aldrin	ND	ug/L	0.007	0.1		
b-BHC	ND	ug/L	0.003	0.1		
Chlordane (technical)	ND	ug/L	0.27	1		
d-BHC	ND	ug/L	0.006	0.1		
Dieldrin	ND	ug/L	0.006	0.1		
Endosulfan I	ND	ug/L	0.004	0.1		
Endosulfan II	ND	ug/L	0.011	0.1		
Endosulfan sulfate	ND	ug/L	0.012	0.1		
Endrin	ND	ug/L	0.008	0.1		
Endrin aldehyde	ND	ug/L	0.009	0.1		
Endrin Ketone	ND	ug/L	0.011	0.1		
Heptachlor	ND	ug/L	0.003	0.1		
Heptachlor epoxide	ND	ug/L	0.002	0.1		
Lindane (Gamma-BHC)	ND	ug/L	0.002	0.1		
Methoxychlor	ND	ug/L	0.055	0.1		
Toxaphene	ND	ug/L	0.48	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201088LCS1, QC1201088LCSD1											
4,4'-DDD	0.5	0.5	0.40	0.40	ug/L	80	80	0	42-142	20	
4,4'-DDE	0.5	0.5	0.41	0.41	ug/L	82	82	0	48-133	20	
4,4'-DDT	0.5	0.5	0.42	0.44	ug/L	84	88	5	40-143	20	
a-BHC	0.5	0.5	0.39	0.39	ug/L	78	78	0	55-122	20	
Aldrin	0.5	0.5	0.37	0.38	ug/L	74	76	3	46-117	20	
b-BHC	0.5	0.5	0.39	0.40	ug/L	78	80	3	46-136	20	
d-BHC	0.5	0.5	0.31	0.32	ug/L	62	64	3	53-124	20	
Dieldrin	0.5	0.5	0.38	0.39	ug/L	76	78	3	49-129	20	
Endosulfan I	0.5	0.5	0.38	0.39	ug/L	76	78	3	54-122	20	
Endosulfan II	0.5	0.5	0.41	0.42	ug/L	82	84	2	46-132	20	
Endosulfan sulfate	0.5	0.5	0.39	0.41	ug/L	78	82	5	52-129	20	
Endrin	0.5	0.5	0.42	0.42	ug/L	84	84	0	57-145	20	
Endrin aldehyde	0.5	0.5	0.40	0.42	ug/L	80	84	5	48-116	20	
Endrin Ketone	0.5	0.5	0.41	0.43	ug/L	82	86	5	44-137	20	
Heptachlor	0.5	0.5	0.37	0.37	ug/L	74	74	0	51-128	20	
Heptachlor epoxide	0.5	0.5	0.39	0.40	ug/L	78	80	3	51-122	20	
Lindane (Gamma-BHC)	0.5	0.5	0.40	0.40	ug/L	80	80	0	54-128	20	
Methoxychlor	0.5	0.5	0.43	0.44	ug/L	86	88	2	52-158	20	

QCBatchID: <u>QC1201090</u>	Analyst: Jarriaga	Method: EPA 8082
Matrix: Water	Analyzed: 04/20/2019	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201090MB1						
PCB-1016	ND	ug/L	0.076	0.5		
PCB-1221	ND	ug/L		0.5		
PCB-1232	ND	ug/L		0.5		
PCB-1242	ND	ug/L		0.5		
PCB-1248	ND	ug/L		0.5		
PCB-1254	ND	ug/L		0.5		
PCB-1260	ND	ug/L	0.082	0.5		
PCB-1262	ND	ug/L		0.5		
PCB-1268	ND	ug/L		0.5		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1201090LCS1, QC1201090LCSD1												
PCB-1016	5	5	3.8	3.6	ug/L	76	72	5	70-130	20		
PCB-1260	5	5	3.7	3.4	ug/L	74	68	8	70-130	20	L	

QCBatchID: QC1201091	Analyst: Jarriaga	Method: EPA 8082
Matrix: Solid	Analyzed: 04/20/2019	Instrument: SVOA-GC (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201091MB1						
PCB-1016	ND	ug/Kg	3	50		
PCB-1221	ND	ug/Kg	14	50		
PCB-1232	ND	ug/Kg	9.5	50		
PCB-1242	ND	ug/Kg	14	50		
PCB-1248	ND	ug/Kg	19	50		
PCB-1254	ND	ug/Kg	20	50		
PCB-1260	ND	ug/Kg	6.9	50		
PCB-1262	ND	ug/Kg	17	50		
PCB-1268	ND	ug/Kg	8.6	50		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1201091LCS1												
PCB-1016	500		540		ug/Kg	108			70-130			
PCB-1260	500		490		ug/Kg	98			70-130			

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201091MS1, QC1201091MSD1												Source: 414424-064
PCB-1016	ND	500	500	480	490	ug/Kg	96	98	2.1	70-130	20	
PCB-1260	ND	500	500	460	460	ug/Kg	92	92	0.0	70-130	20	

QCBatchID: QC1201093

Analyst: Jarriaga

Method: EPA 8081A

Matrix: Solid

Analyzed: 04/19/2019

Instrument: SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201093MB1					
4,4'-DDD	ND	ug/Kg	2.1	5	
4,4'-DDE	ND	ug/Kg	2	5	
4,4'-DDT	ND	ug/Kg	2	5	
a-BHC	ND	ug/Kg	1.6	5	
Aldrin	ND	ug/Kg	1.5	5	
b-BHC	ND	ug/Kg	1.5	5	
Chlordane (technical)	ND	ug/Kg	35	50	
d-BHC	ND	ug/Kg	1.2	5	
Dieldrin	ND	ug/Kg	2.1	5	
Endosulfan I	ND	ug/Kg	1.2	5	
Endosulfan II	ND	ug/Kg	2.8	5	
Endosulfan sulfate	ND	ug/Kg	3.4	5	
Endrin	ND	ug/Kg	2.7	5	
Endrin aldehyde	ND	ug/Kg	2.1	5	
Endrin Ketone	ND	ug/Kg	4.1	5	
Heptachlor	ND	ug/Kg	1.3	5	
Heptachlor epoxide	ND	ug/Kg	2.3	5	
Lindane (Gamma-BHC)	ND	ug/Kg	2	5	
Methoxychlor	ND	ug/Kg	9.2	10	
Toxaphene	ND	ug/Kg	54	100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201093LCS1											
4,4'-DDD	50		52		ug/Kg	104			43-172		
4,4'-DDE	50		47		ug/Kg	94			44-163		
4,4'-DDT	50		62		ug/Kg	124			40-158		
a-BHC	50		45		ug/Kg	90			45-150		
Aldrin	50		47		ug/Kg	94			46-142		
b-BHC	50		46		ug/Kg	92			42-156		
d-BHC	50		36		ug/Kg	72			37-161		
Dieldrin	50		44		ug/Kg	88			47-151		
Endosulfan I	50		42		ug/Kg	84			47-141		
Endosulfan II	50		45		ug/Kg	90			44-156		
Endosulfan sulfate	50		47		ug/Kg	94			43-157		
Endrin	50		54		ug/Kg	108			47-160		
Endrin aldehyde	50		43		ug/Kg	86			32-127		
Endrin Ketone	50		47		ug/Kg	94			48-159		
Heptachlor	50		40		ug/Kg	80			50-144		
Heptachlor epoxide	50		45		ug/Kg	90			48-145		
Lindane (Gamma-BHC)	50		45		ug/Kg	90			47-151		
Methoxychlor	50		63		ug/Kg	126			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201093MS1, QC1201093MSD1												Source: 414424-064
4,4'-DDD	ND	50	50	50	46	ug/Kg	100	92	8.3	43-172	20	
4,4'-DDE	3.9	50	50	43	40	ug/Kg	76	70	7.2	44-163	20	
4,4'-DDT	ND	50	50	53	54	ug/Kg	106	108	1.9	40-158	20	
a-BHC	ND	50	50	41	38	ug/Kg	82	76	7.6	45-150	20	

QCBatchID: **QC1201093**

Analyst: Jarriaga

Method: EPA 8081A

Matrix: Solid

Analyzed: 04/19/2019

Instrument: SVOA-GC (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201093MS1, QC1201093MSD1											Source: 414424-064	
Aldrin	ND	50	50	43	40	ug/Kg	86	80	7.2	46-142	20	
b-BHC	ND	50	50	41	39	ug/Kg	82	78	5.0	42-156	20	
d-BHC	ND	50	50	34	31	ug/Kg	68	62	9.2	37-161	20	
Dieldrin	ND	50	50	41	41	ug/Kg	82	82	0.0	47-151	20	
Endosulfan I	ND	50	50	36	35	ug/Kg	72	70	2.8	47-141	20	
Endosulfan II	ND	50	50	37	37	ug/Kg	74	74	0.0	44-156	20	
Endosulfan sulfate	ND	50	50	40	44	ug/Kg	80	88	9.5	43-157	20	
Endrin	ND	50	50	49	43	ug/Kg	98	86	13.0	47-160	20	
Endrin aldehyde	ND	50	50	32	39	ug/Kg	64	78	19.7	32-127	20	
Endrin Ketone	ND	50	50	43	43	ug/Kg	86	86	0.0	48-159	20	
Heptachlor	ND	50	50	36	33	ug/Kg	72	66	8.7	50-144	20	
Heptachlor epoxide	ND	50	50	38	39	ug/Kg	76	78	2.6	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	40	37	ug/Kg	80	74	7.8	47-151	20	
Methoxychlor	ND	50	50	67	67	ug/Kg	134	134	0.0	36-182	20	

QCBatchID: QC1201107	Analyst: dswafford	Method: EPA 6010B
Matrix: Water	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary						
---------------	--	--	--	--	--	--

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1201107MB1					
Antimony	ND	mg/L	0.014	0.04	
Arsenic	ND	mg/L	0.008	0.01	
Barium	ND	mg/L	0.002	0.01	
Beryllium	ND	mg/L	0.001	0.005	
Boron	ND	mg/L	0.03	0.05	
Cadmium	ND	mg/L	0.001	0.005	
Calcium	ND	mg/L	0.064	0.1	
Chromium	ND	mg/L	0.16	0.01	
Cobalt	ND	mg/L	0.002	0.005	
Copper	0.004 J	mg/L	0.001	0.01	
Iron	ND	mg/L	0.008	0.02	
Lead	ND	mg/L	0.005	0.01	
Magnesium	ND	mg/L	0.044	0.1	
Manganese	ND	mg/L	0.003	0.01	
Molybdenum	ND	mg/L	0.005	0.01	
Nickel	ND	mg/L	0.003	0.02	
Potassium	ND	mg/L	0.167	0.5	
Selenium	ND	mg/L	0.016	0.03	
Silver	ND	mg/L	0.003	0.005	
Sodium	0.236 J	mg/L	0.067	0.5	
Strontium	ND	mg/L	0.004	0.05	
Thallium	ND	mg/L	0.009	0.05	
Vanadium	ND	mg/L	0.002	0.005	
Zinc	ND	mg/L	0.007	0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary										
--	--	--	--	--	--	--	--	--	--	--

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201107LCS1											
Antimony	2		1.88		mg/L	94			80-120		
Arsenic	2		1.93		mg/L	97			80-120		
Barium	2		1.90		mg/L	95			80-120		
Beryllium	2		1.97		mg/L	99			80-120		
Boron	2		1.90		mg/L	95			80-120		
Cadmium	2		1.81		mg/L	91			80-120		
Calcium	2		2.15		mg/L	108			80-120		
Chromium	2		1.93		mg/L	97			80-120		
Cobalt	2		1.86		mg/L	93			80-120		
Copper	2		1.99		mg/L	100			80-120		
Iron	2		1.89		mg/L	95			80-120		
Lead	2		1.78		mg/L	89			80-120		
Magnesium	2		2.19		mg/L	110			80-120		
Manganese	2		1.99		mg/L	100			80-120		
Molybdenum	2		1.84		mg/L	92			80-120		
Nickel	2		1.79		mg/L	90			80-120		
Potassium	20		19.8		mg/L	99			80-120		
Selenium	2		1.87		mg/L	94			80-120		
Silver	2		2.06		mg/L	103			80-120		
Sodium	2		2.14		mg/L	107			80-120		
Strontium	2		2.04		mg/L	102			80-120		
Thallium	2		1.78		mg/L	89			80-120		
Vanadium	2		1.98		mg/L	99			80-120		

QCBatchID: QC1201107	Analyst: dswafford	Method: EPA 6010B
Matrix: Water	Analyzed: 04/19/2019	Instrument: AAICP (group)

QC1201107LCS1

Zinc	2	1.86	mg/L	93	80-120
------	---	------	------	----	--------

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201107MS1, QC1201107MSD1											Source: 414410-001	
Antimony	ND	1	1	1.25	0.875	mg/L	125	88	35.3	75-125	20	M
Arsenic	ND	1	1	1.05	1.22	mg/L	105	122	15.0	75-125	20	
Barium	ND	1	1	0.870	0.881	mg/L	87	88	1.3	75-125	20	
Beryllium	ND	1	1	0.916	0.944	mg/L	92	94	3.0	75-125	20	
Boron	4.82	1	1	5.43	5.55	mg/L	61	73	2.2	75-125	20	NC
Cadmium	ND	1	1	0.921	0.937	mg/L	92	94	1.7	75-125	20	
Calcium	417	1	1	400	415	mg/L	0	0	3.7	75-125	20	NC
Chromium	ND	1	1	0.907	0.916	mg/L	91	92	1.0	75-125	20	
Cobalt	ND	1	1	0.871	0.868	mg/L	87	87	0.3	75-125	20	
Copper	ND	1	1	0.936	0.933	mg/L	94	93	0.3	75-125	20	
Iron	ND	1	1	0.548	0.532	mg/L	55	53	3.0	75-125	20	M
Lead	ND	1	1	0.906	0.884	mg/L	91	88	2.5	75-125	20	
Magnesium	1330	1	1	1280	1320	mg/L	0	0	3.1	75-125	20	NC
Manganese	ND	1	1	0.861	0.888	mg/L	86	89	3.1	75-125	20	
Molybdenum	ND	1	1	0.877	0.897	mg/L	88	90	2.3	75-125	20	
Nickel	ND	1	1	0.923	0.947	mg/L	92	95	2.6	75-125	20	
Potassium	418	10	10	412	428	mg/L	0	100	3.8	75-125	20	NC
Selenium	ND	1	1	-0.061	0.103	mg/L	0	10	781.0	75-125	20	M
Silver	ND	1	1	1.02	1.02	mg/L	102	102	0.0	75-125	20	
Sodium	10700	1	1	10600	9850	mg/L	0	0	7.3	75-125	20	NC
Strontium	6.92	10	1	8.95	8.81	mg/L	9	78	1.6	75-125	20	M
Thallium	ND	1	1	0.875	0.856	mg/L	88	86	2.2	75-125	20	
Vanadium	0.073	1	1	0.959	0.993	mg/L	89	92	3.5	75-125	20	
Zinc	ND	1	1	0.992	5.56	mg/L	99	556	139.4	75-125	20	M

QCBatchID: QC1201118	Analyst: sbailey-woo	Method: EPA 6020
Matrix: Water	Analyzed: 04/19/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201118MB1						
Aluminum	ND	ug/L	3.3	50		
Antimony	ND	ug/L	1.3	6		
Arsenic	ND	ug/L	0.31	2		
Lead	ND	ug/L	0.76	5		
Selenium	ND	ug/L	0.39	2		
Thallium	ND	ug/L	0.18	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1201118LCS1												
Aluminum	50		46.0		ug/L	92			80-120			
Antimony	50		50.3		ug/L	101			80-120			
Arsenic	50		45.3		ug/L	91			80-120			
Lead	50		47.7		ug/L	95			80-120			
Selenium	50		43.1		ug/L	86			80-120			
Thallium	50		46.9		ug/L	94			80-120			

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201118MS1, QC1201118MSD1											Source: 414424-079	
Aluminum	ND	50	50	50.0	50.5	ug/L	100	101	1.0	75-125	20	
Antimony	ND	50	50	51.1	51.8	ug/L	102	104	1.4	75-125	20	
Arsenic	ND	50	50	44.6	46.1	ug/L	89	92	3.3	75-125	20	
Lead	ND	50	50	48.2	49.2	ug/L	96	98	2.1	75-125	20	
Selenium	ND	50	50	41.3	42.9	ug/L	83	86	3.8	75-125	20	
Thallium	ND	50	50	48.8	49.1	ug/L	98	98	0.6	75-125	20	

QCBatchID: QC1201220	Analyst: JParedes	Method: EPA 7470A
Matrix: Water	Analyzed: 04/23/2019	Instrument: AAICP-HG1

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201220MB1						
Mercury	ND	ug/L	0.094	0.4		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201220LCS1											
Mercury	5		5.02		ug/L	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201220MS1, QC1201220MSD1												Source: 414403-001
Mercury	0.11	5	5	5.09	5.05	ug/L	100	99	0.8	75-125	20	
QC1201220MS2												Source: 414424-080
Mercury	ND	5		5.10		ug/L	102			75-125		

QCBatchID: QC1201609	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 05/03/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201609MB1						
Arsenic	0.012 J	mg/L	0.008	0.05		
Lead	0.010 J	mg/L	0.005	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201609LCS1											
Arsenic	2		2.10		mg/L	105			80-120		
Lead	2		2.06		mg/L	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201609MS1, QC1201609MSD1											Source: 414424-022	
Arsenic	0.089	1	1	1.075	1.076	mg/L	99	99	0.1	75-125	20	
Lead	0.020	1	1	0.962	0.942	mg/L	94	92	2.1	75-125	20	

QCBatchID: QC1201621	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 05/03/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201621MB1						
Arsenic	0.015 J	mg/L	0.008	0.03		
Lead	0.027	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201621LCS1, QC1201621LCSD1											
Arsenic	20	20	19.2	19.2	mg/L	96	96	0	80-120	20	
Lead	20	20	19.6	19.9	mg/L	98	100	2	80-120	20	

QCBatchID: <u>QC1201705</u>	Analyst: sbailey-woo	Method: EPA 6020
Matrix: Solid	Analyzed: 05/07/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201705MB1						
Arsenic	ND	ug/L	0.13	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201705LCS1, QC1201705LCSD1											
Arsenic	500	500	535	531	ug/L	107	106	1	80-120	20	

QCBatchID: QC1201729	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 05/08/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1201729MB1						
Arsenic	ND	ug/L	0.31	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1201729LCS1											
Arsenic	100		110		ug/L	110			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1201729MS1, QC1201729MSD1											Source: 414424-074	
Arsenic	3020	100	100	3110	3240	ug/L	90	220	4.1	80-120		NC


Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

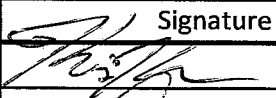

Definitions


DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No: <u>914424</u> Page: <u>1</u> of <u>9</u>				Standard: <input checked="" type="checkbox"/>		4 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other									

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments		
Company:		ES Engineering Services, LLC		Name:		Shenandoah Elementary School		EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs							
Report To:		Dane Nygaard		Number:		029RC1-191395												
Email:		dnygaard@es-online.com		P.O. #:														
Address:		1 Park Plaza, Suite 1000		Address:		2450 Shenandoah Street												
		Irvine, CA 92614				Los Angeles, California												
Phone:		714-919-6500		Global ID:														
Fax:		714-919-6501		Sampled By:		Kris Kern												

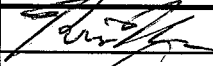
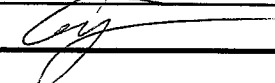
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs									
1 SB-33-0.5'	4/16/19	0910	Soil	1 8oz Jar	ICE	✓	✓	✓										
2 SB-33-1.5'	4/16/19	0917	Soil	1		✓	✓	✓										
3 SB-34-0.5'	4/16/19	0853	Soil	1		✓	✓	✓	✓									
4 SB-34-1.5'	4/16/19	0858	Soil	1		✓	✓	✓	✓									
5 SB-35-0.5'	4/16/19	0930	Soil	1		✓	✓	✓										
6 SB-35-1.5'	4/16/19	0935	Soil	1		✓	✓	✓										
7 SB-36-0.5'	4/16/19	0949	Soil	1		✓	✓	✓										
8 SB-36-1.5'	4/16/19	0951	Soil	1		✓	✓	✓										
9 SB-37-0.5'	4/16/19	1015	Soil	1		✓	✓	✓										
10 SB-37-1.5'	4/16/19	1020	Soil	1		✓	✓	✓										



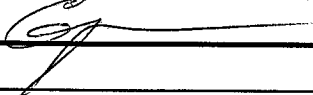
	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	4/17/19 @ 1534
1 Received By:		Dane Nygaard	RA	4/17/19 1535
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				


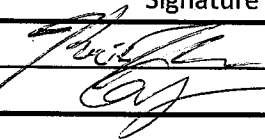
ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No: _____				Standard: <input checked="" type="checkbox"/>		4 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Page: <u>2</u> of <u>9</u>				2 Day: <input type="checkbox"/>		1 Day: <input type="checkbox"/>		Same Day: <input type="checkbox"/>					
Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other									


CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments		
Company:		ES Engineering Services, LLC		Name:		Shenandoah Elementary School		EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs							
Report To:		Dane Nygaard		Number:		029RC1-191395												
Email:		dnygaard@es-online.com		P.O. #:														
Address:		1 Park Plaza, Suite 1000		Address:		2450 Shenandoah Street												
		Irvine, CA 92614				Los Angeles, California												
Phone:		714-919-6500		Global ID:														
Fax:		714-919-6501		Sampled By:		Kris Kern												

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs								
1 SB-38-0.5'	4/16/19	1003	Soil	1 8oz Jar	ICE	✓	✓	✓									
2 SB-38-1.5'	4/16/19	1006				✓	✓	✓									
3 SB-39-0.5'	4/17/19	0855				✓	✓	✓									
4 SB-39-1.5'	4/17/19	0859				✓	✓	✓									
5 SB-39-2.5'	4/17/19	0905				✓	✓	✓									
6 SB-40-0.5'	4/17/19	0830				✓	✓	✓									
7 SB-40-1.5'	4/17/19	0837				✓	✓	✓									
8 SB-40-2.5'	4/17/19	0839				✓	✓	✓									
9 SB-41-0.5'	4/16/19	1504				✓	✓	✓									
10 SB-41-1.5'	4/16/19	1508				✓	✓	✓									

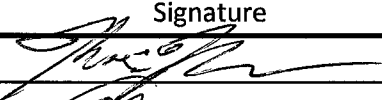
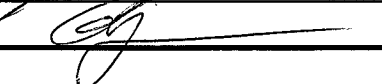
	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	4/17/19 @ 1534
1 Received By:		DK	ES	4/17/19 1534
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				




ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)														
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Lab No:	Page: 3 of 9	Standard:	<input checked="" type="checkbox"/>	4 Day:		3 Day:										
		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		2 Day:			1 Day:		Same Day:										
				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other															
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments					
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs										
Report To:	Dane Nygaard		Number:	029RC1-191395															
Email:	dnygaard@es-online.com		P.O. #:																
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street															
	Irvine, CA 92614			Los Angeles, California															
Phone:	714-919-6500		Global ID:																
Fax:	714-919-6501		Sampled By:	Kris Kern															
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.													
1	SB-42-2.5'	4/16/19	1512	Soil	18.2L	ICE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
2	SB-42-0.5'	4/17/19	0942				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
3	SB-42-1.5'	4/17/19	0946				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
4	SB-42-2.5'	4/17/19	0948				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
5	SB-43-0.5'	4/17/19	095				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
6	SB-43-1.5'	4/17/19	0917				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
7	SB-43-2.5'	4/17/19	0920				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
8	SB-44-0.5'	4/17/19	0843				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
9	SB-44-1.5'	4/17/19	0849				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
10	SB-44-2.5'	4/17/19	0852				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
		Signature		Print Name		Company / Title		Date / Time											
1 Relinquished By:				Kris Kern		ES		4/17/19 @ 1534											
1 Received By:				Dane Nygaard		EN		4/17/19 1539											
2 Relinquished By:																			
2 Received By:																			
3 Relinquished By:																			
3 Received By:																			


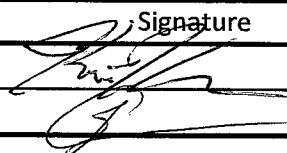

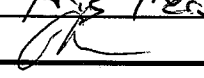
ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record			Turn Around Time (Rush by advanced notice only)																
806 N. Batavia St., Orange, CA 92868				Lab No:			Standard:		<input checked="" type="checkbox"/>		4 Day:		<input type="checkbox"/>		3 Day:		<input type="checkbox"/>						
Phone: (714) 771-6900 Fax: (714) 771-9933				Page: 14 of 9			2 Day:		<input type="checkbox"/>		1 Day:		<input type="checkbox"/>		Same Day:		<input type="checkbox"/>						
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		ENTHALPHY analytical, inc.			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other												
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments							
Company:		ES Engineering Services, LLC		Name:		Shenandoah Elementary School		EPA 6010B - CAM Metals EPA 6020 - Arsenic EPA 8081A - OCPs EPA 8082 - PCBs															
Report To:		Dane Nygaard		Number:		029RC1-191395																	
Email:		dnygaard@es-online.com		P.O. #:																			
Address:		1 Park Plaza, Suite 1000		Address:		2450 Shenandoah Street																	
		Irvine, CA 92614				Los Angeles, California																	
Phone:		714-919-6500		Global ID:																			
Fax:		714-919-6501		Sampled By:		Kris Kern																	
Sample ID		Sampling Date		Sampling Time		Matrix		Container No. / Size		Pres.													
1 SB-45-0.5'		4/16/19		1519		Soil		18oz Jar		ICE		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
2 SB-45-1.5'		4/16/19		1523								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
3 SB-45-2.5'		4/16/19		1526								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
4 SB-46-0.5'		4/17/19		0926								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
5 SB-46-1.5'		4/17/19		0929								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
6 SB-46-2.5'		4/17/19		0935								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
7 SB-47-0.5'		4/17/19		0925								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
8 SB-47-1.5'		4/17/19		0932								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
9 SB-47-2.5'		4/17/19		0938								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
10 SB-48-0.5'		4/17/19		0900								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			
		Signature		Print Name								Company / Title		Date / Time									
1 Relinquished By:				Kris Kern		ES		4/17/19 @ 1535															
1 Received By:																							
2 Relinquished By:								4/17/19 1535															
2 Received By:																							
3 Relinquished By:																							
3 Received By:																							



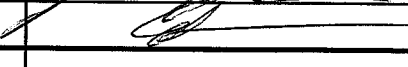
ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)									
806 N. Batavia St., Orange, CA 92868			Lab No:			Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>	<input type="checkbox"/>		
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: 5 of 9			2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>	<input type="checkbox"/>		
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other										

CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request										Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs										
Report To:	Dane Nygaard		Number:	029RC1-191395															
Email:	dnygaard@es-online.com		P.O. #:																
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street															
	Irvine, CA 92614			Los Angeles, California															
Phone:	714-919-6500		Global ID:																
Fax:	714-919-6501		Sampled By:	Kris Kern															
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.														
1 SB-48-1.5'	4/17/19	0903	Soil	1 8oz Jar	ICE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2 SB-48-2.5'	4/17/19	0905				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3 SB-49-0.5'	4/17/19	0818				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 SB-49-1.5'	4/17/19	0823				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5 SB-49-2.5'	4/17/19	0825				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6 SB-50-0.5'	4/16/19	1034				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 SB-50-1.5'	4/16/19	1038				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8 SB-51-0.5'	4/16/19	1211				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9 SB-51-1.5'	4/16/19	1216				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10 SB-52-0.5'	4/16/19	1224				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	4/17/19 @ 1536
1 Received By:		Dane Nygaard	ES	4/17/19 1536
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)									
806 N. Batavia St., Orange, CA 92868				Lab No: _____				Standard: <input checked="" type="checkbox"/>		4 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>					
Phone: (714) 771-6900 Fax: (714) 771-9933				Page: <u>6</u> of <u>9</u>				2 Day: <input type="checkbox"/>		1 Day: <input type="checkbox"/>		Same Day: <input type="checkbox"/>					
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other											
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments			
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 6010B - CAM Metals EPA 6020 - Arsenic EPA 8081A - OCPs EPA 8082 - PCBs EPA 8015-TPHcc EPA 8260 - VOCs EPA 8270 - SVOCs													
Report To: Dane Nygaard		Number: 029RC1-191395															
Email: dnygaard@es-online.com		P.O. #: _____															
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street															
Irvine, CA 92614		Los Angeles, California															
Phone: 714-919-6500		Global ID: _____															
Fax: 714-919-6501		Sampled By: Kris Kern															
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.											
1	SB-52-1.5'	4/16/19	1227	Soil	1 Boz Jar	ICE	✓	✓	✓								
2	SB-53-0.5'	4/16/19	1238				✓	✓	✓								
3	SB-53-1.5'	4/16/19	1241				✓	✓	✓								
4	SB-54-0.5'	4/16/19	1326				✓	✓	✓								
5	SB-54-1.5'	4/16/19	1331				✓	✓	✓								
6	SB-55-0.5'	4/16/19	1345				✓	✓	✓	✓							
7	SB-55-1.5'	4/16/19	1353				✓	✓	✓	✓							
8	SB-56-0.5'	4/17/19	1016				✓	✓	✓								
9	SB-56-1.5'	4/17/19	1020				✓	✓	✓								
10	SB-56-2.5'	4/17/19	1023				✓	✓	✓								
		Signature		Print Name		Company / Title		Date / Time									
1 Relinquished By:				Kris Kern		ES		4/17/19 e 1536									
1 Received By:				Kris Kern		ES		4/17/19 1536									
2 Relinquished By:																	
2 Received By:																	
3 Relinquished By:																	
3 Received By:																	

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933			Chain of Custody Record Lab No: _____ Page: <u>7</u> of <u>9</u>			Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>												
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other												
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request						Test Instructions / Comments						
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - CAM Metals	EPA 6020 - Arsenic	EPA 8081A - OCPs	EPA 8082 - PCBs	EPA 8015-TPHcc	EPA 8260 - VOCs	EPA 8270 - SVOCs						
Report To:	Dane Nygaard		Number:	029RC1-191395														
Email:	dnygaard@es-online.com		P.O. #:															
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street														
	Irvine, CA 92614			Los Angeles, California														
Phone:	714-919-6500		Global ID:															
Fax:	714-919-6501		Sampled By:	Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.												
1	SB-57-0.5'	4/17/19	1031	Soil	1 8oz Jar	DCE	✓	✓	✓									
2	SB-57-1.5'	4/17/19	1036				✓	✓	✓									
3	SB-57-2.5'	4/17/19	1036				✓	✓	✓									
4	SB-58-0.5'	4/16/19	1420				✓	✓	✓	✓								
5	SB-58-1.5'	4/16/19	1440				✓	✓	✓	✓								
6	SB-58-2.5'	4/16/19	1449				✓	✓	✓	✓								
7	SB-59-0.5'	4/17/19	1109		1 8oz Jar; 5 1/2 oz Vials		✓	✓	✓		X	X	X					
8	SB-59-1.5'		1117				✓	✓	✓		X	X	X					
9	SB-59-2.5'		1123				✓	✓	✓		X	X	X					
10							✓	✓	✓									
Signature		Print Name		Company / Title		Date / Time												
1 Relinquished By: 		Kris Kern		ES		4/17/19 @ 1537												
1 Received By: 				PA		4/17/19 1537												
2 Relinquished By:																		
2 Received By:																		
3 Relinquished By:																		
3 Received By:																		

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)															
806 N. Batavia St., Orange, CA 92868				Lab No: _____				Standard: <input checked="" type="checkbox"/>		4 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>											
Phone: (714) 771-6900 Fax: (714) 771-9933				Page: <u>8</u> of <u>9</u>				2 Day: <input type="checkbox"/>		1 Day: <input type="checkbox"/>		Same Day: <input type="checkbox"/>											
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other																	
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments							
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6010B - CAM Metals</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6020 - Arsenic</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8081A - OCPs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8082 - PCBs</div> </div>																			
Report To: Dane Nygaard		Number: 029RC1-191395																					
Email: dnygaard@es-online.com		P.O. #:																					
Address: 1 Park Plaza, Suite 1000 Irvine, CA 92614		Address: 2450 Shenandoah Street Los Angeles, California																					
Phone: 714-919-6500		Global ID:																					
Fax: 714-919-6501		Sampled By: Kris Kern																					
Sample ID		Sampling Date		Sampling Time		Matrix		Container No. / Size		Pres.													
1	SB-39-0.5' (DUP)	4/17/19	0855	Soil	16lbs Jar	ICE	✓	✓	✓														
2	SB-43-0.5' (DUP)	4/17/19	0915	Soil			✓	✓	✓														
3	SB-47-1.5' (DUP)	4/17/19	0932				✓	✓	✓														
4	SB-49-1.5' (DUP)	4/17/19	0823				✓	✓	✓														
5	SB-53-0.5' (DUP)	4/16/19	1238				✓	✓	✓														
6	SB-55-1.5' (DUP)	4/16/19	1353				✓	✓	✓	✓													
7	SB-60-0.5' (DUP)	4/16/19	1256				✓	✓	✓														
8	SB-60-0.5'	4/16/19	1256				✓	✓	✓														
9	SB-60-1.5'	4/16/19	1305				✓	✓	✓														
10							✓	✓	✓														
		Signature		Print Name		Company / Title		Date / Time															
1 Relinquished By:				Kris Kern		ES		4/17/19 e 1537															
1 Received By:				GH		QA		4/17/19 1527															
2 Relinquished By:																							
2 Received By:																							
3 Relinquished By:																							
3 Received By:																							



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No:

Page:

9

of

9

Turn Around Time (rush by advanced notice only)

Standard:

☒

5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

 1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃

 4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION

PROJECT INFORMATION

Analysis Request

Test Instructions / Comments

Company:	ES Engineering Services	Quote #:	
Report To:	Dane Nygaard	Proj. Name:	Shenandoah Elementary School
Email:	nygaard@es-online.com	Proj. #:	141395
Address:	1 Park Plaza, Suite 1000	P.O. #:	
	Irwin, CA 92614	Address:	2450 Shenandoah Street
Phone:	(714) 914-6500	Global ID:	Los Angeles, CA
Fax:		Sampled By:	KAK

CAD Metals	Aspen	OCPS	PCBS	TPH, SVOCs, VOCs															
X	X	X	X	X															
X	X	X	X	X															

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.
1 Equipment blank - Day 1	4/16/19	1551	Water	Multiple	ICE
2 Equipment blank - Day 2	4/17/19	1216	I	I	I
3					
4					
5					
6					
7					
8					
9					
10					

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Horn	ES	4/17/19 @ 1537
1 Received By:		CA	CA	4/17/19 1527
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering Services LLC/Montrose Environmental

Project: Shenandoah Elementary School

Date Received: 4/17/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 3 ☐ No (skip section 2)

Sample Temp (°C)
(No Cooler) : _____

Sample Temp (°C), One from each cooler: #1: 1.2 #2: 1.3 #3: 0.5 #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.3 #2: 2.3 #3: 1.8 #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)		✓	
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?		✓	
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Sample -063: COC sample time 10:36; Container label sample time: 10:39

Sample -003, -004, -009, -051: The sample jar caps were damaged and replaced in the lab. The samples were not compromised.

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____
☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By: G. Guevara Date: 4/17/19

Ranjit Clarke

From: Chris Guesnon
Sent: Thursday, April 18, 2019 4:49 PM
To: Ranjit Clarke
Subject: Re: Shenandoah Elementary School (04/16/19)

Hey ranjit, let's remove bor from 6010B list to avoid confusion.

On Thu, Apr 18, 2019 at 4:41 PM Ranjit Clarke <ranjit.clarke@enthalpy.com> wrote:

Chris,

Since we are reporting As by 6020, do you want us to remove that metal from the 6010B list, or do you want it reported for both methods?

Ranjit

In accordance with our paperless initiative, we are no longer mailing or faxing reports by default. If you require a hard copy, please inform your Project Manager.



Ranjit Clarke

Senior Project Manager

Enthalpy Analytical

[931 W. Barkley Ave., Orange, CA 92868](http://931.W.BarkleyAve.,Orange,CA92868)

O: 714-771-9906 / M: 657-274-9864 / F: 714-538-1209

Ranjit.Clarke@Enthalpy.com

Ranjit Clarke

From: Chris Guesnon
Sent: Monday, April 29, 2019 11:10 AM
To: Ranjit Clarke
Cc: Kristopher Kern
Subject: RE: Shenandoah Elementary School (04/16/19 - 04/17/19) - PDF - Enthalpy Analytical Final Report # 414424

Hi Ranjit. Based on the results, please run the following:

-STLC for arsenic for samples SB-50-0.5, SB-51-0.5, SB-52-0.5, SB-53-0.5, SB-54-0.5, SB-55-0.5

-STLC and TCLP for arsenic for samples SB-51-0.5, SB-52-0.5, SB-53-0.5, SB-54-0.5

-STLC and TCLP for lead for sample SB-42-0.5

Chris A. Guesnon
Senior Geologist
Environmental Remediation and Compliance Services



1 Park Plaza, Suite 1000, Irvine, CA 92614

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.



Please consider the environment before printing

From: Ranjit Clarke [mailto:ranjit.clarke@enthalpy.com]
Sent: Friday, April 26, 2019 4:59 PM
To: Chris Guesnon
Cc: Kristopher Kern
Subject: RE: Shenandoah Elementary School (04/16/19 - 04/17/19) - PDF - Enthalpy Analytical Final Report #414424

10X STLC limits for STLC, 20x TCLP limits for TCLP.



Ranjit Clarke

Ranjit Clarke

Subject: FW: Shenandoah Elementary School (04/16/19 - 04/17/19) - PDF - Enthalpy Analytical Final Report # 414424

From: Chris Guesnon <cguesnon@montrose-env.com>

Sent: Monday, April 29, 2019 4:10 PM

To: Ranjit Clarke <Ranjit.Clarke@enthalpy.com>

Cc: Kristopher Kern <kkern@montrose-env.com>

Subject: RE: Shenandoah Elementary School (04/16/19 - 04/17/19) - PDF - Enthalpy Analytical Final Report #414424

Hey Ranjit. Please run SB-53-0.5 (DUP) and drop SB-53-0.5.

Chris A. Guesnon

Senior Geologist

Environmental Remediation and Compliance Services



1 Park Plaza, Suite 1000, Irvine, CA 92614

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.



Please consider the environment before printing



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard
Comments: Shenandoah Elementary School
029RC1-191395
PO1035690
2450 Shenandoah Street, Los Angeles, CA

Lab Request: 416462
Report Date: 07/25/2019
Date Received: 06/19/2019
Client ID: 12860

Supplemental Report 1 - Additional Total As, STLC As, and TCLP As results are now included.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
416462-001	SB-33A-0.5'	416462-027	SB-42A-1.5'	416462-053	SB-47D-0.5'
416462-002	SB-33A-1.5'	416462-028	SB-42A-2.5'	416462-054	SB-47D-1.5'
416462-003	SB-33B-0.5'	416462-029	SB-42B-0.5'	416462-055	SB-47D-2.5'
416462-004	SB-33B-1.5'	416462-030	SB-42B-1.5'	416462-056	SB-48B-0.5'
416462-005	SB-33C-0.5'	416462-031	SB-42B-2.5'	416462-057	SB-48B-1.5'
416462-006	SB-33C-1.5'	416462-032	SB-42C-0.5'	416462-058	SB-48B-2.5'
416462-007	SB-33D-0.5'	416462-033	SB-42C-1.5'	416462-059	SB-48C-0.5'
416462-008	SB-33D-1.5'	416462-034	SB-42C-1.5' (DUP)	416462-060	SB-48C-1.5'
416462-009	SB-37A-0.5'	416462-035	SB-42C-2.5'	416462-061	SB-48C-2.5'
416462-010	SB-37A-1.5'	416462-036	SB-42D-0.5'	416462-062	SB-48D-0.5'
416462-011	SB-37B-0.5'	416462-037	SB-42D-1.5'	416462-063	SB-48D-1.5'
416462-012	SB-37B-1.5'	416462-038	SB-42D-2.5'	416462-064	SB-48D-2.5'
416462-013	SB-37C-0.5'	416462-039	SB-44B-0.5'	416462-065	SB-50A-0.5'
416462-014	SB-37C-1.5'	416462-040	SB-44B-1.5'	416462-066	SB-50A-1.5'
416462-015	SB-37D-0.5'	416462-041	SB-44B-1.5' (DUP)	416462-067	SB-50B-0.5'
416462-016	SB-37D-1.5'	416462-042	SB-44B-2.5'	416462-068	SB-50B-1.5'
416462-017	SB-39A-0.5'	416462-043	SB-44D-0.5'	416462-069	SB-50C-0.5'
416462-018	SB-39A-1.5'	416462-044	SB-44D-1.5'	416462-070	SB-50C-1.5'
416462-019	SB-39A-2.5'	416462-045	SB-44D-2.5'	416462-071	SB-50D-0.5'
416462-020	SB-39B-0.5'	416462-046	SB-47B-0.5'	416462-072	SB-50D-0.5' (DUP)
416462-021	SB-39B-1.5'	416462-047	SB-47B-0.5' (DUP)	416462-073	SB-50D-1.5'
416462-022	SB-39B-2.5'	416462-048	SB-47B-1.5'	416462-074	SB-51A-0.5'
416462-023	SB-39D-0.5'	416462-049	SB-47B-2.5'	416462-075	SB-51A-1.5'
416462-024	SB-39D-1.5'	416462-050	SB-47C-0.5'	416462-076	SB-51B-0.5'
416462-025	SB-39D-2.5'	416462-051	SB-47C-1.5'	416462-077	SB-51B-1.5'
416462-026	SB-42A-0.5'	416462-052	SB-47C-2.5'	416462-078	SB-51C-0.5'

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.





Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868

Tel: (714)771-6900 Fax: (714)538-1209

www.enthalpy.com

info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard
Comments: Shenandoah Elementary School
029RC1-191395
PO1035690
2450 Shenandoah Street, Los Angeles, CA

Lab Request: 416462
Report Date: 07/25/2019
Date Received: 06/19/2019
Client ID: 12860

Supplemental Report 1 - Additional Total As, STLC As, and TCLP As results are now included.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
416462-079	SB-51C-1.5'	416462-105	SB-54D-0.5'
416462-080	SB-51D-0.5'	416462-106	SB-54D-1.5'
416462-081	SB-51D-1.5'	416462-107	SB-55A-0.5'
416462-082	SB-52A-0.5'	416462-108	SB-55A-1.5'
416462-083	SB-52A-1.5'	416462-109	SB-55B-0.5'
416462-084	SB-52B-0.5'	416462-110	SB-55B-1.5'
416462-085	SB-52B-1.5'	416462-111	SB-55C-0.5'
416462-086	SB-52C-0.5'	416462-112	SB-55C-1.5'
416462-087	SB-52C-1.5'	416462-113	SB-55C-1.5' (DUP)
416462-088	SB-52D-0.5'	416462-114	SB-55D-0.5'
416462-089	SB-52D-1.5'	416462-115	SB-55D-1.5'
416462-090	SB-53A-0.5'	416462-116	SB-57A-0.5'
416462-091	SB-53A-1.5'	416462-117	SB-57A-1.5'
416462-092	Equipment Blank - Day 1	416462-118	SB-57A-2.5'
416462-093	Equipment Blank - Day 2	416462-119	SB-57B-0.5'
416462-094	SB-53B-0.5'	416462-120	SB-57B-1.5'
416462-095	SB-53B-1.5'	416462-121	SB-57B-2.5'
416462-096	SB-53B-1.5' (DUP)	416462-122	SB-57C-0.5'
416462-097	SB-53D-0.5'	416462-123	SB-57C-1.5'
416462-098	SB-53D-1.5'	416462-124	SB-57C-1.5' (DUP)
416462-099	SB-54A-0.5'	416462-125	SB-57C-2.5'
416462-100	SB-54A-1.5'	416462-126	SB-57D-0.5'
416462-101	SB-54B-0.5'	416462-127	SB-57D-1.5'
416462-102	SB-54B-1.5'	416462-128	SB-57D-2.5'
416462-103	SB-54C-0.5'	416462-129	SB-33C-0.5' (DUP)
416462-104	SB-54C-1.5'	416462-130	SB-37B-0.5' (DUP)

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:05		Site:							
Sample #: <u>416462-001</u>		Client Sample #: SB-33A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		5.02	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:09		Site:							
Sample #: <u>416462-002</u>		Client Sample #: SB-33A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:51		Site:							
Sample #: <u>416462-003</u>		Client Sample #: SB-33B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		6.18	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:59		Site:							
Sample #: <u>416462-004</u>		Client Sample #: SB-33B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:55		Site:							
Sample #: <u>416462-005</u>		Client Sample #: SB-33C-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		29.2	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:01		Site:							
Sample #: <u>416462-006</u>		Client Sample #: SB-33C-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:06		Site:							
Sample #: <u>416462-007</u>		Client Sample #: SB-33D-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		5.45	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:10		Site:							
Sample #: <u>416462-008</u>		Client Sample #: SB-33D-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:34		Site:							
Sample #: 416462-009		Client Sample #: SB-37A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		5.44	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:44		Site:							
Sample #: 416462-010		Client Sample #: SB-37A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:34		Site:							
Sample #: 416462-011		Client Sample #: SB-37B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		27.5	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:41		Site:							
Sample #: 416462-012		Client Sample #: SB-37B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:17		Site:							
Sample #: 416462-013		Client Sample #: SB-37C-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		89.9	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW
Method: EPA 6020 NELAC		Prep Method: STLC		QCBatchID: QC1204490					
Arsenic		4080	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:23		Site:							
Sample #: 416462-014		Client Sample #: SB-37C-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic		7.61	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 10:11		Site:							
Sample #: 416462-015		Client Sample #: SB-37D-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		31.8	1	0.108	0.3	mg/Kg	06/24/19	06/24/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 11:20		Site:							
Sample #: <u>416462-016</u>		Client Sample #: SB-37D-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1204495				
Arsenic		7.90	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:14		Site:							
Sample #: <u>416462-017</u>		Client Sample #: SB-39A-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203482				
Arsenic		6.16	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:20		Site:							
Sample #: <u>416462-018</u>		Client Sample #: SB-39A-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:24		Site:							
Sample #: <u>416462-019</u>		Client Sample #: SB-39A-2.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:11		Site:							
Sample #: <u>416462-020</u>		Client Sample #: SB-39B-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203482				
Arsenic		5.70	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:16		Site:							
Sample #: <u>416462-021</u>		Client Sample #: SB-39B-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:22		Site:							
Sample #: <u>416462-022</u>		Client Sample #: SB-39B-2.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:32		Site:							
Sample #: <u>416462-023</u>		Client Sample #: SB-39D-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		8.26	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:35		Site:							
Sample #: <u>416462-024</u>		Client Sample #: SB-39D-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:39		Site:							
Sample #: <u>416462-025</u>		Client Sample #: SB-39D-2.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:37		Site:							
Sample #: <u>416462-026</u>		Client Sample #: SB-42A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203480					
Lead		29.0	1	0.32	1	mg/Kg	06/24/19	06/25/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic		99.7	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1204490					
Arsenic		4080	100	13	200	ug/L	07/23/19	07/25/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:41		Site:							
Sample #: <u>416462-027</u>		Client Sample #: SB-42A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic		5.39	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 10:47		Site:							
Sample #: <u>416462-028</u>		Client Sample #: SB-42A-2.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic		6.81	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:48		Site:							
Sample #: <u>416462-029</u>		Client Sample #: SB-42B-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203480				
Lead		13.2	1	0.32	1	mg/Kg	06/24/19	06/25/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203482				
Arsenic		19.1	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:53		Site:							
Sample #: <u>416462-030</u>		Client Sample #: SB-42B-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 10:55		Site:							
Sample #: <u>416462-031</u>		Client Sample #: SB-42B-2.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 11:03		Site:							
Sample #: <u>416462-032</u>		Client Sample #: SB-42C-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203480				
Lead		12.3	1	0.32	1	mg/Kg	06/24/19	06/25/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203482				
Arsenic		35.6	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 11:22		Site:							
Sample #: <u>416462-033</u>		Client Sample #: SB-42C-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1204495				
Arsenic		6.96	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/18/2019 11:22		Site:							
Sample #: <u>416462-034</u>		Client Sample #: SB-42C-1.5' (DUP)			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:28		Site:						
Sample #: <u>416462-035</u>		Client Sample #: SB-42C-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	7.35	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:04		Site:						
Sample #: <u>416462-036</u>		Client Sample #: SB-42D-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203481					
Lead	39.5	1	0.32	1	mg/Kg	06/24/19	06/25/19	KLN
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic	33.8	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:09		Site:						
Sample #: <u>416462-037</u>		Client Sample #: SB-42D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	6.72	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:13		Site:						
Sample #: <u>416462-038</u>		Client Sample #: SB-42D-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	6.66	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:40		Site:						
Sample #: <u>416462-039</u>		Client Sample #: SB-44B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic	4.67	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:46		Site:						
Sample #: <u>416462-040</u>		Client Sample #: SB-44B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:46		Site:						
Sample #: <u>416462-041</u>		Client Sample #: SB-44B-1.5' (DUP)			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:51		Site:						
Sample #: <u>416462-042</u>		Client Sample #: SB-44B-2.5			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:14		Site:						
Sample #: <u>416462-043</u>		Client Sample #: SB-44D-0.5			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203482					
Arsenic	15.9	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:23		Site:						
Sample #: <u>416462-044</u>		Client Sample #: SB-44D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 09:29		Site:						
Sample #: <u>416462-045</u>		Client Sample #: SB-44D-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:35		Site:						
Sample #: <u>416462-046</u>		Client Sample #: SB-47B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	13.2	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:35		Site:						
Sample #: <u>416462-047</u>		Client Sample #: SB-47B-0.5' (DUP)			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	27.0	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:40		Site:						
Sample #: <u>416462-048</u>		Client Sample #: SB-47B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:46		Site:						
Sample #: <u>416462-049</u>		Client Sample #: SB-47B-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:16		Site:						
Sample #: <u>416462-050</u>		Client Sample #: SB-47C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311		QCBatchID: QC1204491					
Arsenic	1450	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	131	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1204490					
Arsenic	6980	100	13	200	ug/L	07/23/19	07/25/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:25		Site:						
Sample #: <u>416462-051</u>		Client Sample #: SB-47C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	6.28	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:30		Site:						
Sample #: <u>416462-052</u>		Client Sample #: SB-47C-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	8.30	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:12		Site:						
Sample #: <u>416462-053</u>		Client Sample #: SB-47D-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	6.18	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:15		Site:						
Sample #: <u>416462-054</u>		Client Sample #: SB-47D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 13:21		Site:						
Sample #: <u>416462-055</u>		Client Sample #: SB-47D-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:07		Site:						
Sample #: <u>416462-056</u>		Client Sample #: SB-48B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	15.5	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:15		Site:						
Sample #: <u>416462-057</u>		Client Sample #: SB-48B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:21		Site:						
Sample #: <u>416462-058</u>		Client Sample #: SB-48B-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:30		Site:						
Sample #: <u>416462-059</u>		Client Sample #: SB-48C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	5.90	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:38		Site:						
Sample #: <u>416462-060</u>		Client Sample #: SB-48C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:43		Site:						
Sample #: <u>416462-061</u>		Client Sample #: SB-48C-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 08:52		Site:						
Sample #: <u>416462-062</u>		Client Sample #: SB-48D-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic	15.3	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 08:58		Site:							
Sample #: <u>416462-063</u>		Client Sample #: SB-48D-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 09:03		Site:							
Sample #: <u>416462-064</u>		Client Sample #: SB-48D-2.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 09:53		Site:							
Sample #: <u>416462-065</u>		Client Sample #: SB-50A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic		22.8	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 09:57		Site:							
Sample #: <u>416462-066</u>		Client Sample #: SB-50A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 09:50		Site:							
Sample #: <u>416462-067</u>		Client Sample #: SB-50B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 1311		QCBatchID: QC1204491					
Arsenic		2110	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic		633	10	1.08	3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1204490					
Arsenic		9310	100	13	200	ug/L	07/23/19	07/25/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 09:56		Site:							
Sample #: <u>416462-068</u>		Client Sample #: SB-50B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic		56.6	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 09:30		Site:							
Sample #: <u>416462-069</u>		Client Sample #: SB-50C-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic		7.71	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:43		Site:							
Sample #: 416462-070		Client Sample #: SB-50C-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:34		Site:							
Sample #: 416462-071		Client Sample #: SB-50D-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203483				
Arsenic		69.0	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: STLC			QCBatchID: QC1204490				
Arsenic		2590	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:34		Site:							
Sample #: 416462-072		Client Sample #: SB-50D-0.5' (DUP)			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203483				
Arsenic		32.1	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:37		Site:							
Sample #: 416462-073		Client Sample #: SB-50D-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1204495				
Arsenic		6.39	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:15		Site:							
Sample #: 416462-074		Client Sample #: SB-51A-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203483				
Arsenic		26.8	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 09:19		Site:							
Sample #: 416462-075		Client Sample #: SB-51A-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 06/19/2019 09:15		Site:						
Sample #: <u>416462-076</u>		Client Sample #: SB-51B-0.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311				QCBatchID: QC1204491			
Arsenic	3850	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1203483			
Arsenic	395	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1204490			
Arsenic	38100	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 06/19/2019 09:23		Site:						
Sample #: <u>416462-077</u>		Client Sample #: SB-51B-1.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:				QCBatchID:			
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1204495			
Arsenic	11.0	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 06/19/2019 08:58		Site:						
Sample #: <u>416462-078</u>		Client Sample #: SB-51C-0.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 1311				QCBatchID: QC1204491			
Arsenic	1000	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1203483			
Arsenic	136	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1204490			
Arsenic	6000	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 06/19/2019 09:03		Site:						
Sample #: <u>416462-079</u>		Client Sample #: SB-51C-1.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:				QCBatchID:			
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1204495			
Arsenic	8.42	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 06/19/2019 08:59		Site:						
Sample #: <u>416462-080</u>		Client Sample #: SB-51D-0.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1203483			
Arsenic	92.9	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1204490			
Arsenic	4240	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 09:03		Site:						
Sample #: <u>416462-081</u>		Client Sample #: SB-51D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:						QCBatchID:	
N/A	N/A	1						
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1204495	
Arsenic	8.86	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 14:53		Site:						
Sample #: <u>416462-082</u>		Client Sample #: SB-52A-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1203483	
Arsenic	15.0	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 15:00		Site:						
Sample #: <u>416462-083</u>		Client Sample #: SB-52A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 14:50		Site:						
Sample #: <u>416462-084</u>		Client Sample #: SB-52B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1203483	
Arsenic	5.52	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 14:54		Site:						
Sample #: <u>416462-085</u>		Client Sample #: SB-52B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 14:37		Site:						
Sample #: <u>416462-086</u>		Client Sample #: SB-52C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1203483	
Arsenic	27.7	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 14:42		Site:						
Sample #: <u>416462-087</u>		Client Sample #: SB-52C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:						QCBatchID:	
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:14		Site:							
Sample #: <u>416462-088</u>		Client Sample #: SB-52D-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203483					
Arsenic		23.5	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:24		Site:							
Sample #: <u>416462-089</u>		Client Sample #: SB-52D-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 13:43		Site:							
Sample #: <u>416462-090</u>		Client Sample #: SB-53A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic		54.9	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 13:49		Site:							
Sample #: <u>416462-091</u>		Client Sample #: SB-53A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Water		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 07:35		Site:							
Sample #: <u>416462-092</u>		Client Sample #: Equipment Blank - Day 1		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3010A		QCBatchID: QC1203406					
Lead		ND	1	0.005	0.01	mg/L	06/20/19	06/24/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3010A		QCBatchID: QC1203535					
Arsenic		ND	1	0.31	2	ug/L	06/25/19	06/25/19	SBW

