

SUPPLEMENTAL SITE INVESTIGATION  
COLFAX CHARTER ELEMENTARY SCHOOL  
PERIMETER UPGRADE PROJECT  
11724 ADDISON STREET  
VALLEY VILLAGE, CALIFORNIA 91607

Prepared For:

**LOS ANGELES UNIFIED SCHOOL DISTRICT**

Office of Environmental Health and Safety  
333 South Beaudry Avenue, 21<sup>st</sup> Floor  
Los Angeles, California 90017

Project No. 11640.008

January 17, 2019



Leighton Consulting, Inc.

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

Attention: Mr. Andrew Modugno

**Subject: Supplemental Site Investigation  
Colfax Charter Elementary School Perimeter Upgrade Project,  
11724 Addison Street, Valley Village, California 91607**

Leighton Consulting, Inc. is pleased to present this Supplemental Site Investigation Report for the subject site which documents historical site land use, outlines the approach and data collected as part of the recently concluded site assessment, and recommends further action be taken to address impacted soil at the property.

If you have any questions regarding this report, please do not hesitate to contact the undersigned at your earliest convenience. We appreciate the opportunity to be of service to the District.

Respectfully submitted,

LEIGHTON CONSULTING, INC.

Ross Surrency, PG  
Associate Geologist



Robert Lovdahl, PG  
Senior Project Geologist



RES/RAL/lr

Distribution: Addressee (3 hardcopies) c/o Andrew Modugno

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## LIST OF ABBREVIATIONS/ACRONYMS

ACM	asbestos containing material
amsl	above mean sea level
AQMD	South Coast Air Quality Management District
bgs	below ground surface
Cal/EPA	California Environmental Protection Agency
CDPH	California Department of Public Health
COC	chemical of concern
COPC	chemical of potential concern
District	Los Angeles Unified School District
DOT	Department of Transportation
DRO	diesel range organics
DTSC	Department of Toxic Substances Control
DTSC SL	DTSL-Modified Screening Level
ESA	Environmental Site Assessment
ESL	SFRWQCB Environmental Screening Level
GRO	gasoline range organics
HASP	Site-specific health and safety plan
IDW	investigation derived waste
LAUSD	Los Angeles Unified School District
LBP	lead-based paint
Leighton	Leighton Consulting Inc.
mg/kg	milligram per kilogram
µg/kg	microgram per kilogram
MDL	method detection limit
OCPs	organochlorine pesticides
OEHS	Office of Environmental Health and Safety
ORO	oil range organics
PCBs	Polychlorinated Biphenyls
PEA	Preliminary Endangerment Assessment
PPE	personal protective equipment
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RSL	US EPA Regional Screening Level (residential)
School property	Colfax Charter Elementary School Campus

SFRWQCB	San Francisco Bay Regional Water Quality Control Board
Site	Colfax Charter Elementary School Perimeter Upgrade Project Area
SSI	Supplemental Site Investigation
STLC	soluble threshold limit concentration
Strongarm	Strongarm Environmental Services, Inc.
TPH	Total petroleum hydrocarbons
TTCL	total threshold limit concentration
UCL	upper confidence limit
USA	Underground Service Alert

## EXECUTIVE SUMMARY

This Supplemental Site Investigation (SSI) Report summarizes historical site land use and outlines the approach utilized and data collected as part of the recently concluded assessment conducted for the Colfax Charter Elementary School Perimeter Upgrade Project (the 'Site', Figures 1 and 2). The Site consists of the perimeter area of the Colfax Charter Elementary School property (hereinafter also referred to as 'the School property'), which is located at 11724 Addison Street, Valley Village, California 91607.

The School property was formerly used as an arboretum from at least 1928 to 1940 and included a single-family dwelling in the center of the property. LAUSD purchased the property in 1949 and has operated a school at the property since approximately 1951. Prior to 1928, the land was undeveloped. The majority of the School property is paved and currently developed with 15 various school buildings, approximately six (6) intermodal containers used for storage, playground areas and an animal sanctuary. The area surrounding the School property is mainly residential.

The primary objectives of this SSI were to assess shallow soil for potential environmental concerns and to evaluate overall Site health risk based on soil analytical screening results for chemicals of potential concern (COPCs), including lead, arsenic, mercury, total petroleum hydrocarbons (TPH), organochlorine pesticides (OCPs), and polychlorinated biphenyls (PCBs).

Between October 27 and December 21, 2018, forty (40) soil borings were advanced to a maximum depth of three (3) feet below ground surface (bgs) using a hand auger. Boring locations are shown on Figure 2. Soil samples were collected from depth intervals 0.5, 1.5 and 3 feet bgs and select samples were analyzed for COPCs. The soil matrix analytical results (Table 1) indicate that COPCs at the Site were either below laboratory detection limits or below regulatory screening levels with the exception of arsenic, diesel-range organics (DRO), chlordane, and dieldrin.