Matrix: Water		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 11:24		Site:							
Sample #: <u>416462-093</u>		Client Sample #: Equipment Blank - Day 2		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3010A		QCBatchID: QC1203406					
Lead		ND	1	0.005	0.01	mg/L	06/20/19	06/25/19	KLN
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3010A		QCBatchID: QC1203535					
Arsenic		ND	1	0.31	2	ug/L	06/25/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 13:57		Site:							
Sample #: <u>416462-094</u>		Client Sample #: SB-53B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic		65.3	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:05		Site:							
Sample #: 416462-095		Client Sample #: SB-53B-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:05		Site:							
Sample #: 416462-096		Client Sample #: SB-53B-1.5' (DUP)		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:25		Site:							
Sample #: 416462-097		Client Sample #: SB-53D-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 1311		QCBatchID: QC1204491					
Arsenic		1910	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic		136	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 NELAC		Prep Method: STLC		QCBatchID: QC1204490					
Arsenic		8990	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/18/2019 14:42		Site:							
Sample #: 416462-098		Client Sample #: SB-53D-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic		67.6	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 08:06		Site:							
Sample #: 416462-099		Client Sample #: SB-54A-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic		5.35	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 08:10		Site:							
Sample #: 416462-100		Client Sample #: SB-54A-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 06/19/2019 07:55		Site:							
Sample #: 416462-101		Client Sample #: SB-54B-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic		8.83	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:00		Site:						
Sample #: 416462-102		Client Sample #: SB-54B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:	QCBatchID:						
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 07:56		Site:						
Sample #: 416462-103		Client Sample #: SB-54C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B	QCBatchID: QC1203484						
Arsenic	5.65	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:07		Site:						
Sample #: 416462-104		Client Sample #: SB-54C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:	QCBatchID:						
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:12		Site:						
Sample #: 416462-105		Client Sample #: SB-54D-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B	QCBatchID: QC1203484						
Arsenic	9.40	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:17		Site:						
Sample #: 416462-106		Client Sample #: SB-54D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:	QCBatchID:						
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:21		Site:						
Sample #: 416462-107		Client Sample #: SB-55A-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B	QCBatchID: QC1203484						
Arsenic	6.41	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:25		Site:						
Sample #: 416462-108		Client Sample #: SB-55A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:	QCBatchID:						
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:18		Site:							
Sample #: <u>416462-109</u>		Client Sample #: SB-55B-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic		87.3	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: STLC			QCBatchID: QC1204490				
Arsenic		3760	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:24		Site:							
Sample #: <u>416462-110</u>		Client Sample #: SB-55B-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1204495				
Arsenic		8.35	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:30		Site:							
Sample #: <u>416462-111</u>		Client Sample #: SB-55C-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic		55.4	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: STLC			QCBatchID: QC1204490				
Arsenic		2280	100	13	200	ug/L	07/23/19	07/25/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:36		Site:							
Sample #: <u>416462-112</u>		Client Sample #: SB-55C-1.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1204495				
Arsenic		7.75	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:36		Site:							
Sample #: <u>416462-113</u>		Client Sample #: SB-55C-1.5' (DUP)			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD		Prep Method:			QCBatchID:				
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 06/19/2019 08:31		Site:							
Sample #: <u>416462-114</u>		Client Sample #: SB-55D-0.5'			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic		21.1	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 08:37		Site:						
Sample #: <u>416462-115</u>		Client Sample #: SB-55D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 12:04		Site:						
Sample #: <u>416462-116</u>		Client Sample #: SB-57A-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic	6.03	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 12:09		Site:						
Sample #: <u>416462-117</u>		Client Sample #: SB-57A-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 12:11		Site:						
Sample #: <u>416462-118</u>		Client Sample #: SB-57A-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:35		Site:						
Sample #: <u>416462-119</u>		Client Sample #: SB-57B-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC	Prep Method: EPA 1311		QCBatchID: QC1204491					
Arsenic	791	10	3.1	20	ug/L		07/23/19	JP
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1203484					
Arsenic	151	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Method: EPA 6020 NELAC	Prep Method: STLC		QCBatchID: QC1204490					
Arsenic	5600	100	13	200	ug/L	07/23/19	07/25/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:45		Site:						
Sample #: <u>416462-120</u>		Client Sample #: SB-57B-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						
Method: EPA 6020 NELAC	Prep Method: EPA 3050B		QCBatchID: QC1204495					
Arsenic	5.42	1	0.108	0.3	mg/Kg	07/23/19	07/23/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:50		Site:						
Sample #: <u>416462-121</u>		Client Sample #: SB-57B-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:24		Site:						
Sample #: <u>416462-122</u>		Client Sample #: SB-57C-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic	6.95	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:31		Site:						
Sample #: <u>416462-123</u>		Client Sample #: SB-57C-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:			QCBatchID:				
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:31		Site:						
Sample #: <u>416462-124</u>		Client Sample #: SB-57C-1.5' (DUP)			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:			QCBatchID:				
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:33		Site:						
Sample #: <u>416462-125</u>		Client Sample #: SB-57C-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:			QCBatchID:				
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:44		Site:						
Sample #: <u>416462-126</u>		Client Sample #: SB-57D-0.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic	6.86	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:49		Site:						
Sample #: <u>416462-127</u>		Client Sample #: SB-57D-1.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:			QCBatchID:				
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/18/2019 11:53		Site:						
Sample #: <u>416462-128</u>		Client Sample #: SB-57D-2.5'			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: AL HOLD	Prep Method:			QCBatchID:				
N/A	N/A	1						
Matrix: Solid		Client: ES Engineering			Collector: Client			
Sampled: 06/19/2019 10:55		Site:						
Sample #: <u>416462-129</u>		Client Sample #: SB-33C-0.5' (DUP)			Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1203484				
Arsenic	23.5	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 06/19/2019 10:34	Site:	
Sample #: <u>416462-130</u>	Client Sample #: SB-37B-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1203484	
Arsenic	32.7	1	0.108	0.3	mg/Kg	06/24/19	06/25/19	SBW

QCBatchID: QC1203406	Analyst: dswafford	Method: EPA 6010B
Matrix: Water	Analyzed: 06/20/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203406MB1						
Antimony	ND	mg/L	0.014	0.04		
Arsenic	ND	mg/L	0.008	0.01		
Barium	ND	mg/L	0.002	0.01		
Beryllium	ND	mg/L	0.001	0.005		
Boron	ND	mg/L	0.03	0.05		
Cadmium	ND	mg/L	0.001	0.005		
Chromium	ND	mg/L	0.002	0.01		
Cobalt	ND	mg/L	0.002	0.005		
Copper	0.008 J	mg/L	0.001	0.01		
Iron	0.016 J	mg/L	0.008	0.02		
Lead	ND	mg/L	0.005	0.01		
Manganese	ND	mg/L	0.003	0.01		
Molybdenum	0.006 J	mg/L	0.005	0.01		
Nickel	ND	mg/L	0.003	0.02		
Selenium	ND	mg/L	0.016	0.03		
Silver	ND	mg/L	0.003	0.005		
Sodium	0.380 J	mg/L	0.067	0.5		
Thallium	ND	mg/L	0.009	0.05		
Vanadium	0.003 J	mg/L	0.002	0.005		
Zinc	ND	mg/L	0.007	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203406LCS1											
Antimony	2		1.93		mg/L	97			80-120		
Arsenic	2		1.81		mg/L	91			80-120		
Barium	2		1.90		mg/L	95			80-120		
Beryllium	2		2.05		mg/L	103			80-120		
Cadmium	2		1.86		mg/L	93			80-120		
Chromium	2		2.02		mg/L	101			80-120		
Cobalt	2		1.96		mg/L	98			80-120		
Copper	2		1.89		mg/L	95			80-120		
Lead	2		1.90		mg/L	95			80-120		
Molybdenum	2		2.03		mg/L	102			80-120		
Nickel	2		1.97		mg/L	99			80-120		
Selenium	2		1.91		mg/L	96			80-120		
Silver	2		1.99		mg/L	100			80-120		
Thallium	2		1.89		mg/L	95			80-120		
Vanadium	2		2.09		mg/L	105			80-120		
Zinc	2		1.94		mg/L	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203406MS1, QC1203406MSD1											Source: 416462-092	
Antimony	ND	1	1	1.09	1.06	mg/L	109	106	2.8	75-125	20	
Arsenic	0.014	1	1	1.01	0.980	mg/L	100	97	3.0	75-125	20	
Barium	ND	1	1	0.919	0.983	mg/L	92	98	6.7	75-125	20	
Beryllium	ND	1	1	0.985	1.02	mg/L	99	102	3.5	75-125	20	
Cadmium	ND	1	1	0.910	0.964	mg/L	91	96	5.8	75-125	20	
Chromium	ND	1	1	0.976	1.03	mg/L	98	103	5.4	75-125	20	

QCBatchID: **QC1203406**

Analyst: dswafford

Method: EPA 6010B

Matrix: Water

Analyzed: 06/20/2019

Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1203406MS1, QC1203406MSD1											Source: 416462-092	
Cobalt	ND	1	1	0.982	1.04	mg/L	98	104	5.7	75-125	20	
Copper	0.006	1	1	0.871	0.887	mg/L	87	88	1.8	75-125	20	
Lead	ND	1	1	0.936	0.963	mg/L	94	96	2.8	75-125	20	
Molybdenum	ND	1	1	0.951	0.980	mg/L	95	98	3.0	75-125	20	
Nickel	ND	1	1	0.982	1.04	mg/L	98	104	5.7	75-125	20	
Selenium	ND	1	1	0.924	0.920	mg/L	92	92	0.4	75-125	20	
Silver	ND	1	1	1.13	1.17	mg/L	113	117	3.5	75-125	20	
Thallium	ND	1	1	0.949	0.982	mg/L	95	98	3.4	75-125	20	
Vanadium	ND	1	1	1.01	1.00	mg/L	101	100	1.0	75-125	20	
Zinc	ND	1	1	0.932	0.994	mg/L	93	99	6.4	75-125	20	

QCBatchID: QC1203480	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203480MB1						
Antimony	1.28 J	mg/Kg	0.37	3		
Arsenic	0.99 J	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	ND	mg/Kg	0.31	1		
Lead	ND	mg/Kg	0.32	1		
Molybdenum	0.68 J	mg/Kg	0.13	1		
Nickel	ND	mg/Kg	0.2	1.5		
Selenium	ND	mg/Kg	0.72	3		
Silver	ND	mg/Kg	0.13	0.5		
Thallium	ND	mg/Kg	0.42	3		
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	0.86 J	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203480LCS1											
Antimony	100		107		mg/Kg	107			80-120		
Arsenic	100		103		mg/Kg	103			80-120		
Barium	100		108		mg/Kg	108			80-120		
Beryllium	100		114		mg/Kg	114			80-120		
Cadmium	100		104		mg/Kg	104			80-120		
Chromium	100		100		mg/Kg	100			80-120		
Cobalt	100		107		mg/Kg	107			80-120		
Copper	100		102		mg/Kg	102			80-120		
Lead	100		101		mg/Kg	101			80-120		
Molybdenum	100		109		mg/Kg	109			80-120		
Nickel	100		105		mg/Kg	105			80-120		
Selenium	100		92.8		mg/Kg	93			80-120		
Silver	100		103		mg/Kg	103			80-120		
Thallium	100		101		mg/Kg	101			80-120		
Vanadium	100		114		mg/Kg	114			80-120		
Zinc	100		103		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203480MS1, QC1203480MSD1										Source: 416342-001		
Antimony	1.91	100	100	46.1	43.3	mg/Kg	44	41	6.3	75-125	20	M
Arsenic	3.16	100	100	105	100	mg/Kg	102	97	4.9	75-125	20	
Barium	29.2	100	100	136	131	mg/Kg	107	102	3.7	75-125	20	
Beryllium	ND	100	100	111	108	mg/Kg	111	108	2.7	75-125	20	
Cadmium	0.38	100	100	96.2	89.6	mg/Kg	96	89	7.1	75-125	20	
Chromium	33.3	100	100	134	126	mg/Kg	101	93	6.2	75-125	20	
Cobalt	7.42	100	100	104	99.5	mg/Kg	97	92	4.4	75-125	20	
Copper	12.6	100	100	106	102	mg/Kg	93	89	3.8	75-125	20	
Lead	5.18	100	100	100	96.2	mg/Kg	95	91	3.9	75-125	20	
Molybdenum	0.58	100	100	101	96.7	mg/Kg	100	96	4.4	75-125	20	

QCBatchID: <u>QC1203480</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203480MS1, QC1203480MSD1											Source: 416342-001	
Nickel	34.1	100	100	134	129	mg/Kg	100	95	3.8	75-125	20	
Selenium	ND	100	100	92.9	88.0	mg/Kg	93	88	5.4	75-125	20	
Silver	ND	100	100	99.2	93.9	mg/Kg	99	94	5.5	75-125	20	
Thallium	0.87	100	100	94.2	95.3	mg/Kg	93	94	1.2	75-125	20	
Vanadium	25.9	100	100	140	134	mg/Kg	114	108	4.4	75-125	20	
Zinc	27.0	100	100	124	109	mg/Kg	97	82	12.9	75-125	20	

QCBatchID: QC1203481	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203481MB1						
Antimony	ND	mg/Kg	0.37	3		
Arsenic	0.79 J	mg/Kg	0.36	1		
Barium	ND	mg/Kg	0.23	1		
Beryllium	ND	mg/Kg	0.17	0.5		
Cadmium	ND	mg/Kg	0.21	0.5		
Chromium	ND	mg/Kg	0.13	1		
Cobalt	ND	mg/Kg	0.19	0.5		
Copper	0.38 J	mg/Kg	0.31	1		
Lead	ND	mg/Kg	0.32	1		
Molybdenum	ND	mg/Kg	0.13	1		
Nickel	ND	mg/Kg	0.2	1.5		
Selenium	ND	mg/Kg	0.72	3		
Silver	0.32 J	mg/Kg	0.13	0.5		
Thallium	ND	mg/Kg	0.42	3		
Vanadium	ND	mg/Kg	0.37	0.5		
Zinc	ND	mg/Kg	0.28	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203481LCS1											
Antimony	100		113		mg/Kg	113			80-120		
Arsenic	100		101		mg/Kg	101			80-120		
Barium	100		93.0		mg/Kg	93			80-120		
Beryllium	100		95.8		mg/Kg	96			80-120		
Cadmium	100		93.8		mg/Kg	94			80-120		
Chromium	100		97.3		mg/Kg	97			80-120		
Cobalt	100		98.6		mg/Kg	99			80-120		
Copper	100		90.3		mg/Kg	90			80-120		
Lead	100		103		mg/Kg	103			80-120		
Molybdenum	100		111		mg/Kg	111			80-120		
Nickel	100		107		mg/Kg	107			80-120		
Selenium	100		93.9		mg/Kg	94			80-120		
Silver	100		99.8		mg/Kg	100			80-120		
Thallium	100		99.4		mg/Kg	99			80-120		
Vanadium	100		99.7		mg/Kg	100			80-120		
Zinc	100		104		mg/Kg	104			80-120		

Matrix Spike/Matrix Spike Duplicate Summary													
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD		
QC1203481MS1, QC1203481MSD1										Source: 416470-001			
Antimony	ND	100	100	15.1	16.6	mg/Kg	15	17	9.5	75-125	20	M	
Arsenic	8.87	100	100	95.1	113	mg/Kg	86	104	17.2	75-125	20		
Barium	136	100	100	277	290	mg/Kg	141	154	4.6	75-125	20	M	
Beryllium	ND	100	100	95.9	102	mg/Kg	96	102	6.2	75-125	20		
Cadmium	2.18	100	100	85.6	94.6	mg/Kg	83	92	10.0	75-125	20		
Chromium	50.5	100	100	151	168	mg/Kg	101	118	10.7	75-125	20		
Cobalt	9.04	100	100	97.8	108	mg/Kg	89	99	9.9	75-125	20		
Copper	40.8	100	100	129	130	mg/Kg	88	89	0.8	75-125	20		
Lead	4.98	100	100	90.1	105	mg/Kg	85	100	15.3	75-125	20		
Molybdenum	7.55	100	100	83.4	98.0	mg/Kg	76	90	16.1	75-125	20		

QCBatchID: <u>QC1203481</u>	Analyst: dswafford	Method: EPA 6010B
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD		
QC1203481MS1, QC1203481MSD1											Source: 416470-001		
Nickel	62.0	100	100	148	178	mg/Kg	86	116	18.4	75-125	20	M	
Selenium	ND	100	100	80.8	102	mg/Kg	81	102	23.2	75-125	20		
Silver	ND	100	100	83.1	87.1	mg/Kg	83	87	4.7	75-125	20		
Thallium	ND	100	100	78.0	94.2	mg/Kg	78	94	18.8	75-125	20		
Vanadium	46.1	100	100	148	165	mg/Kg	102	119	10.9	75-125	20	M	
Zinc	105	100	100	196	233	mg/Kg	91	128	17.2	75-125	20		

QCBatchID: QC1203482	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1203482MB1					
Antimony	1.408	mg/Kg	0.282	0.5	B
Arsenic	0.158 J	mg/Kg	0.108	0.3	
Barium	ND	mg/Kg	0.209	0.5	
Beryllium	ND	mg/Kg	0.16	0.5	
Cadmium	ND	mg/Kg	0.141	0.5	
Chromium	ND	mg/Kg	0.372	0.5	
Cobalt	ND	mg/Kg	0.13	0.5	
Copper	ND	mg/Kg	0.181	0.5	
Lead	ND	mg/Kg	0.128	0.5	
Molybdenum	0.371 J	mg/Kg	0.125	0.5	
Nickel	ND	mg/Kg	0.381	0.5	
Selenium	ND	mg/Kg	0.199	0.5	
Silver	ND	mg/Kg	0.136	0.5	
Thallium	ND	mg/Kg	0.128	0.5	
Vanadium	ND	mg/Kg	0.155	0.5	
Zinc	ND	mg/Kg	0.756	1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203482LCS1											
Antimony	50		50.4		mg/Kg	101			80-120		
Arsenic	50		48.0		mg/Kg	96			80-120		
Barium	50		47.9		mg/Kg	96			80-120		
Beryllium	50		51.5		mg/Kg	103			80-120		
Cadmium	50		50.6		mg/Kg	101			80-120		
Chromium	50		48.2		mg/Kg	96			80-120		
Cobalt	50		47.1		mg/Kg	94			80-120		
Copper	50		46.3		mg/Kg	93			80-120		
Lead	50		48.3		mg/Kg	97			80-120		
Molybdenum	50		47.7		mg/Kg	95			80-120		
Nickel	50		47.4		mg/Kg	95			80-120		
Selenium	50		50.9		mg/Kg	102			80-120		
Silver	50		47.2		mg/Kg	94			80-120		
Thallium	50		46.4		mg/Kg	93			80-120		
Vanadium	50		50.0		mg/Kg	100			80-120		
Zinc	50		51.5		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203482MS1, QC1203482MSD1												Source: 416362-003
Antimony	ND	50	50	2.52	3.18	mg/Kg	5	6	23.2	75-125	20	M,D
Arsenic	ND	50	50	47.7	48.4	mg/Kg	95	97	1.5	75-125	20	
Barium	11.0	50	50	61.7	63.2	mg/Kg	101	104	2.4	75-125	20	
Beryllium	ND	50	50	49.7	50.6	mg/Kg	99	101	1.8	75-125	20	
Cadmium	ND	50	50	52.5	50.4	mg/Kg	105	101	4.1	75-125	20	
Chromium	47.0	50	50	98.5	93.9	mg/Kg	103	94	4.8	75-125	20	
Cobalt	27.9	50	50	68.2	69.0	mg/Kg	81	82	1.2	75-125	20	
Copper	29.9	50	50	72.4	75.1	mg/Kg	85	90	3.7	75-125	20	
Lead	1.031	50	50	48.9	47.5	mg/Kg	96	93	2.9	75-125	20	
Molybdenum	ND	50	50	39.5	38.0	mg/Kg	79	76	3.9	75-125	20	

QCBatchID: <u>QC1203482</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203482MS1, QC1203482MSD1										Source: 416362-003		
Nickel	66.1	50	50	103	105	mg/Kg	74	78	1.9	75-125	20	M
Selenium	ND	50	50	55.7	56.2	mg/Kg	111	112	0.9	75-125	20	
Silver	ND	50	50	48.5	46.7	mg/Kg	97	93	3.8	75-125	20	
Thallium	0.174	50	50	46.5	44.7	mg/Kg	93	89	3.9	75-125	20	
Vanadium	61.2	50	50	99.4	101	mg/Kg	76	80	1.6	75-125	20	
Zinc	54.4	50	50	103	110	mg/Kg	97	111	6.6	75-125	20	

QCBatchID: QC1203483	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203483MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203483LCS1											
Arsenic	50		51.1		mg/Kg	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203483MS1, QC1203483MSD1											Source: 416462-046	
Arsenic	13.2	50	50	53.7	53.0	mg/Kg	81	80	1.3	75-125	20	

QCBatchID: <u>QC1203484</u>	Analyst: dswafford	Method: EPA 6020
Matrix: Solid	Analyzed: 06/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203484MB1						
Arsenic	ND	mg/Kg	0.108	0.3		
Thallium	ND	mg/Kg	0.128	0.5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203484LCS1											
Arsenic	50		49.9		mg/Kg	100			80-120		
Thallium	50		48.7		mg/Kg	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1203484MS1, QC1203484MSD1											Source: 416462-090	
Arsenic	54.9	50	50	102	105	mg/Kg	94	100	2.9	75-125	20	
Thallium	0.258	50	50	44.4	47.3	mg/Kg	88	94	6.3	75-125	20	

QCBatchID: <u>QC1203535</u>	Analyst: sbailey-woo	Method: EPA 6020
Matrix: Water	Analyzed: 06/25/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1203535MB1						
Arsenic	ND	ug/L	0.31	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1203535LCS1											
Arsenic	50		46.0		ug/L	92			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1203535MS1, QC1203535MSD1											Source: 416462-092	
Arsenic	ND	50	50	45.3	46.0	ug/L	91	92	1.5	75-125	20	

QCBatchID: <u>QC1204490</u>	Analyst: cmorales	Method: EPA 6020
Matrix: Solid	Analyzed: 07/25/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1204490MB1						
Arsenic	ND	ug/L	0.13	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1204490LCS1, QC1204490LCSD1											
Arsenic	1000	1000	1010	1000	ug/L	101	100	1	80-120	20	

QCBatchID: <u>QC1204491</u>	Analyst: cmorales	Method: EPA 6020
Matrix: Solid	Analyzed: 07/23/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1204491MB1						
Arsenic	ND	ug/L	0.31	2		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1204491LCS1											
Arsenic	50		52.6		ug/L	105			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1204491MS1, QC1204491MSD1											Source: 416462-050	
Arsenic	1450	50	50	1400	1410	ug/L	0	0	0.7	80-120	NC	

QCBatchID: <u>QC1204495</u>	Analyst: cmorales	Method: EPA 6020
Matrix: Solid	Analyzed: 07/23/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1204495MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1204495LCS1											
Arsenic	50		47.9		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1204495MS1, QC1204495MSD1											Source: 416462-120	
Arsenic	5.42	50	50	46.5	45.8	mg/Kg	82	81	1.5	75-125	20	


Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.



Definitions



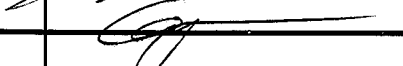
DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds


ENTHALPY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868			Lab No: 416462	Standard: <input checked="" type="checkbox"/>	4 Day: <input type="checkbox"/>	3 Day: <input type="checkbox"/>						
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: 1 of 14	2 Day: <input type="checkbox"/>	1 Day: <input type="checkbox"/>							
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other						



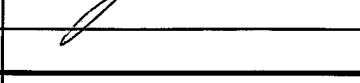
CUSTOMER INFORMATION		PROJECT INFORMATION		Analysis Request										Test Instructions / Comments			
Company:	ES Engineering Services, LLC	Name:	Shenandoah Elementary School	EPA 6010B - Lead	EPA 6020 - Arsenic												
Report To:	Dane Nygaard	Number:	029RC1-191395														
Email:	dnygaard@es-online.com	P.O. #:	PO1035690														
Address:	1 Park Plaza, Suite 1000	Address:	2450 Shenandoah Street														
	Irvine, CA 92614		Los Angeles, California														
Phone:	714-919-6500	Global ID:															
Fax:	714-919-6501	Sampled By:	Kris Kern														


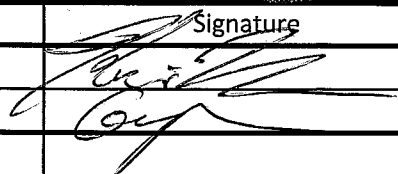
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic									
1 SB-33A-0.5'	6/19/19	1105	Soil	1 glass Jar	ICE		X									
2 SB-33A-1.5'		1109					X									Hold
3 SB-33B-0.5'		1051					X									
4 SB-33B-1.5'		1059					X									Hold
5 SB-33C-0.5'		1055					X									
6 SB-33C-1.5'		1101					X									Hold
7 SB-33D-0.5'		1106					X									
8 SB-33D-1.5'		1110					X									Hold
9 SB-37A-0.5'		1034					X									
10 SB-37A-1.5'		1044					X									Hold



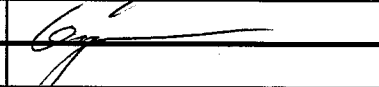
	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Kris Kern	ES	6/19/19 @ 1539
¹ Received By:		D. Kern	ES	6/19/19 1139
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				


ENTHALPY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)												
806 N. Batavia St., Orange, CA 92868			Lab No: <u>416462</u>	Standard: <input checked="" type="checkbox"/>	4 Day: <input type="checkbox"/>	3 Day: <input type="checkbox"/>											
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>2</u> of <u>14</u>	2 Day: <input type="checkbox"/>	1 Day: <input type="checkbox"/>	Same Day: <input type="checkbox"/>											
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other												
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments			
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic													
Report To: Dane Nygaard		Number: 029RC1-191395															
Email: dnygaard@es-online.com		P.O. #: PO1035690															
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street															
Irvine, CA 92614		Los Angeles, California															
Phone: 714-919-6500		Global ID:															
Fax: 714-919-6501		Sampled By: Kris Kern															
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.											
1	SB-37B-0.5'	6/19/19	1034	Soil	1 Glass Jar	HCE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	SB-37B-1.5'	I	1041	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
3	SB-37C-0.5'	I	1017	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	SB-37C-1.5'	I	1023	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
5	SB-37D-0.5'	I	1011	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	SB-37D-1.5'	I	1120	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
7	SB-39A-0.5'	6/18/19	1014	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	SB-39A-1.5'	I	1020	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
9	SB-39A-2.5'	I	1024	I	I	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold
10				I	I	I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Signature		Print Name		Company / Title				Date / Time									
1 Relinquished By: 		Kris Kern		ES				6/19/19 1540									
1 Received By: 		G. Kern		GK				6/19/19 1540									
2 Relinquished By:																	
2 Received By:																	
3 Relinquished By:																	
3 Received By:																	


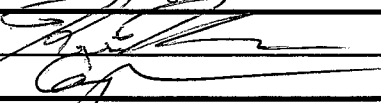
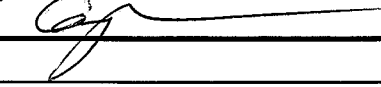
ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933			Chain of Custody Record Lab No: 416462 Page: 3 of 14		Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>															
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other					Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other												
CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request												Test Instructions / Comments	
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic																
Report To: Dane Nygaard		Number: 029RC1-191395																		
Email: dnygaard@es-online.com		P.O. #: PO1035690																		
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street																		
Irvine, CA 92614		Los Angeles, California																		
Phone: 714-919-6500		Global ID:		EPA 6010B - Lead EPA 6020 - Arsenic																
Fax: 714-919-6501		Sampled By: Kris Kern																		
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.														
1 SB-39B-0.5'		6/18/19	1011	Soil	1 Glass Jar	ICE														
2 SB-39B-1.5'			1016																Hold	
3 SB-39B-2.5'			1022																Hold	
4 SB-39D-0.5'			1032																	
5 SB-39D-1.5'			1035																Hold	
6 SB-39D-2.5'			1039																Hold	
7 SB-42A-0.5'			1037																	
8 SB-42A-1.5'			1041																Hold	
9 SB-42A-2.5'			1047																Hold	
10																				
Signature		Print Name		Company / Title		Date / Time														
1 Relinquished By: [Signature]		Kris Kern		ES		6/18/19 1540														
1 Received By: [Signature]		[Signature]		EA		6/18/19 1540														
2 Relinquished By:																				
2 Received By:																				
3 Relinquished By:																				
3 Received By:																				


ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868			Lab No:	416462		Standard:	<input checked="" type="checkbox"/>		4 Day:		3 Day:				
Phone: (714) 771-6900 Fax: (714) 771-9933			Page:	4 of 14		2 Day:		1 Day:		Same Day:					
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other					Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request					Test Instructions / Comments				
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic									
Report To:	Dane Nygaard		Number:	029RC1-191395											
Email:	dnygaard@es-online.com		P.O. #:	PO1035690											
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street											
	Irvine, CA 92614			Los Angeles, California											
Phone:	714-919-6500		Global ID:												
Fax:	714-919-6501		Sampled By:	Kris Kern											
Sample ID			Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.								
29	1	SB-42B-0.5'	6/18/19	1048	Soil	1 600g Jar	ICE	X	X						
30	2	SB-42B-1.5'	6/19/19	1053				X	X						Hold
31	3	SB-42B-2.5'		1055				X	X						Hold
32	4	SB-42C-0.5'		1103				X	X						
33	5	SB-42C-1.5'		1122				X	X						Hold
34	6	SB-42C-1.5' (DUP)		1122				X	X						Hold
35	7	SB-42C-2.5'		1126				X	X						Hold
36	8	SB-42D-0.5'		1104				X	X						
37	9	SB-42D-1.5'		1109				X	X						Hold
38	10	SB-42D-2.5'		1113				X	X						Hold
			Signature		Print Name		Company / Title			Date / Time					
1 Relinquished By:					Kris Kern		ES			6/19/19 2:540					
1 Received By:					G Kern		ES			6/19/19 154W					
2 Relinquished By:															
2 Received By:															
3 Relinquished By:															
3 Received By:															

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Chain of Custody Record Lab No: <u>416462</u> Page: <u>5</u> of <u>14</u>			Turn Around Time (Rush by advanced notice only) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Standard:</td> <td><input checked="" type="checkbox"/></td> <td>4 Day:</td> <td><input type="checkbox"/></td> <td>3 Day:</td> <td><input type="checkbox"/></td> </tr> <tr> <td>2 Day:</td> <td><input type="checkbox"/></td> <td>1 Day:</td> <td><input type="checkbox"/></td> <td>Same Day:</td> <td><input type="checkbox"/></td> </tr> </table>										Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>	2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>																																																																																																																																																																																																		
Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>																																																																																																																																																																																																																									
2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>																																																																																																																																																																																																																									
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other																																																																																																																																																																																																																									
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments																																																																																																																																																																																																														
Company:		ES Engineering Services, LLC		Name:		Shenandoah Elementary School		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6010B - Lead</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 6020 - Arsenic</div> </div>																																																																																																																																																																																																																						
Report To:		Dane Nygaard		Number:		029RC1-191395																																																																																																																																																																																																																								
Email:		dnygaard@es-online.com		P.O. #:		PO1035690																																																																																																																																																																																																																								
Address:		1 Park Plaza, Suite 1000		Address:		2450 Shenandoah Street																																																																																																																																																																																																																								
		Irvine, CA 92614				Los Angeles, California																																																																																																																																																																																																																								
Phone:		714-919-6500		Global ID:																																																																																																																																																																																																																										
Fax:		714-919-6501		Sampled By:		Kris Kern																																																																																																																																																																																																																								
Sample ID			Sampling Date		Sampling Time		Matrix		Container No. / Size		Pres.																																																																																																																																																																																																																			
1 SB-44B-0.5'			6/8/19		0940		Soil		16 liter		ICE		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>								X																				X																				X																				X																				X																				X																				X																				X																				X																				X																					
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
X																																																																																																																																																																																																																														
2 SB-44B-1.5'					0946																Hold																																																																																																																																																																																																									
3 SB-44B-1.5' (DUP)					0946																Hold																																																																																																																																																																																																									
4 SB-44B-2.5'					0951																Hold																																																																																																																																																																																																									
5 SB-44D-0.5'					0914																																																																																																																																																																																																																									
6 SB-44D-1.5'					0923																Hold																																																																																																																																																																																																									
7 SB-44D-2.5'					0929																Hold																																																																																																																																																																																																									
8 SB-47B-0.5'					1335																																																																																																																																																																																																																									
9 SB-47B-0.5' (DUP)					1335																																																																																																																																																																																																																									
10																																																																																																																																																																																																																														
				Signature				Print Name				Company / Title				Date / Time																																																																																																																																																																																																														
1 Relinquished By:								Kris Kern				ES				6/17/19 @ 1540																																																																																																																																																																																																														
1 Received By:																																																																																																																																																																																																																														
2 Relinquished By:																																																																																																																																																																																																																														
2 Received By:																																																																																																																																																																																																																														
3 Relinquished By:																																																																																																																																																																																																																														
3 Received By:																																																																																																																																																																																																																														

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714)771-9933			Chain of Custody Record Lab No: 416462 Page: 6 of 14		Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>																
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other					Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other													
CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request												Test Instructions / Comments		
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic															
Report To:	Dane Nygaard		Number:	029RC1-191395																	
Email:	dnygaard@es-online.com		P.O. #:	PO1035690																	
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street																	
	Irvine, CA 92614			Los Angeles, California																	
Phone:	714-919-6500		Global ID:																		
Fax:	714-919-6501		Sampled By:	Kris Kern																	
Sample ID			Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Analysis Request												Test Instructions / Comments	
1	SB-47B-1.5'		6/18/19	1340	Soil	16 Glass Jar	ICE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Add		
2	SB-47B-2.5'			1346				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold		
3	SB-47C-0.5'			1316				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4	SB-47C-1.5'			1325				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold		
5	SB-47C-2.5'			1330				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold		
6	SB-47D-0.5'			1312				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
7	SB-47D-1.5'			1315				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold		
8	SB-47D-2.5'		+	1321	+	+	+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hold		
9								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			Signature		Print Name		Company / Title		Date / Time												
1 Relinquished By:					Kris Kern		ES		6/19/19 @ 1540												
1 Received By:					G. Kern		GM		6/19/19 1540												
2 Relinquished By:																					
2 Received By:																					
3 Relinquished By:																					
3 Received By:																					



ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)												
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933			Lab No:	416462			Standard:	<input checked="" type="checkbox"/>	4 Day:	<input type="checkbox"/>	<input type="checkbox"/>	3 Day:	<input type="checkbox"/>	<input type="checkbox"/>				
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Page:	7	of	14	2 Day:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	<input type="checkbox"/>	Same Day:	<input type="checkbox"/>	<input type="checkbox"/>				
			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other									
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request									Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead EPA 6020 - Arsenic												
Report To:	Dane Nygaard		Number:	029RC1-191395														
Email:	dnygaard@es-online.com		P.O. #:	PO1035690														
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street														
	Irvine, CA 92614			Los Angeles, California														
Phone:	714-919-6500		Global ID:															
Fax:	714-919-6501		Sampled By:	Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.												
1	SB-4BB-0.5'	6/18/19	0807	Soil	1 Glass Jar	ICE	X											
2	SB-4BB-1.5'	I	0815	I	I	I	X										Aold	
3	SB-4BB-2.5'	I	0821	I	I	I	X										Held	
4	SB-4BC-0.5'	I	0830	I	I	I	X											
5	SB-4BC-1.5'	I	0838	I	I	I	X										Held	
6	SB-4BC-2.5'	I	0843	I	I	I	X										Held	
7	SB-4BD-0.5'	I	0852	I	I	I	X											
8	SB-4BD-1.5'	I	0858	I	I	I	X										Held	
9	SB-4BD-2.5'	I	0903	I	I	I	X										Held	
10																		
Signature		Print Name		Company / Title		Date / Time												
Relinquished By:		Kris Kern		F.S		6/19/19 @ 1542												
Received By:		G Kern		GA		6/19/19 1542												
Relinquished By:																		
Received By:																		
Relinquished By:																		
Received By:																		


ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record			Turn Around Time (Rush by advanced notice only)												
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933			Lab No:	416462			Standard:	<input checked="" type="checkbox"/>	4 Day:		3 Day:							
			Page:	8	of	14	2 Day:		1 Day:		Same Day:							
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other					Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other										
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request									Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B - Lead	EPA 6020 - Arsenic											
Report To:	Dane Nygaard		Number:	029RC1-191395														
Email:	dnygaard@es-online.com		P.O. #:	PO1035690														
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street														
	Irvine, CA 92614			Los Angeles, California														
Phone:	714-919-6500		Global ID:															
Fax:	714-919-6501		Sampled By:	Kris Kern														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.												
1	SB-50A-0.5'	6/19/19	0953	Soil	1 Glass Jar	ICE	X											
2	SB-50A-1.5'		0957				X										Hold	
3	SB-50B-0.5'		0950				X											
4	SB-50B-1.5'		0956				X										Hold	
5	SB-50C-0.5'		0930				X											
6	SB-50C-1.5'		0943				X										Hold	
7	SB-50D-0.5'		0934				X											
8	SB-50D-0.5' (DUP)		0934				X											
9	SB-50D-1.5'		0937				X										Hold	
10																		
Relinquished By:		Signature		Print Name		Company / Title		Date / Time										
1 Relinquished By:				Kris Kern		ES		6/19/19 @ 1542										
1 Received By:				OK		CS		6/19/19 1542										
2 Relinquished By:																		
2 Received By:																		
3 Relinquished By:																		
3 Received By:																		

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868			Lab No:	416462			Standard:	<input checked="" type="checkbox"/>		4 Day:			3 Day:		
Phone: (714) 771-6900 Fax: (714) 771-9933			Page:	9	of	14	2 Day:			1 Day:			Same Day:		
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other							

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request										Test Instructions / Comments						
Company:	ES Engineering Services, LLC			Name:	Shenandoah Elementary School			EPA 6010B - Lead EPA 6020 - Arsenic																
Report To:	Dane Nygaard			Number:	029RC1-191395																			
Email:	dnygaard@es-online.com			P.O. #:	PO1035690																			
Address:	1 Park Plaza, Suite 1000			Address:	2450 Shenandoah Street																			
	Irvine, CA 92614				Los Angeles, California																			
Phone:	714-919-6500			Global ID:																				
Fax:	714-919-6501			Sampled By:	Kris Kern																			

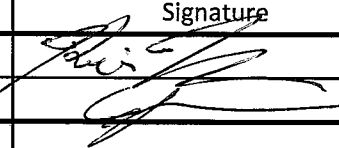

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic															
1 SB-51A-0.5'	6/19/19	0915	Soil	16ss Jar	PCR	X	X															
2 SB-51A-1.5'		0919				X	X														Hold	
3 SB-51B-0.5'		0915				X	X															
4 SB-51B-1.5'		0923				X	X															
5 SB-51C-0.5'		0858				X	X															
6 SB-51C-1.5'		0903				X	X															
7 SB-51D-0.5'		0859				X	X															
8 SB-51D-1.5'		0903				X	X															
9 SB-52A-0.5'		6/18/19	1453				X	X														
10 SB-52A-1.5'	6/18/19	1500				X	X															

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	6/19/19 1542
1 Received By:		Ghr	Ghr	6/19/19 1542
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868			Lab No: <u>416462</u>	Standard: <input checked="" type="checkbox"/>	4 Day: <input type="checkbox"/>	3 Day: <input type="checkbox"/>									
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>11</u> of <u>14</u>	2 Day: <input type="checkbox"/>	1 Day: <input type="checkbox"/>	Same Day: <input type="checkbox"/>									
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other										Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other			

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request										Test Instructions / Comments						
Company:	ES Engineering Services, LLC			Name:	Shenandoah Elementary School			EPA 6010B - Lead EPA 6020 - Arsenic																
Report To:	Dane Nygaard			Number:	029RC1-191395																			
Email:	dnygaard@es-online.com			P.O. #:	PO1035690																			
Address:	1 Park Plaza, Suite 1000			Address:	2450 Shenandoah Street																			
	Irvine, CA 92614				Los Angeles, California																			
Phone:	714-919-6500			Global ID:																				
Fax:	714-919-6501			Sampled By:	Kris Kern																			

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	EPA 6010B - Lead	EPA 6020 - Arsenic															
1 SB-53B-0.5'	6/18/19	1357	Soil	1 Glass Jar	ICE	X																
2 SB-53B-1.5'	L	1405	L	L	L	X															Hold	
3 SB-53B-1.5' (DVP)	L	1405	L	L	L	X															Hold	
4 SB-53D-0.5'	L	1425	L	L	L	X																
5 SB-53D-1.5'	L	1442	L	L	L	X															Hold	
6 SB-54A-0.5'	6/19/19	0806	L	L	L	X																
7 SB-54A-1.5'	L	0810	L	L	L	X															Hold	
8 SB-54B-0.5'	L	0755	L	L	L	X																
9 SB-54B-1.5'	L	0800	L	L	L	X															Hold	
10																						

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Kris Kern	ES	6/19/19 @ 1545
¹ Received By:		Dana Nygaard	ES	6/19/19 @ 1545
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				

**Turn Around Time (rush by advanced notice only)**

416462

--	--

Custom TA

(lab use only)

Test Instructions / Comments

K ₁₅	K ₂₀
-----------------	-----------------

6070 EPA-A5

HOLD

HOLD

	7
x	

	*
	x

	\times
\div	

	+	
+		
		+

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

	X

	X

--	--

Date / Time

6/19/19	1545
6/19/19	1545



ENTHALPY
ANALYTICAL

Chain of Custody Record

Lab No:

416462

Page:

13

of

14

Turn Around Time (rush by advanced notice only)

Standard:

5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃

4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION

Company: ES Engineering Services
Report To: Dave Nguyen
Email: dnguyen@es-online.com
Address: 1 Park Plaza, Suite 1,000
Irvine, CA 92614
Phone: 714 919-6500
Fax:

PROJECT INFORMATION

Quote #:
Proj. Name: Shenandoah Elderberry School
Proj. #: 191395
P.O. #: 1035690
Address: 2480 Shenandoah Street
Los Angeles, CA
Global ID:
Sampled By: Kris Thern / Sean Hyle

Analysis Request

Test Instructions / Comments

Sample ID

Sampling
Date

Sampling
Time

Matrix

Container
No. / Size

Pres.

EPA 6020 - Arsenic

1 SB-55C-0.5'

6/19/19

0830

Soil

1 Glass Jar

ICE

X

2 SB-55C-1.5'

L

0836

L

L

L

X

3 SB-55C-1.5' (DUP)

L

0836

L

L

L

X

4 SB-55D-0.5'

L

0831

L

L

L

X

5 SB-55D-1.5'

L

0837

L

L

L

X

6 SB-57A-0.5'

6/18/19

1204

L

L

L

X

7 SB-57A-1.5'

L

1209

L

L

L

X

8 SB-57A-2.5'

L

1211

L

L

L

X

9

10

Signature

Print Name

Company / Title

Date / Time

1 Relinquished By:

1 Received By:

2 Relinquished By:

2 Received By:

3 Relinquished By:

3 Received By:

Kris Thern
6 km

ES
GA

6/19/19 @ 1545
6/19/19 1545



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No:

416462

Page:

14

of

14

Turn Around Time (rush by advanced notice only)

Standard:

5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION

Company: ES Engineering Services

Report To: Don Nygaard

Email: dnygaard

Address: 1 Park Plaza Suite 100

Farming CA 92641

Phone: (714) 919-6500

Fax:

PROJECT INFORMATION

Quote #:

Proj. Name: Shenandoah Elementary School

Proj. #: 191395

P.O. #: 1035690

Address: 2450 Shenandoah Street

Global ID: Los Angeles, CA

Sampled By: Kris Kern

Analysis Request

Test Instructions / Comments

Sample ID

Sampling
DateSampling
Time

Matrix

Container
No. / Size

Pres.

EPA 6020 - Arsenic

1	SB-57B-0.5'	6/18/19	1135	Soil	16 Lbs Jar	ICE
2	SB-57B-1.5'		1145			
3	SB-57B-2.5'		1150			
4	SB-57C-0.5'		1124			
5	SB-57C-1.5'		1131			
6	SB-57C-1.5' (DUP)		1131			
7	SB-57C-2.5'		1133			
8	SB-57D-0.5'		1144			
9	SB-57D-1.5'		1149			
10	SB-57D-2.5'		1153			

X
X
X
X
X
X
X
X
X
X

Hold

Hold

Hold


Hold

Hold

Hold

Hold

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Kris Kern	ES	6/19/19 @ 1545
1 Received By:		Kris Kern	ES	6/19/19 1545
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPHY ANALYTICAL, INC. 806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Chain of Custody Record Lab No: 416462 Page: of		Turn Around Time (Rush by advanced notice only) Standard: <input checked="" type="checkbox"/> 4 Day: <input type="checkbox"/> 3 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/> Same Day: <input type="checkbox"/>																	
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614				Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other													
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments							
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		Report To: Dane Nygaard		Number: 029RC1-191395		EPA 6010B - Lead EPA 6020 - Arsenic															
Email: dnygaard@es-online.com		P.O. #: PO1035690		Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street																	
Irvine, CA 92614		Los Angeles, California		Phone: 714-919-6500		Global ID:																	
Fax: 714-919-6501		Sampled By: Kris Kern																					
Sample ID		Sampling Date		Sampling Time		Matrix		Container No. / Size		Pres.													
1 SB-33C-0.5' (DUP)		06.19.2019		1055		Soil		4oz glass (1)		ICE		X											
2 SB-37B-0.5' (DUP)		06.19.2019		1034		Soil		4oz glass (1)		ICE		X											
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
Signature		Print Name		Company / Title		Date / Time																	
1 Relinquished By: Sean Hyde		Sean Hyde		Montrose / Staff Geologist		06.19.2019 / 1550																	
1 Received By:																							
2 Relinquished By:																							
2 Received By:																							
3 Relinquished By:																							
3 Received By: * [Signature]		Zaid Padilla		EA/GL		6/20/19 0950																	



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: Shenandoah Elementary Elementary 2 6/19/19

Date Received: 6/19/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 2 ☐ No (skip section 2)

Sample Temp (°C)
(No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 0.3 #2: 0.2 #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: -1.2 #2: -0.8 #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives? <u>2 6/19/19</u>	✓		✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

*"SB-33C-0.5'(DUP)" & "SB-37B-0.5'(DUP)" WERE RECEIVED 6/19/19 @ 15:39.
COC WAS RECEIVED 6/20/19 @ 0950. (ZP)

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time: _____
☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By: [Signature] Date: 6/19/19

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209

www.enthalpy.com/socal

Sample Acceptance Checklist - Rev 4, 8/8/2017

Ranjit Clarke

From: Chris Guesnon
Sent: Friday, July 12, 2019 2:12 PM
To: Ranjit Clarke
Cc: dnygaard@montrose-env.com
Subject: FW: Exceedances at Shenandoah
Attachments: 416462-00101900-SIGNED.PDF; 191395-F2-step outs revised.pdf

Hi Ranjit. See below. We need to do extra analysis on the soil samples from Shenandoah. A standard TAT is fine for these samples. Thanks.

Based on the results of the recent soil sampling at Shenandoah, the lead results were below the EPA screening level (80 mg/kg). The high arsenic hits are tabulated below. Please let us know if we should request additional analyses, including the deeper samples of the following:

Sample ID	Arsenic Results (mg/kg)	Comment
SB-37C-0.5	89.9	Run STLC, Run 1.5 foot sample (As only)
SB-37D-0.5	31.8	Run 1.5 foot sample (As only)
SB-42A-0.5	99.7	Run STLC, Run 1.5 and 2.5 foot sample (As only)
SB-42C-0.5	35.6	Run 1.5 and 2.5 foot sample (As only)
SB-42D-0.5	33.8	Run 1.5 and 2.5 foot sample (As only)
SB-47C-0.5	131	Run STLC and TCLP, Run 1.5 and 2.5 sample (As only)
SB-50B-0.5	633	Haz Waste (>500 mg/kg), Run STLC and TCLP, Run 1.5 foot sample
SB-50D-0.5	69.0	Run STLC, Run 1.5 foot sample (As only)
SB-51B-0.5	395	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-51C-0.5	136	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-51D-0.5	92.9	Run STLC, Run 1.5 foot sample (As only)
SB-53D-0.5	136	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-55B-0.5	87.3	Run STLC, Run 1.5 foot sample (As only)
SB-55C-0.5	55.4	Run STLC, Run 1.5 foot sample (As only)
SB-57B-0.5	151	Run STLC and TCLP, Run 1.5 foot sample (As only)

Note: Blue = Result <50 mg/kg
Red = Result >50 mg/kg (run STLC)
Black = Result >100 mg/kg (run STLC and TCLP)
Purple = Result >500 mg/kg (Hazardous waste)

Chris A. Guesnon
Senior Geologist

Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 418919
Report Date: 09/19/2019
Date Received: 09/03/2019
Client ID: 12860

Comments: Shenandoah
029RC1-191395
PO# 1038854
2450 Shenandoah St., Los Angeles, CA

Report includes additional STLC, TCLP and Total Arsenic results per client's 9/12/19 email request.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
418919-001	SB-37C2-0.5'	418919-025	EQUIPMENT BLANK
418919-002	SB-37C2-1.5'	418919-026	SB-37D2-0.5' (DUP)
418919-003	SB-37D2-0.5'		
418919-004	SB-37D2-1.5'		
418919-005	SB-42A2-0.5'		
418919-006	SB-42A2-1.5'		
418919-007	SB-42D2-0.5'		
418919-008	SB-42D2-1.5'		
418919-009	SB-50B2-0.5'		
418919-010	SB-50B2-1.5'		
418919-011	SB-50A2-0.5'		
418919-012	SB-50A2-1.5'		
418919-013	SB-50A2-2.5'		
418919-014	SB-50AB2-0.5'		
418919-015	SB-50AB2-1.5'		
418919-016	SB-53D2-0.5'		
418919-017	SB-53D2-1.5'		
418919-018	SB-55B2-0.5'		
418919-019	SB-55B2-1.5'		
418919-020	SB-50AB2-0.5' (DUP)		
418919-021	SB-55C2-0.5'		
418919-022	SB-55C2-1.5'		
418919-023	SB-57B2-0.5'		
418919-024	SB-57B2-1.5'		

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Patricia Mata, PM

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:03		Site:							
Sample #: <u>418919-001</u>		Client Sample #: SB-37C2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A						QCBatchID: QC1206731	
Arsenic		1.766	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		14.2	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		189	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:04		Site:							
Sample #: <u>418919-002</u>		Client Sample #: SB-37C2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		38.2	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 09:46		Site:							
Sample #: <u>418919-003</u>		Client Sample #: SB-37D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		2.68	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		57.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 09:48		Site:							
Sample #: <u>418919-004</u>		Client Sample #: SB-37D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		35.5	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:32		Site:							
Sample #: <u>418919-005</u>		Client Sample #: SB-42A2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		43.2	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:36		Site:							
Sample #: <u>418919-006</u>		Client Sample #: SB-42A2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		5.37	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 12:00		Site:						
Sample #: <u>418919-007</u>		Client Sample #: SB-42D2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1206690					
Arsenic	2.99	10	0.08	0.3	mg/L	09/18/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic	61.9	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 12:09		Site:						
Sample #: <u>418919-008</u>		Client Sample #: SB-42D2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic	7.52	1	0.108	0.3	mg/Kg	09/16/19	JP	

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 10:15		Site:						
Sample #: <u>418919-009</u>		Client Sample #: SB-50B2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1206731					
Arsenic	1.465	1	0.008	0.05	mg/L	09/17/19	SBW	
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1206690					
Arsenic	7.78	10	0.08	0.3	mg/L	09/18/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic	140	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 10:21		Site:						
Sample #: <u>418919-010</u>		Client Sample #: SB-50B2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic	5.62	1	0.108	0.3	mg/Kg	09/16/19	JP	

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 10:54		Site:						
Sample #: <u>418919-011</u>		Client Sample #: SB-50A2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic	9.94	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 11:02		Site:						
Sample #: <u>418919-012</u>		Client Sample #: SB-50A2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 11:05		Site:						
Sample #: <u>418919-013</u>		Client Sample #: SB-50A2-2.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:	Prep Method:		QCBatchID:					
N/A	N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: 418919-014		Client Sample #: SB-50AB2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		6.34	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:43		Site:							
Sample #: 418919-015		Client Sample #: SB-50AB2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		6.02	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:21		Site:							
Sample #: 418919-016		Client Sample #: SB-53D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: EPA 1311/3010A		QCBatchID: QC1206731					
Arsenic		0.907	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B NELAC		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		5.30	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		118	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:25		Site:							
Sample #: 418919-017		Client Sample #: SB-53D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		7.12	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:41		Site:							
Sample #: 418919-018		Client Sample #: SB-55B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B NELAC		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		4.08	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		86.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:46		Site:							
Sample #: 418919-019		Client Sample #: SB-55B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method:		Prep Method:		QCBatchID:					
N/A		N/A	1						

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: 418919-020		Client Sample #: SB-50AB2-0.5' (DUP)		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 NELAC		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		14.1	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:44		Site:							
Sample #: <u>418919-021</u>		Client Sample #: SB-55C2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A						QCBatchID: QC1206731	
Arsenic		1.556	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		6.67	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		128	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:49		Site:							
Sample #: <u>418919-022</u>		Client Sample #: SB-55C2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		17.5	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:46		Site:							
Sample #: <u>418919-023</u>		Client Sample #: SB-57B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		4.93	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		99.3	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:52		Site:							
Sample #: <u>418919-024</u>		Client Sample #: SB-57B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		5.01	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Water		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 13:30		Site:							
Sample #: <u>418919-025</u>		Client Sample #: EQUIPMENT BLANK		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3010A						QCBatchID: QC1206200	
Arsenic		ND	1	0.31	2	ug/L	09/04/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 09:46		Site:							
Sample #: <u>418919-026</u>		Client Sample #: SB-37D2-0.5' (DUP)		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		48.6	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

QCBatchID: QC1206185	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 09/03/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206185MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206185LCS1											
Arsenic	50		46.7		mg/Kg	93			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206185MS1, QC1206185MSD1											Source: 416462-006	
Arsenic	11.1	50	50	49.6	49.7	mg/Kg	77	77	0.2	75-125	20	

QCBatchID: QC1206200	Analyst: JParedes	Method: EPA 6020
Matrix: Water	Analyzed: 09/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206200MB1						
Arsenic	ND	ug/L	0.31	2		
Copper	ND	ug/L	0.12	3		
Zinc	3.05 J	ug/L	2.7	10		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1206200LCS1												
Arsenic	50		46.3		ug/L	93			80-120			
Copper	50		46.7		ug/L	93			80-120			
Zinc	50		50.4		ug/L	101			80-120			

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1206200MS1, QC1206200MSD1												Source: 418919-025
Arsenic	ND	50	50	47.4	47.5	ug/L	95	95	0.2	75-125	20	
Copper	0.5	50	50	47.4	48.2	ug/L	94	95	1.7	75-125	20	
Zinc	3.50	50	50	50.3	51.4	ug/L	94	96	2.2	75-125	20	

QCBatchID: QC1206688	Analyst: wragsdale	Method: EPA 6020
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206688MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206688LCS1											
Arsenic	100		96.5		mg/Kg	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206688MS1, QC1206688MSD1											Source: 418919-002	
Arsenic	38.2	100	100	122	107	mg/Kg	84	69	13.1	75-125	20	M

QCBatchID: QC1206690	Analyst: wragsdale	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206690MB1						
Arsenic	0.101	mg/L	0.008	0.03		
Barium	0.007 J	mg/L	0.002	0.03		
Cadmium	0.005 J	mg/L	0.001	0.015		
Lead	0.012 J	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206690LCS1, QC1206690LCSD1											
Arsenic	20	20	19.6	18.2	mg/L	98	91	7	80-120	20	
Barium	20	20	17.9	17.3	mg/L	90	87	3	80-120	20	
Cadmium	20	20	17.6	17.2	mg/L	88	86	2	80-120	20	
Lead	20	20	17.5	16.8	mg/L	88	84	4	80-120	20	

QCBatchID: QC1206731	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/17/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206731MB1						
Arsenic	ND	mg/L	0.008	0.05		
Barium	0.13 J	mg/L	0.002	0.5		
Beryllium	ND	mg/L	0.001	0.05		
Cadmium	ND	mg/L	0.001	0.05		
Chromium	0.003 J	mg/L	0.002	0.05		
Cobalt	0.002 J	mg/L	0.001	0.05		
Copper	0.012 J	mg/L	0.004	0.05		
Lead	ND	mg/L	0.005	0.05		
Molybdenum	0.010 J	mg/L	0.005	0.05		
Nickel	0.006 J	mg/L	0.003	0.05		
Selenium	ND	mg/L	0.016	0.05		
Silver	ND	mg/L	0.003	0.05		
Thallium	0.011 J	mg/L	0.009	0.05		
Vanadium	0.005 J	mg/L	0.002	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206731LCS1											
Antimony	2		2.06		mg/L	103			80-120		
Arsenic	2		2.04		mg/L	102			80-120		
Barium	2		2.12		mg/L	106			80-120		
Beryllium	2		1.84		mg/L	92			80-120		
Cadmium	2		2.11		mg/L	106			80-120		
Chromium	2		2.02		mg/L	101			80-120		
Cobalt	2		1.92		mg/L	96			80-120		
Copper	2		2.08		mg/L	104			80-120		
Lead	2		1.880		mg/L	94			80-120		
Molybdenum	2		2.07		mg/L	104			80-120		
Nickel	2		1.82		mg/L	91			80-120		
Selenium	2		2.09		mg/L	105			80-120		
Silver	2		1.884		mg/L	94			80-120		
Thallium	2		1.63		mg/L	82			80-120		
Vanadium	2		2.07		mg/L	104			80-120		
Zinc	2		2.12		mg/L	106			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1												Source: 418919-001
Arsenic	1.766	1	1	2.94	3.00	mg/L	117	123	2.0	75-125	20	
Barium	0.58	1	1	1.53	1.52	mg/L	95	94	0.7	75-125	20	
Beryllium	0.004	1	1	0.956	0.928	mg/L	95	92	3.0	75-125	20	
Cadmium	0.004	1	1	1.027	0.998	mg/L	102	99	2.9	75-125	20	
Chromium	0.012	1	1	1.015	0.998	mg/L	100	99	1.7	75-125	20	
Cobalt	0.007	1	1	0.942	0.905	mg/L	94	90	4.0	75-125	20	
Copper	0.022	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Lead	0.014	1	1	0.977	0.980	mg/L	96	97	0.3	75-125	20	
Molybdenum	0.010	1	1	1.06	1.08	mg/L	105	107	1.9	75-125	20	
Nickel	0.012	1	1	0.920	0.923	mg/L	91	91	0.3	75-125	20	
Selenium	ND	1	1	0.986	1.030	mg/L	99	103	4.4	75-125	20	
Silver	0.008	1	1	0.963	1.097	mg/L	96	109	13.0	75-125	20	

QCBatchID: <u>QC1206731</u>		Analyst: kedy		Method: EPA 6010B	
Matrix: Solid		Analyzed: 09/17/2019		Instrument: AAICP (group)	

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1											Source: 418919-001	
Thallium	0.032	1	1	0.857	0.886	mg/L	83	85	3.3	75-125	20	
Vanadium	0.017	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Zinc	0.281	1	1	1.353	1.265	mg/L	107	98	6.7	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)										
		Lab No: 418819		Page: 1 of 3		Standard: <input checked="" type="checkbox"/>		5 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>						
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900		Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)						
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments		
Company: <i>Montrose Environmental</i>			Quote #: <i></i>			Arsenic (EPA 6020)								Hold all 1.5' samples		
Report To: <i>Dane Nygaard</i>			Proj. Name: <i>Shenandoah</i>													
Email: <i>dnygaard@montrose-env.com</i>			Proj. #: <i>029RC1-191395</i>													
Address: <i>1636 E. St Andrew place</i>			P.O. #: <i>PO 1038854</i>													
<i>Santa Ana, CA</i>			Address: <i>2450 Shenandoah St,</i>													
Phone: <i>714 919 6500</i>			Global ID: <i>CA, CA</i>													
Fax: <i></i>			Sampled By: <i>S Hyde / K Kern</i>													
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.										
1 SB-37C2-0.5'		08/30/2019	1003	S	802 glass	ICE	X									
2 SB-37C2-1.5'			1004		1		X								Hold	
3 SB-37D2-0.5'			0946		402 glass		X									
4 SB-37D2-1.5'			0948		802 glass		X								Hold	
5 SB-42A2-0.5'			1132				X									
6 SB-42A2-1.5'			1136				X								Hold	
7 SB-42D2-0.5'			1200				X									
8 SB-42D2-1.5'			1209				X								Hold	
9 SB-50B2-0.5'			1015				X									
10 SB-50B2-1.5'			1021				X								Hold	
		Signature	Print Name		Company / Title				Date / Time							
1 Relinquished By:		<i>Sean Hyde</i>	<i>Sean Hyde</i>		<i>Montrose - Geologist</i>				<i>09/03/2019 0900</i>							
1 Received By:		<i>EA</i>	<i>EA</i>		<i>EA</i>				<i>9/3/19 900</i>							
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)															
		Lab No: <u>418919</u> Page: <u>2</u> of <u>3</u>				Standard: <u>J</u> 2 Day:		5 Day:		3 Day:		Custom TAT:									
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900						Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)					
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments					
Company:		<u>Montrose Environmental</u>		Quote #:				Arsenic (EPA 8020)								Hold all 1.5' samples					
Report To:		<u>Dan Nygaard</u>		Proj. Name:		<u>Shenandoah</u>															
Email:		<u>dnygaard@montrose-env.ca</u>		Proj. #:		<u>029RC1-191395</u>															
Address:		<u>1631 E. St. Andrew Place</u>		P.O. #:		<u>PO 1035690 038854</u>															
		<u>Santa Ana, CA</u>		Address:		<u>2450 Shenandoah St,</u>															
Phone:		<u>714 919 6500</u>		Global ID:		<u>LA/CA</u>															
Fax:				Sampled By:		<u>S Hyde / K Kern</u>															
Sample ID				Sampling Date		Sampling Time		Matrix		Container No. / Size		Pres.									
1 SB-50A2-0.5'				08/30/2019		1054		S		8 oz glass		Ice									
2 SB-50A2-1.5'						1102								Hold							
3 SB-50A2-2.5'						1105								Hold							
4 SB-50AB2-0.5'						1040				4 oz glass											
5 SB-50AB2-1.5'						1043				8 oz glass				Hold							
6 SB-53D2-0.5'						1221															
7 SB-53D2-1.5'						1225								Hold							
8 SB-55B2-0.5'						1241															
9 SB-55B2-1.5'						1246								Hold							
10 SB-50AB2-Dup 0.5' (Dup)						1040				4 oz glass											
Signature				Print Name				Company / Title				Date / Time									
1 Relinquished By:				<u>Sean Hyde</u>				<u>Sean Hyde</u>				<u>Montrose - Geologist</u>				<u>0900 09/03/2019</u>					
1 Received By:				<u>[Signature]</u>				<u>GA Hernandez</u>				<u>E.A.</u>				<u>9/3/19 960</u>					
2 Relinquished By:																					
2 Received By:																					
3 Relinquished By:																					
3 Received By:																					



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No:

418919

Page:

3

of

3

Turn Around Time (rush by advanced notice only)

Standard:



5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION		PROJECT INFORMATION				Analysis Request												Test Instructions / Comments		
Company:	Montrose Environmental	Quote #:				Arsenic (EPA 600)														Hold all 1.5' samples
Report To:	Dane Nygaard	Proj. Name:	Sherandoch																	
Email:	dnygaard@montrose-env.com	Proj. #:	029RC1-191395																	
Address:	1631 E St Andrew Place	P.O. #:	PO 103-564038854																	
	Santa Ana, CA	Address:	2450 Sherandoch St, CA																	
Phone:	714 919 6500	Global ID:																		
Fax:		Sampled By:	S. Hyde / K Kern																	
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.															
1 SB-55C2-0.5'	08/30/2019	1244	S	8 oz glass	ICE	X														
2 SB-55C2-1.5'	08/30/2019	1249	I		I	X													Hold	
3 SB-57B2-0.5'	I	1146	I		I	X														
4 SB-57B2-1.5'	I	1152	I		I	X													Hold	
5 EQUIPMENT BLANK 1	I	1330	W	2x 250 mL	HNO ₃	X														
6 SB-37D2-0.5 (DUP)	08/30/2019	0946	S	4 oz glass	ICE	X														
7																				
8																				
9																				
10																				
Signature		Print Name		Company / Title		Date / Time														
1 Relinquished By: <i>[Signature]</i>		Sean Hyde		Montrose - geologist		09/03/2019 0900														
1 Received By: <i>[Signature]</i>		C. Hernandez		EA		9/3/19 900														
2 Relinquished By:																				
2 Received By:																				
3 Relinquished By:																				
3 Received By:																				



SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: _____

Date Received: 09/03/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) _____
(No Cooler) : _____

Sample Temp (°C), One from each cooler: #1: 6.6 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.1 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample IDs present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sampling dates & times present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a relinquished signature present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the tests required clearly indicated on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If custody seals are present, were they intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all samples arrive intact? If no, indicate in Section 4 below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all bottle labels agree with COC? (ID, dates and times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were the samples collected in the correct containers for the required tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the containers labeled with the correct preservatives?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was a sufficient amount of sample submitted for the requested tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By:  Date: 9/3/19

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209
www.enthalpy.com/socal

Sample Acceptance Checklist – Rev 4, 8/8/2017

Patty Mata

From: Chris Guesnon
Sent: Thursday, September 12, 2019 1:07 PM
To: Patty Mata; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Sorry Patty. Thanks for pointing that out. Please run SB-50AB2-1.5. The Table below has been updated.

From: Patty Mata [mailto:patty.mata@enthalpy.com]
Sent: Thursday, September 12, 2019 12:55 PM
To: Chris Guesnon; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Chris,
I've added the STLC and TCLP tests to the 0.5' samples and I've added total As to the 1.5' samples as requested, except for the DUP sample. The DUP sample we received is the AB sample (SB-50AB2-0.5' (DUP)), not the A sample, and we only received the 0.5' depth. What would you like done for this sample?

With Regards,

Patty Mata
Project Manager
Direct (714) 771-9930



From: Chris Guesnon <cguesnon@montrose-env.com>
Sent: Thursday, September 12, 2019 12:08 PM
To: Patty Mata <patty.mata@enthalpy.com>; Ranjit Clarke <Ranjit.Clarke@enthalpy.com>
Cc: dnygaard@montrose-env.com; kkern@montrose-env.com; shyde@montrose-env.com
Subject: FW: Exceedances at Shenandoah

Hi Patty. Please complete the additional analyses for Shenandoah Elementary School, as listed below, on standard TAT:

Sample ID	Arsenic Results (mg/kg)	Comment
SB-37C2-0.5	189	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-37D2-0.5	57.4	Run STLC, Run 1.5 foot sample (As only)
SB-42A2-0.5	43.2	Run 1.5 foot sample (As only)
SB-42D2-0.5	61.9	Run STLC, Run 1.5 foot sample (As only)
SB-50AB2-0.5 (Dup)	14.1	Run 1.5 foot sample (As only)
SB-50B2-0.5	140	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-53D2-0.5	118	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-55B2-0.5	86.4	Run STLC, Run 1.5 foot sample (As only)
SB-55C2-0.5	128	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-57B2-0.5	99.3	Run STLC, Run 1.5 foot sample (As only)

Thank you.

Chris A. Guesnon
Senior Geologist
Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Subject: [REDACTED]



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 418919
Report Date: 09/27/2019
Date Received: 09/03/2019
Client ID: 12860

Comments: Shenandoah
029RC1-191395
PO# 1038854
2450 Shenandoah St., Los Angeles, CA

Report includes additional STLC, TCLP and Total Arsenic results per client's 9/12/19 email request, including sample SB-55B2-1.5.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
-----------------	-------------------------

418919-001	SB-37C2-0.5'
418919-002	SB-37C2-1.5'
418919-003	SB-37D2-0.5'
418919-004	SB-37D2-1.5'
418919-005	SB-42A2-0.5'
418919-006	SB-42A2-1.5'
418919-007	SB-42D2-0.5'
418919-008	SB-42D2-1.5'
418919-009	SB-50B2-0.5'
418919-010	SB-50B2-1.5'
418919-011	SB-50A2-0.5'
418919-014	SB-50AB2-0.5'
418919-015	SB-50AB2-1.5'
418919-016	SB-53D2-0.5'
418919-017	SB-53D2-1.5'
418919-018	SB-55B2-0.5'
418919-019	SB-55B2-1.5'
418919-020	SB-50AB2-0.5' (DUP)
418919-021	SB-55C2-0.5'
418919-022	SB-55C2-1.5'
418919-023	SB-57B2-0.5'
418919-024	SB-57B2-1.5'
418919-025	EQUIPMENT BLANK
418919-026	SB-37D2-0.5' (DUP)

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 10:03		Site:						
Sample #: <u>418919-001</u>		Client Sample #: SB-37C2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1206731	
Arsenic	1.766	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1206690	
Arsenic	14.2	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic	189	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 10:04		Site:						
Sample #: <u>418919-002</u>		Client Sample #: SB-37C2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic	38.2	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 09:46		Site:						
Sample #: <u>418919-003</u>		Client Sample #: SB-37D2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1206690	
Arsenic	2.68	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic	57.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 09:48		Site:						
Sample #: <u>418919-004</u>		Client Sample #: SB-37D2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic	35.5	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 11:32		Site:						
Sample #: <u>418919-005</u>		Client Sample #: SB-42A2-0.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic	43.2	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client				
Sampled: 08/30/2019 11:36		Site:						
Sample #: <u>418919-006</u>		Client Sample #: SB-42A2-1.5'		Sample Type:				
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic	5.37	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:00		Site:							
Sample #: <u>418919-007</u>		Client Sample #: SB-42D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		2.99	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		61.9	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:09		Site:							
Sample #: <u>418919-008</u>		Client Sample #: SB-42D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		7.52	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:15		Site:							
Sample #: <u>418919-009</u>		Client Sample #: SB-50B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A		QCBatchID: QC1206731					
Arsenic		1.465	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		7.78	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		140	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:21		Site:							
Sample #: <u>418919-010</u>		Client Sample #: SB-50B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		5.62	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:54		Site:							
Sample #: <u>418919-011</u>		Client Sample #: SB-50A2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		9.94	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: <u>418919-014</u>		Client Sample #: SB-50AB2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		6.34	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:43		Site:							
Sample #: <u>418919-015</u>		Client Sample #: SB-50AB2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		6.02	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:21		Site:							
Sample #: <u>418919-016</u>		Client Sample #: SB-53D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A					QCBatchID: QC1206731		
Arsenic		0.907	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		5.30	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		118	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:25		Site:							
Sample #: <u>418919-017</u>		Client Sample #: SB-53D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206688		
Arsenic		7.12	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:41		Site:							
Sample #: <u>418919-018</u>		Client Sample #: SB-55B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		4.08	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		86.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:46		Site:							
Sample #: <u>418919-019</u>		Client Sample #: SB-55B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1207077		
Arsenic		7.83	5	0.54	1.5	mg/Kg	09/26/19	09/27/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: <u>418919-020</u>		Client Sample #: SB-50AB2-0.5' (DUP)		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		14.1	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:44		Site:							
Sample #: <u>418919-021</u>		Client Sample #: SB-55C2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A					QCBatchID: QC1206731		
Arsenic		1.556	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		6.67	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		128	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering			Collector: Client		
Sampled: 08/30/2019 12:49		Site:					
Sample #: <u>418919-022</u>		Client Sample #: SB-55C2-1.5'			Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1206688			
Arsenic	17.5	1	0.108	0.3	mg/Kg	09/16/19	JP
Matrix: Solid		Client: ES Engineering			Collector: Client		
Sampled: 08/30/2019 11:46		Site:					
Sample #: <u>418919-023</u>		Client Sample #: SB-57B2-0.5'			Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC			QCBatchID: QC1206690			
Arsenic	4.93	10	0.08	0.3	mg/L	09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1206185			
Arsenic	99.3	10	1.08	3	mg/Kg	09/03/19	09/04/19 JP
Matrix: Solid		Client: ES Engineering			Collector: Client		
Sampled: 08/30/2019 11:52		Site:					
Sample #: <u>418919-024</u>		Client Sample #: SB-57B2-1.5'			Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1206688			
Arsenic	5.01	1	0.108	0.3	mg/Kg	09/16/19	JP
Matrix: Water		Client: ES Engineering			Collector: Client		
Sampled: 08/30/2019 13:30		Site:					
Sample #: <u>418919-025</u>		Client Sample #: EQUIPMENT BLANK			Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3010A			QCBatchID: QC1206200			
Arsenic	ND	1	0.31	2	ug/L	09/04/19	09/04/19 JP
Matrix: Solid		Client: ES Engineering			Collector: Client		
Sampled: 08/30/2019 09:46		Site:					
Sample #: <u>418919-026</u>		Client Sample #: SB-37D2-0.5' (DUP)			Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B			QCBatchID: QC1206185			
Arsenic	48.6	10	1.08	3	mg/Kg	09/03/19	09/04/19 JP

QCBatchID: QC1206185	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 09/03/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206185MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206185LCS1											
Arsenic	50		46.7		mg/Kg	93			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206185MS1, QC1206185MSD1											Source: 416462-006	
Arsenic	11.1	50	50	49.6	49.7	mg/Kg	77	77	0.2	75-125	20	

QCBatchID: <u>QC1206200</u>	Analyst: JParedes	Method: EPA 6020
Matrix: Water	Analyzed: 09/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206200MB1						
Arsenic	ND	ug/L	0.31	2		
Copper	ND	ug/L	0.12	3		
Zinc	3.05 J	ug/L	2.7	10		

Lab Control Spike/ Lab Control Spike Duplicate Summary												
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes	
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD		
QC1206200LCS1												
Arsenic	50		46.3		ug/L	93			80-120			
Copper	50		46.7		ug/L	93			80-120			
Zinc	50		50.4		ug/L	101			80-120			

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1206200MS1, QC1206200MSD1											Source: 418919-025	
Arsenic	ND	50	50	47.4	47.5	ug/L	95	95	0.2	75-125	20	
Copper	0.5	50	50	47.4	48.2	ug/L	94	95	1.7	75-125	20	
Zinc	3.50	50	50	50.3	51.4	ug/L	94	96	2.2	75-125	20	

QCBatchID: QC1206688	Analyst: wragsdale	Method: EPA 6020
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206688MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206688LCS1											
Arsenic	100		96.5		mg/Kg	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206688MS1, QC1206688MSD1											Source: 418919-002	
Arsenic	38.2	100	100	122	107	mg/Kg	84	69	13.1	75-125	20	M

QCBatchID: QC1206690	Analyst: wragsdale	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206690MB1						
Arsenic	0.101	mg/L	0.008	0.03		
Barium	0.007 J	mg/L	0.002	0.03		
Cadmium	0.005 J	mg/L	0.001	0.015		
Lead	0.012 J	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206690LCS1, QC1206690LCSD1											
Arsenic	20	20	19.6	18.2	mg/L	98	91	7	80-120	20	
Barium	20	20	17.9	17.3	mg/L	90	87	3	80-120	20	
Cadmium	20	20	17.6	17.2	mg/L	88	86	2	80-120	20	
Lead	20	20	17.5	16.8	mg/L	88	84	4	80-120	20	

QCBatchID: QC1206731	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/17/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206731MB1						
Arsenic	ND	mg/L	0.008	0.05		
Barium	0.13 J	mg/L	0.002	0.5		
Beryllium	ND	mg/L	0.001	0.05		
Cadmium	ND	mg/L	0.001	0.05		
Chromium	0.003 J	mg/L	0.002	0.05		
Cobalt	0.002 J	mg/L	0.001	0.05		
Copper	0.012 J	mg/L	0.004	0.05		
Lead	ND	mg/L	0.005	0.05		
Molybdenum	0.010 J	mg/L	0.005	0.05		
Nickel	0.006 J	mg/L	0.003	0.05		
Selenium	ND	mg/L	0.016	0.05		
Silver	ND	mg/L	0.003	0.05		
Thallium	0.011 J	mg/L	0.009	0.05		
Vanadium	0.005 J	mg/L	0.002	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206731LCS1											
Antimony	2		2.06		mg/L	103			80-120		
Arsenic	2		2.04		mg/L	102			80-120		
Barium	2		2.12		mg/L	106			80-120		
Beryllium	2		1.84		mg/L	92			80-120		
Cadmium	2		2.11		mg/L	106			80-120		
Chromium	2		2.02		mg/L	101			80-120		
Cobalt	2		1.92		mg/L	96			80-120		
Copper	2		2.08		mg/L	104			80-120		
Lead	2		1.880		mg/L	94			80-120		
Molybdenum	2		2.07		mg/L	104			80-120		
Nickel	2		1.82		mg/L	91			80-120		
Selenium	2		2.09		mg/L	105			80-120		
Silver	2		1.884		mg/L	94			80-120		
Thallium	2		1.63		mg/L	82			80-120		
Vanadium	2		2.07		mg/L	104			80-120		
Zinc	2		2.12		mg/L	106			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1												Source: 418919-001
Arsenic	1.766	1	1	2.94	3.00	mg/L	117	123	2.0	75-125	20	
Barium	0.58	1	1	1.53	1.52	mg/L	95	94	0.7	75-125	20	
Beryllium	0.004	1	1	0.956	0.928	mg/L	95	92	3.0	75-125	20	
Cadmium	0.004	1	1	1.027	0.998	mg/L	102	99	2.9	75-125	20	
Chromium	0.012	1	1	1.015	0.998	mg/L	100	99	1.7	75-125	20	
Cobalt	0.007	1	1	0.942	0.905	mg/L	94	90	4.0	75-125	20	
Copper	0.022	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Lead	0.014	1	1	0.977	0.980	mg/L	96	97	0.3	75-125	20	
Molybdenum	0.010	1	1	1.06	1.08	mg/L	105	107	1.9	75-125	20	
Nickel	0.012	1	1	0.920	0.923	mg/L	91	91	0.3	75-125	20	
Selenium	ND	1	1	0.986	1.030	mg/L	99	103	4.4	75-125	20	
Silver	0.008	1	1	0.963	1.097	mg/L	96	109	13.0	75-125	20	

QCBatchID: <u>QC1206731</u>	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/17/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1											Source: 418919-001	
Thallium	0.032	1	1	0.857	0.886	mg/L	83	85	3.3	75-125	20	
Vanadium	0.017	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Zinc	0.281	1	1	1.353	1.265	mg/L	107	98	6.7	75-125	20	

QCBatchID: <u>QC1207077</u>	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 09/26/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1207077MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1207077LCS1											
Arsenic	50		48.9		mg/Kg	98			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1207077MS1, QC1207077MSD1											Source: 418919-019	
Arsenic	7.83	50	50	56.0	53.4	mg/Kg	96	91	4.8	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

<h1 style="margin: 0;">ENTHALPY</h1> <p style="margin: 0;">ANALYTICAL</p>		Chain of Custody Record			Turn Around Time (rush by advanced notice only)									
		Lab No: 418819 Page: 1 of 3			Standard: <input checked="" type="checkbox"/> 5 Day: <input type="checkbox"/> 2 Day: <input type="checkbox"/> 1 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/> Custom TAT: <input type="checkbox"/>							
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900				Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other		Sample Receipt Temp: (lab use only)				
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request						Test Instructions / Comments		
Company: <i>Montrose Environmental</i> Report To: <i>Dane Nygaard</i> Email: <i>dnygaard@montrose-env.com</i> Address: <i>1636 E. St Andrew place</i> <i>Santa Ana, CA</i> Phone: <i>714 919 6500</i> Fax:			Quote #: Proj. Name: <i>Shenandoah</i> Proj. #: <i>029RC1-191395</i> <i>1038854</i> P.O. #: <i>PO 1035690</i> Address: <i>2450 Shenandoah St,</i> <i>CA, CA</i> Global ID: Sampled By: <i>S Hyde / K Kern</i>			Arsenic (EPA 6020)						<i>Hold all 1.5' samples</i>		
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size									Pres.
1	<i>SB-37C2-0.5'</i>	<i>08/30/2019</i>	<i>1003</i>	<i>S</i>	<i>802 glass</i>									<i>ICE</i>
2	<i>SB-37C2-1.5'</i>		<i>1004</i>		<i>1</i>									
3	<i>SB-37D2-0.5'</i>		<i>0946</i>		<i>402 glass</i>									
4	<i>SB-37D2-1.5'</i>		<i>0948</i>		<i>802 glass</i>									
5	<i>SB-42A2-0.5'</i>		<i>1132</i>											
6	<i>SB-42A2-1.5'</i>		<i>1136</i>											
7	<i>SB-42D2-0.5'</i>		<i>1200</i>											
8	<i>SB-42D2-1.5'</i>		<i>1209</i>											
9	<i>SB-50B2-0.5'</i>		<i>1015</i>											
10	<i>SB-50B2-1.5'</i>		<i>1021</i>											
		Signature	Print Name		Company / Title			Date / Time						
1 Relinquished By:		<i>Sean Hyde</i>	<i>Sean Hyde</i>		<i>Montrose - Geologist</i>			<i>09/03/2019 0900</i>						
1 Received By:		<i>EA</i>	<i>EA</i>		<i>EA</i>			<i>9/3/19 900</i>						
2 Relinquished By:														
2 Received By:														
3 Relinquished By:														
3 Received By:														

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)											
		Lab No: <u>418919</u> Page: <u>2</u> of <u>3</u>				Standard: <u>J</u> 2 Day:		5 Day: <u> </u> 1 Day: <u> </u>		3 Day: <u> </u> Custom TAT: <u> </u>							
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900						Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)	
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments	
Company: <u>Montrose Environmental</u>		Quote #:		Proj. Name: <u>Shenandoah</u>		Arsenic (EPA 8020)										Hold all 1.5' samples	
Report To: <u>Dan Nygaard</u>		Proj. #:		P.O. #:													
Email: <u>dnygaard@montrose-env.ca</u>		Address:		Global ID:													
Address: <u>1631 E. St. Andrew Place</u>		Address: <u>2450 Shenandoah St,</u>		LA/CA													
Phone: <u>714 919 6500</u>		Sampled By: <u>S Hyde / K Kern</u>															
Fax:																	
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.											
1	SB-50A2-0.5'	08/30/2019	1054	S	8 oz glass	Ice	X										
2	SB-50A2-1.5'		1102				X									Hold	
3	SB-50A2-2.5'		1105				X									Hold	
4	SB-50AB2-0.5'		1040				X										
5	SB-50AB2-1.5'		1043				X									Hold	
6	SB-53D2-0.5'		1221				X										
7	SB-53D2-1.5'		1225				X									Hold	
8	SB-55B2-0.5'		1241				X										
9	SB-55B2-1.5'		1246				X									Hold	
10	SB-50AB2-Dup 0.5' (dup)		1040				X										
			Signature				Print Name		Company / Title				Date / Time				
1 Relinquished By:		<u>Sean Hyde</u>		<u>Sean Hyde</u>		<u>Montrose - Geologist</u>				<u>0900 09/03/2019</u>							
1 Received By:		<u>[Signature]</u>		<u>GA Hernandez</u>		<u>E.A.</u>				<u>9/3/19 960</u>							
2 Relinquished By:																	
2 Received By:																	
3 Relinquished By:																	
3 Received By:																	



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No:

418919

Page:

3

of

3

Turn Around Time (rush by advanced notice only)

Standard:



5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION		PROJECT INFORMATION				Analysis Request												Test Instructions / Comments		
Company:	Montrose Environmental	Quote #:				Arsenic (EPA 600)														Hold all 1.5' samples
Report To:	Dane Nygaard	Proj. Name:	Sherandoch																	
Email:	dnygaard@montrose-env.com	Proj. #:	029RC1-191395																	
Address:	1631 E St Andrew Place	P.O. #:	PO 103-564038854																	
	Santa Ana, CA	Address:	2450 Sherandoch St, CA																	
Phone:	714 919 6500	Global ID:																		
Fax:		Sampled By:	S. Hyde / K Kern																	
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.															
1 SB-55C2-0.5'	08/30/2019	1244	S	8 oz glass	ICE	X														
2 SB-55C2-1.5'	08/30/2019	1249	I		I	X													Hold	
3 SB-57B2-0.5'	I	1146	I		I	X														
4 SB-57B2-1.5'	I	1152	I		I	X													Hold	
5 EQUIPMENT BLANK 1	I	1330	W	2x 250 mL	HNO ₃	X														
6 SB-37D2-0.5 (DUP)	08/30/2019	0946	S	4 oz glass	ICE	X														
7																				
8																				
9																				
10																				
Signature		Print Name		Company / Title		Date / Time														
1 Relinquished By: <i>[Signature]</i>		Sean Hyde		Montrose - geologist		09/03/2019 0900														
1 Received By: <i>[Signature]</i>		C. Hernandez		EA		9/3/19 900														
2 Relinquished By:																				
2 Received By:																				
3 Relinquished By:																				
3 Received By:																				



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: _____

Date Received: 09/03/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2)

Sample Temp (°C)
(No Cooler) : _____

Sample Temp (°C), One from each cooler: #1: 6.6 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam

☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.1 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample IDs present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sampling dates & times present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a relinquished signature present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the tests required clearly indicated on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If custody seals are present, were they intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all samples arrive intact? If no, indicate in Section 4 below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all bottle labels agree with COC? (ID, dates and times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were the samples collected in the correct containers for the required tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the containers labeled with the correct preservatives?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was a sufficient amount of sample submitted for the requested tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time: _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By: _____

Date: 9/3/19

Patty Mata

From: Chris Guesnon
Sent: Thursday, September 12, 2019 1:07 PM
To: Patty Mata; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Sorry Patty. Thanks for pointing that out. Please run SB-50AB2-1.5. The Table below has been updated.

From: Patty Mata [mailto:patty.mata@enthalpy.com]
Sent: Thursday, September 12, 2019 12:55 PM
To: Chris Guesnon; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Chris,
I've added the STLC and TCLP tests to the 0.5' samples and I've added total As to the 1.5' samples as requested, except for the DUP sample. The DUP sample we received is the AB sample (SB-50AB2-0.5' (DUP)), not the A sample, and we only received the 0.5' depth. What would you like done for this sample?

With Regards,

Patty Mata
Project Manager
Direct (714) 771-9930



From: Chris Guesnon <cguesnon@montrose-env.com>
Sent: Thursday, September 12, 2019 12:08 PM
To: Patty Mata <patty.mata@enthalpy.com>; Ranjit Clarke <Ranjit.Clarke@enthalpy.com>
Cc: dnygaard@montrose-env.com; kkern@montrose-env.com; shyde@montrose-env.com
Subject: FW: Exceedances at Shenandoah

Hi Patty. Please complete the additional analyses for Shenandoah Elementary School, as listed below, on standard TAT:

Sample ID	Arsenic Results (mg/kg)	Comment
SB-37C2-0.5	189	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-37D2-0.5	57.4	Run STLC, Run 1.5 foot sample (As only)
SB-42A2-0.5	43.2	Run 1.5 foot sample (As only)
SB-42D2-0.5	61.9	Run STLC, Run 1.5 foot sample (As only)
SB-50AB2-0.5 (Dup)	14.1	Run 1.5 foot sample (As only)
SB-50B2-0.5	140	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-53D2-0.5	118	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-55B2-0.5	86.4	Run STLC, Run 1.5 foot sample (As only)
SB-55C2-0.5	128	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-57B2-0.5	99.3	Run STLC, Run 1.5 foot sample (As only)

Thank you.

Chris A. Guesnon
Senior Geologist
Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Subject: [REDACTED]



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 419266
Report Date: 10/01/2019
Date Received: 09/11/2019
Client ID: 12860

Comments: Shenandoah
029RC1-191395
PO 1038854
2450 Shenandoah St., Los Angeles, CA

Supplemental Report 1 - STLC and TCLP results are now reported for sample "SB-37C3-0.5".

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
-----------------	-------------------------

419266-001	SB-37C3-0.5'
419266-002	SB-37C3-1.5'
419266-003	SB-50B3-0.5'
419266-004	SB-50B3-1.5'

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 08/30/2019 13:51		Site:						
Sample #: <u>419266-001</u>		Client Sample #: SB-37C3-0.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A				QCBatchID: QC1207182			
Arsenic	2.30	1	0.008	0.05	mg/L	09/30/19	SBW	
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1207165			
Arsenic	10.6	10	0.08	0.3	mg/L	09/30/19	SBW	
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1206569			
Arsenic	136	1	0.108	0.3	mg/Kg	09/12/19	JP	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 08/30/2019 13:56		Site:						
Sample #: <u>419266-002</u>		Client Sample #: SB-37C3-1.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1206569			
Arsenic	45.3	1	0.108	0.3	mg/Kg	09/12/19	JP	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 08/30/2019 13:22		Site:						
Sample #: <u>419266-003</u>		Client Sample #: SB-50B3-0.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1206569			
Arsenic	9.12	1	0.108	0.3	mg/Kg	09/12/19	JP	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 08/30/2019 13:26		Site:						
Sample #: <u>419266-004</u>		Client Sample #: SB-50B3-1.5'				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1206569			
Arsenic	8.33	1	0.108	0.3	mg/Kg	09/12/19	JP	

QCBatchID: QC1206569	Analyst: kedy	Method: EPA 6020
Matrix: Solid	Analyzed: 09/12/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206569MB1						
Arsenic	ND	mg/Kg	0.108	0.3		
Cadmium	ND	mg/Kg	0.141	0.5		
Thallium	ND	mg/Kg	0.128	0.5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206569LCS1											
Arsenic	100		98.2		mg/Kg	98			80-120		
Cadmium	100		100		mg/Kg	100			80-120		
Thallium	100		95.1		mg/Kg	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206569MS1, QC1206569MSD1										Source: 419247-004		
Arsenic	1.416	100	100	77.3	74.2	mg/Kg	76	73	4.1	75-125	20	M
Cadmium	ND	100	100	89.9	84.9	mg/Kg	90	85	5.7	75-125	20	
Thallium	0.162	100	100	80.8	76.7	mg/Kg	81	77	5.2	75-125	20	

QCBatchID: <u>QC1207165</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/30/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1207165MB1						
Arsenic	ND	mg/L	0.008	0.03		
Barium	ND	mg/L	0.002	0.03		
Lead	ND	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1207165LCS1, QC1207165LCSD1											
Arsenic	20	20	20.0	19.6	mg/L	100	98	2	80-120	20	
Barium	20	20	19.9	19.5	mg/L	100	98	2	80-120	20	
Lead	20	20	19.0	19.0	mg/L	95	95	0	80-120	20	

QCBatchID: QC1207182	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/30/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1207182MB1						
Arsenic	0.011 J	mg/L	0.008	0.05		
Barium	0.09 J	mg/L	0.002	0.5		
Cadmium	ND	mg/L	0.001	0.05		
Chromium	ND	mg/L	0.002	0.05		
Lead	0.008 J	mg/L	0.005	0.05		
Selenium	ND	mg/L	0.016	0.05		
Silver	ND	mg/L	0.003	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1207182LCS1											
Arsenic	2		1.946		mg/L	97			80-120		
Barium	2		1.93		mg/L	97			80-120		
Cadmium	2		1.909		mg/L	95			80-120		
Chromium	2		1.936		mg/L	97			80-120		
Lead	2		1.788		mg/L	89			80-120		
Selenium	2		1.783		mg/L	89			80-120		
Silver	2		1.983		mg/L	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1207182MS1, QC1207182MSD1												Source: 419266-001
Arsenic	2.30	1	1	3.21	3.30	mg/L	91	100	2.8	75-125	20	
Barium	0.58	1	1	1.46	1.47	mg/L	88	89	0.7	75-125	20	
Cadmium	0.002	1	1	0.888	0.884	mg/L	89	88	0.5	75-125	20	
Chromium	0.006	1	1	0.940	0.944	mg/L	93	94	0.4	75-125	20	
Lead	0.031	1	1	0.888	0.920	mg/L	86	89	3.5	75-125	20	
Selenium	0.044	1	1	0.851	0.940	mg/L	81	90	9.9	75-125	20	
Silver	ND	1	1	0.942	0.966	mg/L	94	97	2.5	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)												
		Lab No: 419266 Page: 1 of 1				Standard: <input checked="" type="checkbox"/>		5 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>								
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900						Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)				
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments		
Company:		Montrose Environmental		Quote #:				Arsenic (EPA 6020)										
Report To:		Dane Nygaard		Proj. Name:		Sherandoah												
Email:		dnygaard@montrose-env.com		Proj. #:		029RC1-191395												
Address:		1631 E. St Andrew Place		P.O. #:		PO 1038854												
		Santa Ana, CA		Address:		2450 Sherandoah St. LA, CA												
Phone:		714 916 6500		Global ID:														
Fax:				Sampled By:		SHyde / K Kern												
Sample ID				Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.										
1 SB-37C3-0.5'				8/30/2019	1351	S	2x 4oz glass	N/A										
2 SB-37C3-1.5'				↓	1356	S	↓	↓										
3 SB-50B3-0.5'				↓	1322	S	↓	↓										
4 SB-50B3-1.5'				↓	1326	S	↓	↓										
5																		
6																		
7																		
8																		
9																		
10																		
				Signature		Print Name		Company / Title				Date / Time						
1 Relinquished By:				Sean Hyde		Sean Hyde		Montrose / Staff Geologist				09/11/2019 @ 1030						
1 Received By:				Ely		Elizabeth R		EA				09/11/19 1030						
2 Relinquished By:																		
2 Received By:																		
3 Relinquished By:																		
3 Received By:																		



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Montrose EnvironmentalProject: SherandoahDate Received: 9/11/19Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☐ Yes, How many? _____ ☒ No (skip section 2)Sample Temp (°C)
(No Cooler) : 22.3

Sample Temp (°C), One from each cooler: #1: _____ #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: _____ #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.		✓	
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

4 4oz jars were received without a cooler and dated from 08/04/2019.

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: EGDate: 09/11/19

Ranjit Clarke

Subject: Shenandoah - Enthalpy Analytical Final Report #419266

From: Chris Guesnon <cguesnon@montrose-env.com>

Sent: Thursday, September 26, 2019 12:46 PM

To: Patty Mata <patty.mata@enthalpy.com>

Cc: dnygaard@montrose-env.com

Subject: FW: Shenandoah - Enthalpy Analytical Final Report #419266

Hi Patty. Please run STLC and TCLP for sample SB-37C3-0.5. Please provide results as soon as possible.

Thank you.

Chris A. Guesnon

Senior Geologist

Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Save#Envgnu#K#Hylrogh#ehin#subvj

From: Patty Mata [mailto:patty.mata@enthalpy.com]

Sent: Wednesday, September 18, 2019 11:56 AM

To: dnygaard@es-online.com

Cc: cguesnon@es-online.com; lskow@es-online.com; kkern@es-online.com; asrihiran@es-online.com; sking@es-online.com; vpaitimusa@es-online.com

Subject: Shenandoah - Enthalpy Analytical Final Report #419266

Hi Dane Nygaard,

Attached is your final report #419266.

Thank you.

In accordance with our paperless initiative, we are no longer mailing or faxing reports by default. If you require a hard copy, please inform your Project Manager.



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 418919
Report Date: 09/27/2019
Date Received: 09/03/2019
Client ID: 12860

Comments: Shenandoah
029RC1-191395
PO# 1038854
2450 Shenandoah St., Los Angeles, CA

Report includes additional STLC, TCLP and Total Arsenic results per client's 9/12/19 email request, including sample SB-55B2-1.5.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
-----------------	-------------------------

418919-001	SB-37C2-0.5'
418919-002	SB-37C2-1.5'
418919-003	SB-37D2-0.5'
418919-004	SB-37D2-1.5'
418919-005	SB-42A2-0.5'
418919-006	SB-42A2-1.5'
418919-007	SB-42D2-0.5'
418919-008	SB-42D2-1.5'
418919-009	SB-50B2-0.5'
418919-010	SB-50B2-1.5'
418919-011	SB-50A2-0.5'
418919-014	SB-50AB2-0.5'
418919-015	SB-50AB2-1.5'
418919-016	SB-53D2-0.5'
418919-017	SB-53D2-1.5'
418919-018	SB-55B2-0.5'
418919-019	SB-55B2-1.5'
418919-020	SB-50AB2-0.5' (DUP)
418919-021	SB-55C2-0.5'
418919-022	SB-55C2-1.5'
418919-023	SB-57B2-0.5'
418919-024	SB-57B2-1.5'
418919-025	EQUIPMENT BLANK
418919-026	SB-37D2-0.5' (DUP)

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:03		Site:							
Sample #: <u>418919-001</u>		Client Sample #: SB-37C2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A						QCBatchID: QC1206731	
Arsenic		1.766	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		14.2	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		189	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:04		Site:							
Sample #: <u>418919-002</u>		Client Sample #: SB-37C2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		38.2	1	0.108	0.3	mg/Kg		09/16/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 09:46		Site:							
Sample #: <u>418919-003</u>		Client Sample #: SB-37D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC						QCBatchID: QC1206690	
Arsenic		2.68	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		57.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 09:48		Site:							
Sample #: <u>418919-004</u>		Client Sample #: SB-37D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		35.5	1	0.108	0.3	mg/Kg		09/16/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:32		Site:							
Sample #: <u>418919-005</u>		Client Sample #: SB-42A2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic		43.2	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP
Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 11:36		Site:							
Sample #: <u>418919-006</u>		Client Sample #: SB-42A2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic		5.37	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:00		Site:							
Sample #: <u>418919-007</u>		Client Sample #: SB-42D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		2.99	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		61.9	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:09		Site:							
Sample #: <u>418919-008</u>		Client Sample #: SB-42D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		7.52	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:15		Site:							
Sample #: <u>418919-009</u>		Client Sample #: SB-50B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A		QCBatchID: QC1206731					
Arsenic		1.465	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC		QCBatchID: QC1206690					
Arsenic		7.78	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		140	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:21		Site:							
Sample #: <u>418919-010</u>		Client Sample #: SB-50B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		5.62	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:54		Site:							
Sample #: <u>418919-011</u>		Client Sample #: SB-50A2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		9.94	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: <u>418919-014</u>		Client Sample #: SB-50AB2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206185					
Arsenic		6.34	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:43		Site:							
Sample #: <u>418919-015</u>		Client Sample #: SB-50AB2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B		QCBatchID: QC1206688					
Arsenic		6.02	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:21		Site:							
Sample #: <u>418919-016</u>		Client Sample #: SB-53D2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A					QCBatchID: QC1206731		
Arsenic		0.907	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		5.30	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		118	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:25		Site:							
Sample #: <u>418919-017</u>		Client Sample #: SB-53D2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206688		
Arsenic		7.12	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:41		Site:							
Sample #: <u>418919-018</u>		Client Sample #: SB-55B2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		4.08	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		86.4	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:46		Site:							
Sample #: <u>418919-019</u>		Client Sample #: SB-55B2-1.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1207077		
Arsenic		7.83	5	0.54	1.5	mg/Kg	09/26/19	09/27/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 10:40		Site:							
Sample #: <u>418919-020</u>		Client Sample #: SB-50AB2-0.5' (DUP)		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		14.1	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid		Client: ES Engineering		Collector: Client					
Sampled: 08/30/2019 12:44		Site:							
Sample #: <u>418919-021</u>		Client Sample #: SB-55C2-0.5'		Sample Type:					
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 1311/3010A					QCBatchID: QC1206731		
Arsenic		1.556	1	0.008	0.05	mg/L		09/17/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC					QCBatchID: QC1206690		
Arsenic		6.67	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>		Prep Method: EPA 3050B					QCBatchID: QC1206185		
Arsenic		128	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 08/30/2019 12:49	Site:	
Sample #: <u>418919-022</u>	Client Sample #: SB-55C2-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic	17.5	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 08/30/2019 11:46	Site:	
Sample #: <u>418919-023</u>	Client Sample #: SB-57B2-0.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1206690	
Arsenic	4.93	10	0.08	0.3	mg/L		09/18/19	SBW
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic	99.3	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 08/30/2019 11:52	Site:	
Sample #: <u>418919-024</u>	Client Sample #: SB-57B2-1.5'	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206688	
Arsenic	5.01	1	0.108	0.3	mg/Kg		09/16/19	JP

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 08/30/2019 13:30	Site:	
Sample #: <u>418919-025</u>	Client Sample #: EQUIPMENT BLANK	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3010A						QCBatchID: QC1206200	
Arsenic	ND	1	0.31	2	ug/L	09/04/19	09/04/19	JP

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 08/30/2019 09:46	Site:	
Sample #: <u>418919-026</u>	Client Sample #: SB-37D2-0.5' (DUP)	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6020 <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206185	
Arsenic	48.6	10	1.08	3	mg/Kg	09/03/19	09/04/19	JP

QCBatchID: QC1206185	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 09/03/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206185MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206185LCS1											
Arsenic	50		46.7		mg/Kg	93			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206185MS1, QC1206185MSD1											Source: 416462-006	
Arsenic	11.1	50	50	49.6	49.7	mg/Kg	77	77	0.2	75-125	20	

QCBatchID: <u>QC1206200</u>	Analyst: JParedes	Method: EPA 6020
Matrix: Water	Analyzed: 09/04/2019	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1206200MB1					
Arsenic	ND	ug/L	0.31	2	
Copper	ND	ug/L	0.12	3	
Zinc	3.05 J	ug/L	2.7	10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206200LCS1											
Arsenic	50		46.3		ug/L	93			80-120		
Copper	50		46.7		ug/L	93			80-120		
Zinc	50		50.4		ug/L	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206200MS1, QC1206200MSD1											Source: 418919-025	
Arsenic	ND	50	50	47.4	47.5	ug/L	95	95	0.2	75-125	20	
Copper	0.5	50	50	47.4	48.2	ug/L	94	95	1.7	75-125	20	
Zinc	3.50	50	50	50.3	51.4	ug/L	94	96	2.2	75-125	20	

QCBatchID: QC1206688	Analyst: wragsdale	Method: EPA 6020
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206688MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206688LCS1											
Arsenic	100		96.5		mg/Kg	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206688MS1, QC1206688MSD1											Source: 418919-002	
Arsenic	38.2	100	100	122	107	mg/Kg	84	69	13.1	75-125	20	M

QCBatchID: <u>QC1206690</u>	Analyst: wragsdale	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/16/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206690MB1						
Arsenic	0.101	mg/L	0.008	0.03		
Barium	0.007 J	mg/L	0.002	0.03		
Cadmium	0.005 J	mg/L	0.001	0.015		
Lead	0.012 J	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206690LCS1, QC1206690LCSD1											
Arsenic	20	20	19.6	18.2	mg/L	98	91	7	80-120	20	
Barium	20	20	17.9	17.3	mg/L	90	87	3	80-120	20	
Cadmium	20	20	17.6	17.2	mg/L	88	86	2	80-120	20	
Lead	20	20	17.5	16.8	mg/L	88	84	4	80-120	20	

QCBatchID: QC1206731	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/17/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206731MB1						
Arsenic	ND	mg/L	0.008	0.05		
Barium	0.13 J	mg/L	0.002	0.5		
Beryllium	ND	mg/L	0.001	0.05		
Cadmium	ND	mg/L	0.001	0.05		
Chromium	0.003 J	mg/L	0.002	0.05		
Cobalt	0.002 J	mg/L	0.001	0.05		
Copper	0.012 J	mg/L	0.004	0.05		
Lead	ND	mg/L	0.005	0.05		
Molybdenum	0.010 J	mg/L	0.005	0.05		
Nickel	0.006 J	mg/L	0.003	0.05		
Selenium	ND	mg/L	0.016	0.05		
Silver	ND	mg/L	0.003	0.05		
Thallium	0.011 J	mg/L	0.009	0.05		
Vanadium	0.005 J	mg/L	0.002	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206731LCS1											
Antimony	2		2.06		mg/L	103			80-120		
Arsenic	2		2.04		mg/L	102			80-120		
Barium	2		2.12		mg/L	106			80-120		
Beryllium	2		1.84		mg/L	92			80-120		
Cadmium	2		2.11		mg/L	106			80-120		
Chromium	2		2.02		mg/L	101			80-120		
Cobalt	2		1.92		mg/L	96			80-120		
Copper	2		2.08		mg/L	104			80-120		
Lead	2		1.880		mg/L	94			80-120		
Molybdenum	2		2.07		mg/L	104			80-120		
Nickel	2		1.82		mg/L	91			80-120		
Selenium	2		2.09		mg/L	105			80-120		
Silver	2		1.884		mg/L	94			80-120		
Thallium	2		1.63		mg/L	82			80-120		
Vanadium	2		2.07		mg/L	104			80-120		
Zinc	2		2.12		mg/L	106			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1												Source: 418919-001
Arsenic	1.766	1	1	2.94	3.00	mg/L	117	123	2.0	75-125	20	
Barium	0.58	1	1	1.53	1.52	mg/L	95	94	0.7	75-125	20	
Beryllium	0.004	1	1	0.956	0.928	mg/L	95	92	3.0	75-125	20	
Cadmium	0.004	1	1	1.027	0.998	mg/L	102	99	2.9	75-125	20	
Chromium	0.012	1	1	1.015	0.998	mg/L	100	99	1.7	75-125	20	
Cobalt	0.007	1	1	0.942	0.905	mg/L	94	90	4.0	75-125	20	
Copper	0.022	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Lead	0.014	1	1	0.977	0.980	mg/L	96	97	0.3	75-125	20	
Molybdenum	0.010	1	1	1.06	1.08	mg/L	105	107	1.9	75-125	20	
Nickel	0.012	1	1	0.920	0.923	mg/L	91	91	0.3	75-125	20	
Selenium	ND	1	1	0.986	1.030	mg/L	99	103	4.4	75-125	20	
Silver	0.008	1	1	0.963	1.097	mg/L	96	109	13.0	75-125	20	

QCBatchID: <u>QC1206731</u>	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/17/2019	Instrument: AAICP (group)

Analyte	Sample	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	Amount	MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206731MS1, QC1206731MSD1											Source: 418919-001	
Thallium	0.032	1	1	0.857	0.886	mg/L	83	85	3.3	75-125	20	
Vanadium	0.017	1	1	1.04	1.02	mg/L	102	100	1.9	75-125	20	
Zinc	0.281	1	1	1.353	1.265	mg/L	107	98	6.7	75-125	20	

QCBatchID: <u>QC1207077</u>	Analyst: JParedes	Method: EPA 6020
Matrix: Solid	Analyzed: 09/26/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1207077MB1						
Arsenic	ND	mg/Kg	0.108	0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1207077LCS1											
Arsenic	50		48.9		mg/Kg	98			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1207077MS1, QC1207077MSD1											Source: 418919-019	
Arsenic	7.83	50	50	56.0	53.4	mg/Kg	96	91	4.8	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

<h1 style="margin: 0;">ENTHALPY</h1> <p style="margin: 0;">ANALYTICAL</p>		Chain of Custody Record			Turn Around Time (rush by advanced notice only)									
		Lab No: 418819 Page: 1 of 3			Standard: <input checked="" type="checkbox"/>		5 Day: <input type="checkbox"/>		3 Day: <input type="checkbox"/>					
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900					Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other			Sample Receipt Temp: (lab use only)			
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request						Test Instructions / Comments		
Company: <i>Montrose Environmental</i> Report To: <i>Dane Nygaard</i> Email: <i>dnygaard@montrose-env.com</i> Address: <i>1636 E. St Andrew place</i> <i>Santa Ana, CA</i> Phone: <i>714 919 6500</i> Fax:			Quote #: Proj. Name: <i>Shenandoah</i> Proj. #: <i>029RC1-191395</i> <i>1038854</i> P.O. #: <i>PO 1035690</i> Address: <i>2450 Shenandoah St,</i> <i>CA, CA</i> Global ID: Sampled By: <i>S Hyde / K Kern</i>			Arsenic (EPA 6020)						<i>Hold all 1.5' samples</i>		
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size									Pres.
1	<i>SB-37C2-0.5'</i>	<i>08/30/2019</i>	<i>1003</i>	<i>S</i>	<i>802 glass</i>									<i>ICE</i>
2	<i>SB-37C2-1.5'</i>		<i>1004</i>		<i>1</i>									
3	<i>SB-37D2-0.5'</i>		<i>0946</i>		<i>402 glass</i>									
4	<i>SB-37D2-1.5'</i>		<i>0948</i>		<i>802 glass</i>									
5	<i>SB-42A2-0.5'</i>		<i>1132</i>											
6	<i>SB-42A2-1.5'</i>		<i>1136</i>											
7	<i>SB-42D2-0.5'</i>		<i>1200</i>											
8	<i>SB-42D2-1.5'</i>		<i>1209</i>											
9	<i>SB-50B2-0.5'</i>		<i>1015</i>											
10	<i>SB-50B2-1.5'</i>		<i>1021</i>											
		Signature	Print Name		Company / Title			Date / Time						
1 Relinquished By:		<i>Sean Hyde</i>	<i>Sean Hyde</i>		<i>Montrose - Geologist</i>			<i>09/03/2019 0900</i>						
1 Received By:		<i>EA</i>	<i>EA</i>		<i>EA</i>			<i>9/3/19 900</i>						
2 Relinquished By:														
2 Received By:														
3 Relinquished By:														
3 Received By:														

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)											
		Lab No: <u>418919</u> Page: <u>2</u> of <u>3</u>				Standard: <u>J</u> 2 Day:		5 Day: <u> </u> 1 Day: <u> </u>		3 Day: <u> </u> Custom TAT: <u> </u>							
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900						Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)	
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments	
Company: <u>Montrose Environmental</u>		Quote #:		Proj. Name: <u>Shenandoah</u>		Arsenic (EPA 8020)										Hold all 1.5' samples	
Report To: <u>Dan Nygaard</u>		Proj. #:		P.O. #:													
Email: <u>dnygaard@montrose-env.ca</u>		Address:		Global ID:													
Address: <u>1631 E. St. Andrew Place</u>		Address: <u>2450 Shenandoah St,</u>		LA/CA													
Phone: <u>714 919 6500</u>		Sampled By: <u>S Hyde / K Kern</u>															
Fax:																	
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.											
1	SB-50A2-0.5'	08/30/2019	1054	S	8 oz glass	Ice	X										
2	SB-50A2-1.5'		1102				X									Hold	
3	SB-50A2-2.5'		1105				X									Hold	
4	SB-50AB2-0.5'		1040				X										
5	SB-50AB2-1.5'		1043				X									Hold	
6	SB-53D2-0.5'		1221				X										
7	SB-53D2-1.5'		1225				X									Hold	
8	SB-55B2-0.5'		1241				X										
9	SB-55B2-1.5'		1246				X									Hold	
10	SB-50AB2-Dup 0.5' (dup)		1040				X										
			Signature				Print Name		Company / Title				Date / Time				
1 Relinquished By:		<u>Sean Hyde</u>		<u>Sean Hyde</u>		<u>Montrose - Geologist</u>				<u>0900 09/03/2019</u>							
1 Received By:		<u>[Signature]</u>		<u>GA Hernandez</u>		<u>E.A.</u>				<u>9/3/19 960</u>							
2 Relinquished By:																	
2 Received By:																	
3 Relinquished By:																	
3 Received By:																	



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No:

418919

Page:

3

of

3

Turn Around Time (rush by advanced notice only)

Standard:



5 Day:

3 Day:

2 Day:

1 Day:

Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION		PROJECT INFORMATION				Analysis Request												Test Instructions / Comments		
Company:	Montrose Environmental	Quote #:				Arsenic (EPA 600)														Hold all 1.5' samples
Report To:	Dane Nygaard	Proj. Name:	Sherandoch																	
Email:	dnygaard@montrose-env.com	Proj. #:	029RC1-191395																	
Address:	1631 E St Andrew Place	P.O. #:	PO 103-564038854																	
	Santa Ana, CA	Address:	2450 Sherandoch St, CA																	
Phone:	714 919 6500	Global ID:																		
Fax:		Sampled By:	S. Hyde / K Kern																	
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.															
1 SB-55C2-0.5'	08/30/2019	1244	S	8 oz glass	ICE	X														
2 SB-55C2-1.5'	08/30/2019	1249	I		I	X													Hold	
3 SB-57B2-0.5'	I	1146	I		I	X														
4 SB-57B2-1.5'	I	1152	I		I	X													Hold	
5 EQUIPMENT BLANK 1	I	1330	W	2x 250 mL	HNO ₃	X														
6 SB-37D2-0.5 (DUP)	08/30/2019	0946	S	4 oz glass	ICE	X														
7																				
8																				
9																				
10																				
Signature		Print Name		Company / Title		Date / Time														
1 Relinquished By: <i>[Signature]</i>		Sean Hyde		Montrose - geologist		09/03/2019 0900														
1 Received By: <i>[Signature]</i>		C. Hernandez		EA		9/3/19 900														
2 Relinquished By:																				
2 Received By:																				
3 Relinquished By:																				
3 Received By:																				



ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: _____

Date Received: 09/03/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) _____
(No Cooler) : _____

Sample Temp (°C), One from each cooler: #1: 6.6 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam

☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.1 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample IDs present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sampling dates & times present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a relinquished signature present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the tests required clearly indicated on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If custody seals are present, were they intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all samples arrive intact? If no, indicate in Section 4 below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all bottle labels agree with COC? (ID, dates and times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were the samples collected in the correct containers for the required tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the containers labeled with the correct preservatives?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was a sufficient amount of sample submitted for the requested tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response: _____

Completed By: [Signature] Date: 9/3/19

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209
www.enthalpy.com/socal

Sample Acceptance Checklist – Rev 4, 8/8/2017

Patty Mata

From: Chris Guesnon
Sent: Thursday, September 12, 2019 1:07 PM
To: Patty Mata; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Sorry Patty. Thanks for pointing that out. Please run SB-50AB2-1.5. The Table below has been updated.

From: Patty Mata [mailto:patty.mata@enthalpy.com]
Sent: Thursday, September 12, 2019 12:55 PM
To: Chris Guesnon; Ranjit Clarke
Cc: Dane Nygaard; Kristopher Kern; Sean Mitchell Hyde
Subject: RE: Exceedances at Shenandoah

Chris,
I've added the STLC and TCLP tests to the 0.5' samples and I've added total As to the 1.5' samples as requested, except for the DUP sample. The DUP sample we received is the AB sample (SB-50AB2-0.5' (DUP)), not the A sample, and we only received the 0.5' depth. What would you like done for this sample?

With Regards,

Patty Mata
Project Manager
Direct (714) 771-9930



From: Chris Guesnon <cguesnon@montrose-env.com>
Sent: Thursday, September 12, 2019 12:08 PM
To: Patty Mata <patty.mata@enthalpy.com>; Ranjit Clarke <Ranjit.Clarke@enthalpy.com>
Cc: dnygaard@montrose-env.com; kkern@montrose-env.com; shyde@montrose-env.com
Subject: FW: Exceedances at Shenandoah

Hi Patty. Please complete the additional analyses for Shenandoah Elementary School, as listed below, on standard TAT:

Sample ID	Arsenic Results (mg/kg)	Comment
SB-37C2-0.5	189	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-37D2-0.5	57.4	Run STLC, Run 1.5 foot sample (As only)
SB-42A2-0.5	43.2	Run 1.5 foot sample (As only)
SB-42D2-0.5	61.9	Run STLC, Run 1.5 foot sample (As only)
SB-50AB2-0.5 (Dup)	14.1	Run 1.5 foot sample (As only)
SB-50B2-0.5	140	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-53D2-0.5	118	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-55B2-0.5	86.4	Run STLC, Run 1.5 foot sample (As only)
SB-55C2-0.5	128	Run STLC and TCLP, Run 1.5 foot sample (As only)
SB-57B2-0.5	99.3	Run STLC, Run 1.5 foot sample (As only)

Thank you.

Chris A. Guesnon
Senior Geologist
Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705

t (714) 919-6526

f (714) 919-6501

m (714) 514-9056

cguesnon@montrose-env.com

www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



Subject: [REDACTED]



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 419651
Report Date: 09/24/2019
Date Received: 09/21/2019
Client ID: 12860

Comments: Shenandoah Elementary School
Number: 029RC1-191395
P.O#: PO1026791
24560 Shenandoah Street, Los Angeles, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>
-----------------	-------------------------

419651-001	SB-61-0.5
419651-002	SB-61-1.5
419651-003	SB-62-0.5
419651-004	SB-62-1.5
419651-005	SB-63-0.5
419651-006	SB-63-1.5
419651-007	SB-64-0.5
419651-008	SB-64-1.5
419651-009	SB-64-2.5
419651-010	Equipment Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Patricia Mata, PM

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 07:35		Site:					
Sample #: <u>419651-001</u>		Client Sample #: SB-61-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	9.85	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 07:40		Site:					
Sample #: <u>419651-002</u>		Client Sample #: SB-61-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	6.64	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 08:15		Site:					
Sample #: <u>419651-003</u>		Client Sample #: SB-62-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	14.7	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 08:20		Site:					
Sample #: <u>419651-004</u>		Client Sample #: SB-62-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	8.73	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 07:55		Site:					
Sample #: <u>419651-005</u>		Client Sample #: SB-63-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	25.8	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 08:00		Site:					
Sample #: <u>419651-006</u>		Client Sample #: SB-63-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	8.22	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 08:30		Site:					
Sample #: <u>419651-007</u>		Client Sample #: SB-64-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	7.18	1	0.67	1	mg/Kg	09/24/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 09/21/2019 08:35		Site:					
Sample #: <u>419651-008</u>		Client Sample #: SB-64-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1206986				
Arsenic	8.81	1	0.67	1	mg/Kg	09/24/19	SBW

Matrix: Solid	Client: ES Engineering	Collector: Client
Sampled: 09/21/2019 08:40	Site:	
Sample #: <u>419651-009</u>	Client Sample #: SB-64-2.5	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1206986	
Arsenic	9.64	1	0.67	1	mg/Kg		09/24/19	SBW

Matrix: Water	Client: ES Engineering	Collector: Client
Sampled: 09/21/2019 09:00	Site:	
Sample #: <u>419651-010</u>	Client Sample #: Equipment Blank	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3010A						QCBatchID: QC1206987	
Arsenic	ND	1	0.008	0.01	mg/L		09/24/19	SBW

QCBatchID: QC1206986	Analyst: kedy	Method: EPA 6010B
Matrix: Solid	Analyzed: 09/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206986MB1						
Arsenic	ND	mg/Kg	0.67	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206986LCS1											
Arsenic	50		43.1		mg/Kg	86			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206986MS1, QC1206986MSD1												Source: 419651-001
Arsenic	9.85	50	50	54.7	50.1	mg/Kg	90	81	8.8	75-125	20	

QCBatchID: QC1206987	Analyst: kedy	Method: EPA 6010B
Matrix: Water	Analyzed: 09/24/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1206987MB1						
Antimony	ND	mg/L	0.014	0.04		
Arsenic	ND	mg/L	0.008	0.01		
Barium	ND	mg/L	0.002	0.01		
Beryllium	ND	mg/L	0.001	0.005		
Cadmium	ND	mg/L	0.002	0.005		
Chromium	ND	mg/L	0.002	0.01		
Cobalt		mg/L	0.002	0.005		
Copper	ND	mg/L	0.001	0.01		
Lead	ND	mg/L	0.005	0.01		
Molybdenum	ND	mg/L	0.005	0.01		
Nickel		mg/L	0.003	0.02		
Selenium	0.018 J	mg/L	0.016	0.03		
Silver		mg/L	0.003	0.005		
Thallium	ND	mg/L	0.009	0.05		
Vanadium	ND	mg/L	0.002	0.005		
Zinc	ND	mg/L	0.017	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206987LCS1											
Antimony	2		1.84		mg/L	92			80-120		
Arsenic	2		1.77		mg/L	89			80-120		
Barium	2		1.77		mg/L	89			80-120		
Beryllium	2		1.78		mg/L	89			80-120		
Cadmium	2		1.84		mg/L	92			80-120		
Chromium	2		2.00		mg/L	100			80-120		
Cobalt	2				mg/L				80-120		
Copper	2		1.97		mg/L	99			80-120		
Lead	2		1.80		mg/L	90			80-120		
Molybdenum	2		1.89		mg/L	95			80-120		
Nickel	2				mg/L				80-120		
Selenium	2		1.74		mg/L	87			80-120		
Silver	1				mg/L				80-120		
Thallium	2		1.85		mg/L	93			80-120		
Vanadium	2		1.87		mg/L	94			80-120		
Zinc	2		1.84		mg/L	92			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206987MS1, QC1206987MSD1										Source: 419651-010		
Antimony	ND	1	1	0.822	0.827	mg/L	82	83	0.6	75-125	20	
Arsenic	ND	1	1	0.804	0.788	mg/L	80	79	2.0	75-125	20	
Barium	ND	1	1	0.954	0.906	mg/L	95	91	5.2	75-125	20	
Beryllium	ND	1	1	0.825	0.868	mg/L	83	87	5.1	75-125	20	
Cadmium	ND	1	1	0.940	0.875	mg/L	94	88	7.2	75-125	20	
Chromium	0.003	1	1	1.10	1.03	mg/L	110	103	6.6	75-125	20	
Cobalt		1	1			mg/L				75-125	20	
Copper	ND	1	1	0.998	1.05	mg/L	100	105	5.1	75-125	20	
Lead	ND	1	1	0.882	0.864	mg/L	88	86	2.1	75-125	20	
Molybdenum	ND	1	1	0.889	0.862	mg/L	89	86	3.1	75-125	20	

QCBatchID: <u>QC1206987</u>	Analyst: kedy	Method: EPA 6010B
Matrix: Water	Analyzed: 09/24/2019	Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206987MS1, QC1206987MSD1										Source: 419651-010		
Nickel		1	1			mg/L				75-125	20	
Selenium	ND	1	1	0.765	0.769	mg/L	77	77	0.5	75-125	20	
Silver		0.5	0.5			mg/L				75-125	20	
Thallium	ND	1	1	0.863	0.846	mg/L	86	85	2.0	75-125	20	
Vanadium	ND	1	1	0.959	1.01	mg/L	96	101	5.2	75-125	20	
Zinc	ND	1	1	0.912	0.848	mg/L	91	85	7.3	75-125	20	


Data Qualifiers and Definitions

Qualifiers

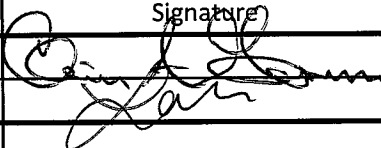
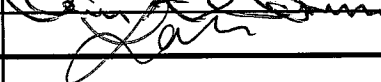
A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions


DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)									
806 N. Batavia St., Orange, CA 92868			Lab No: 419651		Standard:	<input checked="" type="checkbox"/>	4 Day:			3 Day:				
Phone: (714) 771-6900 Fax: (714) 771-9933			Page:		of	2 Day:	<input checked="" type="checkbox"/>	1 Day:	<input checked="" type="checkbox"/>	Same Day:				
Billing: Enthalphy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614			Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								

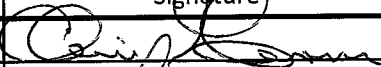
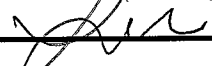
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request										Test Instructions / Comments					
Company:	ES Engineering Services, LLC			Name:	Shenandoah Elementary School			EPA 6010B - Arsenic															
Report To:	Dane Nygaard			Number:	029RC1-191395																		
Email:	dnygaard@es-online.com			P.O. #:	PO1026791																		
Address:	1 Park Plaza, Suite 1000			Address:	2450 Shenandoah Street																		
	Irvine, CA 92614				Los Angeles, California																		
Phone:	714-919-6500			Global ID:																			
Fax:	714-919-6501			Sampled By:	Chris Guesnon																		
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.																	
1	SB-61-0.5	9-21-19	0735	S				X															
2	SB-61-1.5		0740					X															
3	SB-62-0.5		0815					X															
4	SB-62-1.5		0820					X															
5	SB-63-0.5		0755					X															
6	SB-63-1.5		0800					X															
7	SB-64-0.5		0830					X															
8	SB-64-1.5		0835					X															
9	SB-64-2.5	9-21-19	0840	↓				X															
10	SB-64-2.5																						

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Chris Guesnon	Montrose / PM	9/21/19 1040
¹ Received By:		Leslie Hernandez	B.A.	9/21/19 1040
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				

4.7 / 18.9

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record		Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No: 419651	Standard:	<input checked="" type="checkbox"/> 4 Day:	<input type="checkbox"/> 3 Day:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614				Page: of	2 Day:	<input checked="" type="checkbox"/> 1 Day:	<input checked="" type="checkbox"/> Same Day:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				9-21-19 Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other							

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request										Test Instructions / Comments						
Company:	ES Engineering Services, LLC			Name:	Shenandoah Elementary School			EPA 6010B - Arsenic																
Report To:	Dane Nygaard			Number:	029RC1-191395																			
Email:	dnygaard@es-online.com			P.O. #:	PO1026791																			
Address:	1 Park Plaza, Suite 1000			Address:	2450 Shenandoah Street																			
	Irvine, CA 92614				Los Angeles, California																			
Phone:	714-919-6500			Global ID:																				
Fax:	714-919-6501			Sampled By:	Chris Guesnon																			
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.																		
1	Equipment Blank	9-21-19	0900	W	1- 1/2 Ltr	Matrix																		
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Chris Guesnon	Montrose / PM	9-21-19 / 1040
¹ Received By:		Leslie Hernandez	E/A	9/21/19 1040
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				



SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering Services, LLC

Project: Shenandoah Elementary School

Date Received: 9/21/2019

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 18.9 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 4.7 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

The samples were not within acceptable temperature range. ^{2P} 9/22/19

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time: _____
☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: 

Date: 9/21/19



Enthalpy Analytical, LLC

931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com



Client: ES Engineering
Address: 1 Park Plaza
Suite #1000
Irvine, CA 92614
Attn: Dane Nygaard

Lab Request: 420919
Report Date: 11/13/2019
Date Received: 11/04/2019
Client ID: 12860

Comments: Shenandoah Elementary School
#029RC1-191395
2450 Shenandoah Street, Los Angeles, California

This report includes additional STLC and TCLP test results as requested.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sample #</u>	<u>Client Sample ID</u>
420919-001	SB-65-0.5	420919-025	SB-73-0.5	420919-049	SB-81-0.5
420919-002	SB-65-1.0	420919-026	SB-73-1.0	420919-050	SB-81-1.0
420919-003	SB-65-1.5	420919-027	SB-73-1.5	420919-051	SB-81-1.5
420919-004	SB-66-0.5	420919-028	SB-74-0.5	420919-052	SB-82-0.5
420919-005	SB-66-1.0	420919-029	SB-74-1.0	420919-053	SB-82-1.0
420919-006	SB-66-1.5	420919-030	SB-74-1.5	420919-054	SB-82-1.5
420919-007	SB-67-0.5	420919-031	SB-75-0.5	420919-055	SB-83-0.5
420919-008	SB-67-1.0	420919-032	SB-75-1.0	420919-056	SB-83-1.0
420919-009	SB-67-1.5	420919-033	SB-75-1.5	420919-057	SB-83-1.5
420919-010	SB-68-0.5	420919-034	SB-76-0.5	420919-058	SB-84-0.5
420919-011	SB-68-1.0	420919-035	SB-76-1.0	420919-059	SB-84-1.0
420919-012	SB-68-1.5	420919-036	SB-76-1.5	420919-060	SB-84-1.5
420919-013	SB-69-0.5	420919-037	SB-77-0.5	420919-061	EQUIPMENT BLANK
420919-014	SB-69-1.0	420919-038	SB-77-1.0		
420919-015	SB-69-1.5	420919-039	SB-77-1.5		
420919-016	SB-70-0.5	420919-040	SB-78-0.5		
420919-017	SB-70-1.0	420919-041	SB-78-1.0		
420919-018	SB-70-1.5	420919-042	SB-78-1.5		
420919-019	SB-71-0.5	420919-043	SB-79-0.5		
420919-020	SB-71-1.0	420919-044	SB-79-1.0		
420919-021	SB-71-1.5	420919-045	SB-79-1.5		
420919-022	SB-72-0.5	420919-046	SB-80-0.5		
420919-023	SB-72-1.0	420919-047	SB-80-1.0		
420919-024	SB-72-1.5	420919-048	SB-80-1.5		

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Patricia Mata, PM

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.



Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:37		Site:					
Sample #: <u>420919-001</u>		Client Sample #: SB-65-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	7.94	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:40		Site:					
Sample #: <u>420919-002</u>		Client Sample #: SB-65-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1208571				
Arsenic	1.689	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	190	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	9.43	10	0.08	0.3	mg/L	11/13/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:41		Site:					
Sample #: <u>420919-003</u>		Client Sample #: SB-65-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	11.8	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:45		Site:					
Sample #: <u>420919-004</u>		Client Sample #: SB-66-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	33.4	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:47		Site:					
Sample #: <u>420919-005</u>		Client Sample #: SB-66-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1208571				
Arsenic	1.815	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	144	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	9.39	10	0.08	0.3	mg/L	11/13/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:50		Site:					
Sample #: <u>420919-006</u>		Client Sample #: SB-66-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208379				
Arsenic	12.6	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:55		Site:					
Sample #: <u>420919-007</u>		Client Sample #: SB-67-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	68.8	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	2.38	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 07:58		Site:					
Sample #: <u>420919-008</u>		Client Sample #: SB-67-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1208571				
Arsenic	3.89	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	271	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	16.1	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 08:00		Site:					
Sample #: <u>420919-009</u>		Client Sample #: SB-67-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	74.4	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	2.70	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:17		Site:					
Sample #: <u>420919-010</u>		Client Sample #: SB-68-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	8.18	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:20		Site:					
Sample #: <u>420919-011</u>		Client Sample #: SB-68-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	9.45	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:21		Site:					
Sample #: <u>420919-012</u>		Client Sample #: SB-68-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	8.24	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:03		Site:					
Sample #: <u>420919-013</u>		Client Sample #: SB-69-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1208571
Arsenic	1.157	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	260	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1208644
Arsenic	6.67	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:05		Site:					
Sample #: <u>420919-014</u>		Client Sample #: SB-69-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	8.34	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:08		Site:					
Sample #: <u>420919-015</u>		Client Sample #: SB-69-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	9.13	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 11:50		Site:					
Sample #: <u>420919-016</u>		Client Sample #: SB-70-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A						QCBatchID: QC1208571
Arsenic	1.405	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	115	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC						QCBatchID: QC1208644
Arsenic	6.22	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 11:52		Site:					
Sample #: <u>420919-017</u>		Client Sample #: SB-70-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	6.98	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 11:54		Site:					
Sample #: <u>420919-018</u>		Client Sample #: SB-70-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B						QCBatchID: QC1208380
Arsenic	9.27	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:33		Site:						
Sample #: <u>420919-019</u>		Client Sample #: SB-71-0.5				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	63.0	1	0.67	1	mg/Kg	11/05/19	SBW	
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1208644			
Arsenic	2.51	10	0.08	0.3	mg/L	11/13/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:34		Site:						
Sample #: <u>420919-020</u>		Client Sample #: SB-71-1.0				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	8.77	1	0.67	1	mg/Kg	11/05/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:36		Site:						
Sample #: <u>420919-021</u>		Client Sample #: SB-71-1.5				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	27.0	1	0.67	1	mg/Kg	11/05/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:09		Site:						
Sample #: <u>420919-022</u>		Client Sample #: SB-72-0.5				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	32.1	1	0.67	1	mg/Kg	11/05/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:10		Site:						
Sample #: <u>420919-023</u>		Client Sample #: SB-72-1.0				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	13.0	1	0.67	1	mg/Kg	11/05/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:11		Site:						
Sample #: <u>420919-024</u>		Client Sample #: SB-72-1.5				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	16.7	1	0.67	1	mg/Kg	11/05/19	SBW	

Matrix: Solid		Client: ES Engineering				Collector: Client		
Sampled: 11/02/2019 11:21		Site:						
Sample #: <u>420919-025</u>		Client Sample #: SB-73-0.5				Sample Type:		
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B				QCBatchID: QC1208380			
Arsenic	84.2	1	0.67	1	mg/Kg	11/05/19	SBW	
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC				QCBatchID: QC1208644			
Arsenic	3.58	10	0.08	0.3	mg/L	11/13/19	SBW	

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 11:30		Site:					
Sample #: <u>420919-026</u>		Client Sample #: SB-73-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208380				
Arsenic	9.70	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 11:32		Site:					
Sample #: <u>420919-027</u>		Client Sample #: SB-73-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	6.59	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:48		Site:					
Sample #: <u>420919-028</u>		Client Sample #: SB-74-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	47.1	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:51		Site:					
Sample #: <u>420919-029</u>		Client Sample #: SB-74-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	8.41	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:54		Site:					
Sample #: <u>420919-030</u>		Client Sample #: SB-74-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	20.9	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:44		Site:					
Sample #: <u>420919-031</u>		Client Sample #: SB-75-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1208571				
Arsenic	0.850	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	111	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	4.60	10	0.08	0.3	mg/L	11/13/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:48		Site:					
Sample #: <u>420919-032</u>		Client Sample #: SB-75-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	9.16	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:50		Site:							
Sample #: <u>420919-033</u>		Client Sample #: SB-75-1.5			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		4.71	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:14		Site:							
Sample #: <u>420919-034</u>		Client Sample #: SB-76-0.5			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		53.9	1	0.67	1	mg/Kg		11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>		Prep Method: STLC			QCBatchID: QC1208644				
Arsenic		2.42	10	0.08	0.3	mg/L		11/13/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:18		Site:							
Sample #: <u>420919-035</u>		Client Sample #: SB-76-1.0			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		5.09	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:30		Site:							
Sample #: <u>420919-036</u>		Client Sample #: SB-76-1.5			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		8.73	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:32		Site:							
Sample #: <u>420919-037</u>		Client Sample #: SB-77-0.5			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		5.74	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:35		Site:							
Sample #: <u>420919-038</u>		Client Sample #: SB-77-1.0			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		8.23	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering			Collector: Client				
Sampled: 11/02/2019 10:37		Site:							
Sample #: <u>420919-039</u>		Client Sample #: SB-77-1.5			Sample Type:				
Analyte		Result	DF	MDL	RDL	Units	Prepared	Analyzed By	Notes
Method: EPA 6010B <i>NELAC</i>		Prep Method: EPA 3050B			QCBatchID: QC1208381				
Arsenic		5.30	1	0.67	1	mg/Kg		11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:24		Site:					
Sample #: <u>420919-040</u>		Client Sample #: SB-78-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	5.56	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:28		Site:					
Sample #: <u>420919-041</u>		Client Sample #: SB-78-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	6.50	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:31		Site:					
Sample #: <u>420919-042</u>		Client Sample #: SB-78-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	7.22	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:15		Site:					
Sample #: <u>420919-043</u>		Client Sample #: SB-79-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	9.60	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:19		Site:					
Sample #: <u>420919-044</u>		Client Sample #: SB-79-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	10.7	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:21		Site:					
Sample #: <u>420919-045</u>		Client Sample #: SB-79-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	7.53	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:00		Site:					
Sample #: <u>420919-046</u>		Client Sample #: SB-80-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208381				
Arsenic	13.4	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:03		Site:					
Sample #: <u>420919-047</u>		Client Sample #: SB-80-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	5.84	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:06		Site:					
Sample #: <u>420919-048</u>		Client Sample #: SB-80-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	7.95	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 08:54		Site:					
Sample #: <u>420919-049</u>		Client Sample #: SB-81-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	18.7	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:03		Site:					
Sample #: <u>420919-050</u>		Client Sample #: SB-81-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	19.8	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:06		Site:					
Sample #: <u>420919-051</u>		Client Sample #: SB-81-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	5.68	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:50		Site:					
Sample #: <u>420919-052</u>		Client Sample #: SB-82-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	12.1	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:51		Site:					
Sample #: <u>420919-053</u>		Client Sample #: SB-82-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	6.78	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:53		Site:					
Sample #: <u>420919-054</u>		Client Sample #: SB-82-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	4.94	1	0.67	1	mg/Kg	11/05/19	SBW
Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:40		Site:					
Sample #: <u>420919-055</u>		Client Sample #: SB-83-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	7.61	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:42		Site:					
Sample #: <u>420919-056</u>		Client Sample #: SB-83-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	6.99	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:46		Site:					
Sample #: <u>420919-057</u>		Client Sample #: SB-83-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	7.49	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 09:59		Site:					
Sample #: <u>420919-058</u>		Client Sample #: SB-84-0.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 1311/3010A		QCBatchID: QC1208571				
Arsenic	1.497	1	0.008	0.05	mg/L	11/08/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	153	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	8.52	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:02		Site:					
Sample #: <u>420919-059</u>		Client Sample #: SB-84-1.0		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	71.6	1	0.67	1	mg/Kg	11/05/19	SBW
Method: EPA 6010B <i>NELAC</i>	Prep Method: STLC		QCBatchID: QC1208644				
Arsenic	3.88	10	0.08	0.3	mg/L	11/13/19	SBW

Matrix: Solid		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 10:05		Site:					
Sample #: <u>420919-060</u>		Client Sample #: SB-84-1.5		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3050B		QCBatchID: QC1208382				
Arsenic	10.9	1	0.67	1	mg/Kg	11/05/19	SBW

Matrix: Water		Client: ES Engineering		Collector: Client			
Sampled: 11/02/2019 12:37		Site:					
Sample #: <u>420919-061</u>		Client Sample #: EQUIPMENT BLANK		Sample Type:			
Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed By Notes
Method: EPA 6010B <i>NELAC</i>	Prep Method: EPA 3010A		QCBatchID: QC1208394				
Arsenic	ND	1	0.008	0.01	mg/L	11/04/19	SBW

QCBatchID: QC1208379	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208379MB1						
Aluminum	7.34	mg/Kg	2	5	B	
Antimony	ND	mg/Kg	1.6	3		
Arsenic	ND	mg/Kg	0.67	1		
Barium	ND	mg/Kg	0.11	1		
Beryllium	ND	mg/Kg	0.067	0.5		
Cadmium	ND	mg/Kg	0.094	0.5		
Calcium	2.16 J	mg/Kg	1.5	50		
Chromium	ND	mg/Kg	0.096	1		
Cobalt	ND	mg/Kg	0.086	0.5		
Copper	ND	mg/Kg	0.42	1		
Iron	1.99 J	mg/Kg	1.1	5		
Lead	ND	mg/Kg	0.84	1		
Magnesium	ND	mg/Kg	3.3	25		
Manganese	ND	mg/Kg	0.24	1		
Molybdenum	ND	mg/Kg	0.59	1		
Nickel	ND	mg/Kg	0.26	1.5		
Selenium	ND	mg/Kg	1.8	3		
Silicon	0.81 J	mg/Kg	0.24	50		
Silver	ND	mg/Kg	0.16	0.5		
Thallium	ND	mg/Kg	1.1	3		
Vanadium	ND	mg/Kg	0.26	0.5		
Zinc	ND	mg/Kg	0.75	5		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208379LCS1											
Antimony	100		104		mg/Kg	104			80-120		
Arsenic	100		103		mg/Kg	103			80-120		
Barium	100		110		mg/Kg	110			80-120		
Beryllium	100		98.8		mg/Kg	99			80-120		
Cadmium	100		108		mg/Kg	108			80-120		
Chromium	100		107		mg/Kg	107			80-120		
Cobalt	100		110		mg/Kg	110			80-120		
Copper	100		101		mg/Kg	101			80-120		
Lead	100		106		mg/Kg	106			80-120		
Molybdenum	100		106		mg/Kg	106			80-120		
Nickel	100		110		mg/Kg	110			80-120		
Selenium	100		97.5		mg/Kg	98			80-120		
Silver	100		90.8		mg/Kg	91			80-120		
Thallium	100		108		mg/Kg	108			80-120		
Vanadium	100		112		mg/Kg	112			80-120		
Zinc	100		110		mg/Kg	110			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1208379MS1, QC1208379MSD1											Source: 420906-001	
Antimony	5.73	100	100	75.3	83.6	mg/Kg	70	78	10.4	75-125	20	M
Arsenic	2.49	100	100	88.4	94.6	mg/Kg	86	92	6.8	75-125	20	
Barium	142	100	100	220	239	mg/Kg	78	97	8.3	75-125	20	
Beryllium	ND	100	100	97.7	104	mg/Kg	98	104	6.2	75-125	20	

QCBatchID: **QC1208379**

Analyst: rvenegas

Method: EPA 6010B

Matrix: Solid

Analyzed: 11/04/2019

Instrument: AAICP (group)

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1208379MS1, QC1208379MSD1											Source: 420906-001	
Cadmium	1.45	100	100	101	104	mg/Kg	100	103	2.9	75-125	20	
Chromium	80.4	100	100	138	141	mg/Kg	58	61	2.2	75-125	20	M
Cobalt	5.79	100	100	103	111	mg/Kg	97	105	7.5	75-125	20	
Copper	71.8	100	100	142	143	mg/Kg	70	71	0.7	75-125	20	M
Lead	18.6	100	100	121	122	mg/Kg	102	103	0.8	75-125	20	
Molybdenum	5.76	100	100	105	111	mg/Kg	99	105	5.6	75-125	20	
Nickel	111	100	100	117	122	mg/Kg	6	11	4.2	75-125	20	M
Selenium	ND	100	100	82.0	84.2	mg/Kg	82	84	2.6	75-125	20	
Silver	ND	100	50	81.6	85.8	mg/Kg	82	172	5.0	75-125	20	M
Thallium	ND	100	100	89.2	93.5	mg/Kg	89	94	4.7	75-125	20	
Vanadium	24.2	100	100	129	130	mg/Kg	105	106	0.8	75-125	20	
Zinc	1280	100	100	2540	1040	mg/Kg	1260	0	83.8	75-125	20	NC,D

QCBatchID: <u>QC1208380</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208380MB1						
Arsenic	ND	mg/Kg	0.67	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208380LCS1											
Arsenic	100		89.2		mg/Kg	89			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1208380MS1, QC1208380MSD1											Source: 420919-007	
Arsenic	68.8	100	100	159	152	mg/Kg	90	83	4.5	75-125	20	

QCBatchID: <u>QC1208381</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208381MB1						
Arsenic	ND	mg/Kg	0.67	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208381LCS1											
Arsenic	100		89.7		mg/Kg	90			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1208381MS1, QC1208381MSD1											Source: 420919-027	
Arsenic	6.59	100	100	94.7	94.2	mg/Kg	88	88	0.5	75-125	20	

QCBatchID: <u>QC1208382</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208382MB1						
Arsenic	ND	mg/Kg	0.67	1		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208382LCS1											
Arsenic	100		94.8		mg/Kg	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1208382MS1, QC1208382MSD1												Source: 420919-047
Arsenic	5.84	100	100	102	99.5	mg/Kg	96	94	2.5	75-125	20	

QCBatchID: <u>QC1208394</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Water	Analyzed: 11/04/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208394MB1						
Arsenic	ND	mg/L	0.008	0.01		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208394LCS1											
Arsenic	2		1.76		mg/L	88			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1208394MS1, QC1208394MSD1												Source: 420919-061
Arsenic	ND	1	1	0.927	0.921	mg/L	93	92	0.6	75-125	20	

QCBatchID: QC1208571	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/08/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208571MB1						
Arsenic	ND	mg/L	0.008	0.05		
Lead	0.021 J	mg/L	0.005	0.05		
Silver	ND	mg/L	0.003	0.05		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208571LCS1											
Arsenic	2		2.12		mg/L	106			80-120		
Lead	2		2.14		mg/L	107			80-120		
Silver	2		2.18		mg/L	109			80-120		

Matrix Spike/Matrix Spike Duplicate Summary												
Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	MS	MSD	MS	MSD	MS		MSD	%Rec		RPD		
QC1208571MS1, QC1208571MSD1											Source: 420689-002	
Arsenic	0.040	1	1	1.058	1.059	mg/L	102	102	0.1	75-125	20	
Lead	0.274	1	1	1.223	1.237	mg/L	95	96	1.1	75-125	20	
Silver	0.004	1	1	0.980	0.866	mg/L	98	86	12.4	75-125	20	

QCBatchID: <u>QC1208644</u>	Analyst: rvenegas	Method: EPA 6010B
Matrix: Solid	Analyzed: 11/11/2019	Instrument: AAICP (group)

Blank Summary						
Analyte	Blank Result	Units	MDL	RDL	Notes	
QC1208644MB1						
Arsenic	0.197	mg/L	0.008	0.03		
Copper	ND	mg/L	0.004	0.03		
Lead	0.025	mg/L	0.005	0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary											
Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1208644LCS1, QC1208644LCSD1											
Arsenic	20	20	20.5	22.9	mg/L	103	115	11	80-120	20	
Copper	20	20	17.5	16.8	mg/L	88	84	4	80-120	20	
Lead	20	20	20.8	24.0	mg/L	104	120	14	80-120	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

Patty Mata

From: Chris Guesnon <cguesnon@montrose-env.com> on behalf of Chris Guesnon
Sent: Wednesday, November 06, 2019 1:37 PM
To: Patty Mata
Cc: Sean Mitchell Hyde; dnygaard@es-online.com
Subject: RE: Shenandoah (11/2/19) - Enthalpy Analytical Final Report #420919

Hi Patty. Thank you for getting us the results for Shenandoah. Based on the results, arsenic exceeded the screening levels in a number of samples and are tabulated below. Please complete additional analyses for either STLC and TCLP for the following:

Sample ID	Arsenic Results (mg/kg)	Comment
SB-65-1.0	190	Run STLC and TCLP
SB-66-0.5	33.4	
SB-66-1.0	144	Run STLC and TCLP
SB-66-1.5	12.6	
SB-67-0.5	68.8	Run STLC
SB-67-1.0	271	Run STLC and TCLP
SB-67-1.5	74.4	Run STLC
SB-69-0.5	260	Run STLC and TCLP
SB-70-0.5	115	Run STLC and TCLP
SB-71-0.5	63.0	Run STLC
SB-71-1.5	27.0	
SB-72-0.5	32.1	
SB-72-1.0	13.0	
SB-72-1.5	16.7	
SB-73-0.5	84.2	Run STLC
SB-74-0.5	47.1	
SB-74-1.5	20.9	
SB-75-0.5	111	Run STLC and TCLP
SB-76-0.5	53.9	Run STLC
SB-80-0.5	13.4	
SB-81-0.5	18.7	
SB-81-1.0	19.8	
SB-82-0.5	12.1	
SB-84-0.5	153	Run STLC and TCLP
SB-84-1.0	71.6	Run STLC

Thank you.

Chris A. Guesnon
Senior Geologist
Environmental Remediation and Compliance Services



1631 E. St. Andrew Place, Santa Ana, CA 92705
t (714) 919-6526

f (714) 919-6501
m (714) 514-9056
cquesnon@montrose-env.com
www.montrose-env.com

PRIVACY NOTICE: This email, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521 and may contain information that is privileged, confidential, and/or otherwise protected from disclosure to anyone other than the intended recipient(s). Dissemination or use of this email or its contents (including attachments) by persons other than the intended recipient(s) is strictly prohibited. If this email is received in error, please notify the sender immediately either by replying to this email or calling (714) 919-6500 and permanently deleting the original and copies (including attachments). Thank you.

#



From: Patty Mata [mailto:patty.mata@enthalpy.com]
Sent: Wednesday, November 06, 2019 12:22 PM
To: dnygaard@es-online.com
Cc: asrihiran@montrose-env.com; cquesnon@montrose-env.com; kkern@montrose-env.com; Laura Skow; sking@es-online.com; shyde@montrose-env.com
Subject: Shenandoah (11/2/19) - Enthalpy Analytical Final Report #420919

Hi Dane Nygaard,

Attached is your final report #420919.

Thank you.

In accordance with our paperless initiative, we are no longer mailing or faxing reports by default. If you require a hard copy, please inform your Project Manager.

Data qualifiers and additional information necessary for the interpretation of the test results are contained in the PDF file and may not be included in the EDD.

With Regards,


Patty Mata
Project Manager




931 W. Barkley Ave., Orange, CA 92868
O: 714.771.6900
D: 714.771.9930
Patty.mata@enthalpy.com

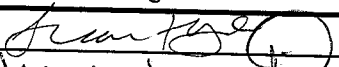
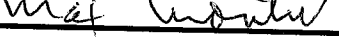
To help protect the air we breathe, the water we drink, and the soil that feeds us.

Please take a moment to provide [customer feedback](#).

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868				Lab No: <u>420919</u>		Standard:		4 Day:		3 Day:						
Phone: (714) 771-6900 Fax: (714) 771-9933				Page: <u>1</u> of <u>7</u>		2 Day:		1 Day:		Same Day:						
Billing: Enthalphy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614				Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other								
CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request								Test Instructions / Comments		
Company: ES Engineering Services, LLC		Name: Shenandoah Elementary School		EPA 6010B - Arsenic												
Report To: Dane Nygaard		Number: 029RC1-191395														
Email: dnygaard@es-online.com		P.O. #: PO1041682														
Address: 1 Park Plaza, Suite 1000		Address: 2450 Shenandoah Street														
Irvine, CA 92614		Los Angeles, California														
Phone: 714-919-6500		Global ID:														
Fax: 714-919-6501		Sampled By: Chris Guesnon														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.									Hold 1.0' and 1.5' samples	
1	SR-65-0.5	11-2-19	0737	S	1-4oz	ice										
2	SD-65-1.0		0740													
3	SR-65-1.5		0741													
4	SB-66-0.5		0745													
5	SB-66-1.0		0747													
6	SB-66-1.5		0750													
7	SR-67-0.5		0753													
8	SR-67-1.0		0758													
9	SR-67-1.5		0800													
10	SB-69-0.5	11-2-19	1217	S	1-4oz	ice										
Signature		Print Name		Company / Title				Date / Time								
1 Relinquished By: <u>Sean Hyde</u>		Sean Hyde		Montrose / Staff Geologist				11.4.19 @ 0800								
1 Received By: <u>Mar Montiel</u>		Mar Montiel		Enthalphy				11/4/19 0919								
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																

ENTHALPHY ANALYTICAL, INC.				Chain of Custody Record				Turn Around Time (Rush by advanced notice only)							
806 N. Batavia St., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 771-9933				Lab No: <u>420919</u>				Standard:		4 Day:		3 Day:			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Page: <u>2</u> of <u>7</u>				2 Day:		1 Day:		Same Day:					
Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other						Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other									

CUSTOMER INFORMATION			PROJECT INFORMATION				Analysis Request										Test Instructions / Comments						
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School			EPA 6010B -Arsenic																
Report To:	Dane Nygaard		Number:	029RC1-191395																			
Email:	dnygaard@es-online.com		P.O. #:	PO1041682																			
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street																			
	Irvine, CA 92614			Los Angeles, California																			
Phone:	714-919-6500		Global ID:																				
Fax:	714-919-6501		Sampled By:	Chris Guesnon																			
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.																		
1 SB-68-1.0	11-2-19	1220	S	1-4oz	Ice		X																
2 SB-68-1.5		1221					X																
3 SB-69-0.5		1203					X																
4 SB-69-1.0		1205					X																
5 SB-69-1.5		1208					X																
6 SB-70-0.5		1150					X																
7 SB-70-1.0		1152					X																
8 SB-70-1.5		1154					X																
9 SB-71-0.5		1133					X																
10 SB-71-0.5	11-2-19	1134	S	1-4oz	Ice		X																

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:		Sean Hyde	Montrose / Geologist	11.4.19 @ 0800
¹ Received By:		Max Montiel	Enthalpy A	11/4/19 0 5 18
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				

ENTHALPHY ANALYTICAL, INC.

806 N. Batavia St., Orange, CA 92868

Phone: (714) 771-6900 Fax: (714) 771-9933

Billing: Enthalpy - SoCal

c/o Montrose Environmental Group

1 Park Plaza, Suite 1000, Irvine, CA 92614


Chain of Custody Record

Lab No: 420919

Page: 3 of 7

Turn Around Time (Rush by advanced notice only)

Standard:			4 Day:			3 Day:		
2 Day:			1 Day:			Same Day:		

Matrix: A = Air DW = Drinking Water
 FL = Food Liquid FS = Food Solid L = Liquid
 PP = Pure Product S = Solid SeaW = Sea Water
 SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = Na₂S₂O₃ 2 = HCl 3 = HNO₃
 4 = H₂SO₄ 5 = NaOH 6 = Other


CUSTOMER INFORMATION
PROJECT INFORMATION
Analysis Request
Test Instructions / Comments

Company:	ES Engineering Services, LLC	Name:	Shenandoah Elementary School
Report To:	Dane Nygaard	Number:	029RC1-191395
Email:	dnygaard@es-online.com	P.O. #:	PO1041682
Address:	1 Park Plaza, Suite 1000	Address:	2450 Shenandoah Street
	Irvine, CA 92614		Los Angeles, California
Phone:	714-919-6500	Global ID:	
Fax:	714-919-6501	Sampled By:	Chris Guesnon

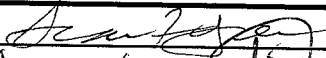

EPA 6010B - Arsenic

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.
1 SB-71-1.5	11-2-19	1136	S	1.4oz	ice
2 SB-72-0.5		1109			
3 SB-72-1.0		1110			
4 SB-72-1.5		1111			
5 SB-73-0.5		1121			
6 SB-73-1.0		1130			
7 SB-73-1.5		1132			
8 SB-74-0.5		1048			
9 SB-74-1.0		1051			
10 SB-74-1.5	11-2-19	1054	S	1.4oz	ice

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:	<i>Sean Hyde</i>	Sean Hyde	Montrose / Geologist	11.4.19 @ 0800
1 Received By:	<i>Max Montrose</i>	Max Montrose	Enthalpy A	11/4/19 0814
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPHY ANALYTICAL, INC.			Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
806 N. Batavia St., Orange, CA 92868			Lab No: <u>420919</u>	Standard:				4 Day:				3 Day:			
Phone: (714) 771-6900 Fax: (714) 771-9933			Page: <u>4</u> of <u>7</u>	2 Day:		<input checked="" type="checkbox"/>		1 Day:				Same Day:			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other											

CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request										Test Instructions / Comments			
Company:	ES Engineering Services, LLC		Name:	Shenandoah Elementary School		EPA 6010B -Arsenic													
Report To:	Dane Nygaard		Number:	029RC1-191395															
Email:	dnygaard@es-online.com		P.O. #:	PO1041682															
Address:	1 Park Plaza, Suite 1000		Address:	2450 Shenandoah Street															
	Irvine, CA 92614			Los Angeles, California															
Phone:	714-919-6500		Global ID:																
Fax:	714-919-6501		Sampled By:	Chris Guesnon															
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.														
1 SB-75-0.5	11-2-19	1044	S	1-4oz	ice		X												
2 SB-75-1.0		1048					X												
3 SB-75-1.5		1050					X												
4 SB-76-0.5		1014					X												
5 SB-76-1.0		1018					X												
6 SB-76-1.5		1030					X												
7 SB-77-0.5		1032					X												
8 SB-77-1.0		1035					X												
9 SB-77-1.5		1037					X												
10 SB-78-0.5	11-2-19	0924	S	1-4oz	Dec		X												

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Sean Hyde	Montrose/ Geologist	11.4.19 @ 0800
1 Received By:		MKK Montiel	Enthalpy A	11/4/19 2:45 PM
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL		Chain of Custody Record			Turn Around Time (rush by advanced notice only)										
		Lab No: <u>420919</u>	Page: <u>5</u> of <u>7</u>		Standard:	5 Day:	3 Day:								
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900		Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other			Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other			Sample Receipt Temp: (lab use only)							
											2 Day: <u>X</u>	1 Day:	Custom TAT:		
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request				Test Instructions / Comments			
Company: <u>BS Engineering</u>		Quote #:		Proj. Name: <u>Shenandoah Elementary</u>		EPA 6010B - Arsenic									
Report To: <u>Dane Nygaard</u>		Proj. #:		<u>029 RKL-191395</u>											
Email: <u>Nygaard@cs-online</u>		P.O. #:		<u>PO 1041682</u>											
Address: <u>1 Park Plaza St 100</u>		Address:		<u>2450 Shenandoah St</u>											
Phone: <u>(714) 919-6500</u>		Global ID:		<u>Los Angeles</u>											
Fax:		Sampled By:		<u>Chris Eversen</u>											
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.									
1	SB-78-1.0	11-2-19	0928	S	1-4oz	ke	X								
2	SB-78-1.5		0931				X								
3	SB-79-0.5		0915				X								
4	SB-79-1.0		0919				X								
5	SB-79-1.5		0921				X								
6	SB-80-0.5		0900				X								
7	SB-80-1.0		0903				X								
8	SB-80-1.5		0906				X								
9	SB-81-0.5		0909				X								
10	SB-81-1.0	11-2-19	0903	S	1-4oz	ke	X								
Signature		Print Name		Company / Title				Date / Time							
1 Relinquished By: <u>Sean Hyde</u>		Sean Hyde		Montrose / Geologist				11.4.19 @ 0800							
1 Received By: <u>Wael Khatib</u>		Wael Khatib		Enthalpy IA				11/4/19 0915							
2 Relinquished By:															
2 Received By:															
3 Relinquished By:															
3 Received By:															

ENTHALPY ANALYTICAL		Chain of Custody Record				Turn Around Time (rush by advanced notice only)										
		Lab No: <u>420919</u>		Page: <u>6</u> of <u>7</u>		Standard:		5 Day:		3 Day:						
Enthalpy Analytical - Orange 931 W. Barkley Avenue, Orange, CA 92868 Phone 714-771-6900		Matrix: A = Air S = Soil/Solid W = Water DW = Drinking Water SD = Sediment PP = Pure Product SEA = Sea Water SW = Swab T = Tissue WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other				Sample Receipt Temp: (lab use only)						
						2 Day:		1 Day:		Custom TAT:						
CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request				Test Instructions / Comments				
Company: <u>ES Engineering</u>		Quote #:		Proj. Name: <u>Shenandoah Elementary</u>		EPA 600/3-A-99-003 (Arsenic)										
Report To: <u>Dane Rygaard</u>		Proj. #:		<u>029RC1-191395</u>												
Email: <u>Drygaard@es-engineering.com</u>		P.O. #:		<u>PO1041682</u>												
Address: <u>1 Park Plaza, Ste 100</u>		Address:		<u>2450 Shenandoah St.</u>												
Phone: <u>(714) 919-6500</u>		Global ID:		<u>Los Angeles</u>												
Fax:		Sampled By: <u>Chris Guesnon</u>														
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.										
1	SB-81-1.5	11-2-19	0906	S	1-4oz	Ice	X									
2	SB-82-0.5		0950				X									
3	SB-82-1.0		0951				X									
4	SB-82-1.5		0953				X									
5	SB-83-0.5		0940				X									
6	SB-83-1.0		0942				X									
7	SB-83-1.5		0946				X									
8	SB-84-0.5		0959				X									
9	SB-84-1.0		1002				X									
10	SB-84-1.5	11-2-19	1005	S	1-4oz	Ice	X									
		Signature		Print Name		Company / Title		Date / Time								
1 Relinquished By:		<u>Sean Hyde</u>		<u>Sean Hyde</u>		<u>Montrose / Geologist</u>		<u>11.4.19 @ 0800</u>								
1 Received By:		<u>Max Mantiel</u>		<u>Max Mantiel</u>		<u>Enthalpy A</u>		<u>11/4/19 0818</u>								
2 Relinquished By:																
2 Received By:																
3 Relinquished By:																
3 Received By:																



ENTHALPY

ANALYTICAL

Chain of Custody Record

Lab No: 420919
Page: 7 of 7

Turn Around Time (rush by advanced notice only)

Standard: 5 Day: 3 Day:
2 Day: X 1 Day: Custom TAT:

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid W =
Water DW = Drinking Water SD = Sediment
PP = Pure Product SEA = Sea Water
SW = Swab T = Tissue WP = Wipe O = Other

Preservatives: 1 =
Na₂S₂O₃ 2 = HCl 3 = HNO₃
4 = H₂SO₄ 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

CUSTOMER INFORMATION			PROJECT INFORMATION			Analysis Request										Test Instructions / Comments			
Company:	<u>ES Engineering Services</u>		Quote #:			Arsenic 6010 B													
Report To:	<u>Dane Nygaard</u>		Proj. Name:	<u>Shenandoah Elementary School</u>															
Email:	<u>dnygaard@montrose-env.ca</u>		Proj. #:	<u>029RC1-191395</u>															
Address:	<u>1631 E St. Andrew place</u>		P.O. #:	<u>PO 1041682</u>															
	<u>Santa Ana, CA 92705</u>		Address:	<u>2450 S. Shenandoah</u>															
Phone:	<u>714 919 6500</u>		Global ID:																
Fax:	<u>714 919 6501</u>		Sampled By:	<u>Chris Guernon</u>															
Sample ID		Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.													
1	<u>Equipment Blank</u>	<u>11/2/19</u>	<u>1237</u>	<u>W</u>	<u>500 mL HDPE</u>	<u>HNO₃</u>		<u>X</u>											
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
		Signature		Print Name		Company / Title		Date / Time											
1 Relinquished By:		<u>Sean Hyde</u>		<u>Sean Hyde</u>		<u>Montrose / Geologist</u>		<u>11.4.19 @ 0800</u>											
1 Received By:		<u>Max Montiel</u>		<u>Max Montiel</u>		<u>Enthalpy A</u>		<u>11/2/19 0818</u>											
2 Relinquished By:																			
2 Received By:																			
3 Relinquished By:																			
3 Received By:																			



SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ES Engineering

Project: Shenandoah Elementary School

Date Received: 11/4/19

Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☐ Yes, How many? ☒ No (skip section 2)

Sample Temp (°C) : 12.1
(No Cooler)

Sample Temp (°C), One from each cooler: #1: #2: #3: #4:

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information:

Section 3

Was the cooler packed with: ☐ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam
☐ Paper ☐ None ☐ Other

Cooler Temp (°C): #1: #2: #3: #4:

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: Date/Time
☐ Email (email sent to/on): /

Project Manager's response:

Completed By:

Date: 11/4/19

APPENDIX D
Waste Manifests

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number Not Required	2. Page 1 of 1	3. Emergency Response Phone 888-423-6060	4. Waste Tracking Number 0720191012	
5. Generator's Name and Mailing Address Los Angeles Unified School District 333 S. Beaudry Ave. Los Angeles CA 90017 Generator's Phone: 213 241-4261			Generator's Site Address (if different than mailing address) Shenandoah Elementary School 2450 Shenandoah Street Los Angeles CA			
6. Transporter 1 Company Name American Integrated Services, Inc.			U.S. EPA ID Number CAR000148338			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address Crosby & Overton, Inc. 1630 W. 17th Street Long Beach CA 90813 Facility's Phone: 562 432-5445			U.S. EPA ID Number CAD028408019			
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non-Hazardous Waste Liquid (Decon water)		1	DM	5	G	
2. Non-Hazardous Waste Solid (Soil)		2	DM	1000	P	
3.						
4.						
13. Special Handling Instructions and Additional Information Wear proper PPE while handling. Weights and volumes are approximate. Project No. 39030-44-1 Profile No 9b1.) 111287 9b2.) 111286						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offor's Printed/Typed Name As Agent For LAUSD - AFHS			Signature <i>[Signature]</i>		Month Day Year 7 10 19	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Tom Turner			Signature <i>[Signature]</i>		Month Day Year 7 10 19	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)			Month Day Year			
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature		Month Day Year	

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number		2. Page 1 of		3. Emergency Response Phone		4. Waste Tracking Number <i>03680</i>	
		5. Generator's Name and Mailing Address <i>Shenandoah Elementary Sch</i>		Generator's Site Address (if different than mailing address)					
Generator's Phone:									
6. Transporter 1 Company Name <i>Slaby Environmental Inc</i>		<i>888</i>		<i>PO Box 6600</i>		U.S. EPA ID Number		<i>N/A</i>	
7. Transporter 2 Company Name						U.S. EPA ID Number			
8. Designated Facility Name and Site Address <i>Filter Recycling Corp</i>		<i>929</i>		<i>421-2012</i>		U.S. EPA ID Number		<i>CAD 182444481</i>	
Facility's Phone:		<i>92376</i>							
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity		12. Unit Wt./Vol.			
		No.	Type						
1. <i>Non Hazardous Waste Solid (soil)</i>		<i>001 DM</i>		<i>295</i>		<i>P</i>			
2.									
3.									
4.									
13. Special Handling Instructions and Additional Information									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offoror's Printed/Typed Name				Signature				Month Day Year	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____									
Transporter Signature (for exports only): _____ Date leaving U.S.: _____									
16. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name <i>Ken Nordstrom</i>				Signature <i>[Signature]</i>				Month Day Year <i>11 18 19</i>	
Transporter 2 Printed/Typed Name				Signature				Month Day Year	
17. Discrepancy									
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
17b. Alternate Facility (or Generator)				Manifest Reference Number:		U.S. EPA ID Number			
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator)								Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a									
Printed/Typed Name				Signature				Month Day Year	