Based on the SSI sampling results (Tables 1 through 3), elevated levels of arsenic, DRO, chlordane, and dieldrin were reported for soil in limited areas at the Site (Figures 3 and 4) and further action appears warranted. A removal action (soil excavation) is recommended to target the four areas (adjacent to Borings PER1, PER12, PER14, and PER22) where impacted soils were identified above regulatory screening levels (Figures 4, 5, and 6). The details regarding the recommended soil excavation and confirmation sampling activities are presented in Section 7.0. Soil generated from the proposed remedial excavation areas should be appropriately secured from public access,

sampled in accordance with District waste characterization procedures, and profiled for offsite disposal at an approved landfill.

## 1.0 INTRODUCTION

This Supplemental Site Investigation (SSI) Report (hereinafter also referred to as 'the report') summarizes historical site land use and outlines the approach utilized and data collected as part of the recently concluded assessment conducted at the Colfax Charter Elementary Perimeter Upgrade Project (the 'Site', Figures 1, and 2).

This report was prepared by Leighton Consulting Inc. (Leighton) on behalf of the Los Angeles Unified School District (LAUSD or the 'District') in general conformance with various existing guidance documents related to site assessment, characterization and investigation published by the California Environmental Protection Agency (Cal/EPA) – Department of Toxic Substances Control (DTSC, 2015). Pertinent references related to the Site are listed in Appendix A.

### 1.1 Site Description

The Site is part of the Colfax Charter Elementary School property (hereinafter also referred to as 'the School property'), which is located at 11724 Addison Street, Valley Village, California 91607. The School property is identified by the Los Angeles County Assessor's Office with Assessor's ID Number (AIN) 2355-013-900 and occupies 8.1 acres. The property is owned and operated by LAUSD.

The Site consists of the perimeter area around the School property boundary and represents proposed development areas associated with the Colfax Charter Elementary School Perimeter Upgrade Project. A portion of the Site along the eastern property boundary was previously investigated in 2016 during a separate Preliminary Endangerment Assessment (PEA) that was completed to assess environmental conditions in two areas at the School property as part of the Colfax Charter Elementary School Classroom Addition Project (areas previously investigated are outlined in yellow on Figure 2).

### 1.2 Background

The School property was formerly used as an arboretum from at least 1928 to 1940 and included a single-family dwelling in the center of the property. LAUSD purchased the property in 1949 and has operated a school at the property since approximately 1951. Prior to 1928 the land was undeveloped. The majority of the School property is paved and currently developed with 15 various school

buildings, approximately six (6) intermodal containers used for storage, playground areas and an animal sanctuary. The area surrounding the School property is mainly residential.

WorleyParsons completed a Phase I Environmental Site Assessment (ESA) for the School property in January 2016. Findings from the Phase I ESA are discussed in Section 1.5, below. In 2016, Leighton prepared a PEA Equivalent Document for two areas on the campus as part of the Colfax Charter Elementary School Classroom Addition Project.

The current Site contact related to the environmental matters is listed below:

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

### **1.3 Regional Geology and Hydrogeology**

The School property is located at an approximate elevation of 633 feet above mean sea level (amsl), and the local topography generally slopes toward the southeast (WorleyParsons, 2016). The School property is located geographically in the southeastern portion of the San Fernando Valley area approximately 1.5 miles north of the Santa Monica Mountains. This area falls within the Transverse Ranges Geomorphic Province of Southern California (DWR, 1961). The Site is underlain by interbedded layers of Quaternary, unconsolidated and poorly sorted sand, silty sand and silty clay from the surface to 71 feet below ground surface (bgs; WorleyParsons, 2016).

The School property is located within the San Fernando Valley Groundwater Basin. The nearest groundwater well, Observation Well 3831J, is located approximately 840 feet north of the School property. Groundwater in this well was measured at approximately 133.70 feet bgs on December 3, 2009 (WorleyParsons, 2016). Site-specific groundwater data was not available for review.

## **1.4 Environmental Setting**

A Phase I ESA was completed for the School property on January 21, 2016 by WorleyParsons (WorleyParsons, 2016). The purpose of the Phase I ESA was to identify recognized environmental conditions (RECs) in order to assist in the evaluation of historical land use, assess potential environmental impacts on- and off-site, and determine if any potential environmental impacts may pose a threat to on-site occupants, off-site individuals and the environment. No other environmental investigations for the School property were identified during the Phase I ESA. Information pertaining to the School property as determined by the Phase I ESA is summarized below.

### **1.4.1 School Property**

The Phase I ESA includes a review of historical aerial photographs, topographic maps and Sanborn® maps for the School property. According to the Phase I ESA, historical use of the School property from at least 1928 to 1940 included an arboretum with a single-family dwelling located in the center portion of the property. The property was purchased by LAUSD in 1949, and has operated as a school since approximately 1951. Currently, the majority of the School property is paved and is developed with various school buildings, intermodal containers used for storage, playground areas and an animal sanctuary. The findings of the Phase I ESA are discussed in Section 1.5, below.

### **1.4.2 Site**

The Site generally consists of landscaped areas or planter spaces on the north, west, east, and south margins of the School property. The east margin of the School property includes a paved section associated with a parking lot.

The District plans to redevelop the School property perimeter as part of the Colfax Charter Elementary School Perimeter Upgrade Project. Planned upgrades included irrigation modifications, possible tree removal, and other changes to landscaping. Leighton was contracted by the District to complete a SSI to characterize soil in advance of these planned perimeter upgrades.

## 1.5 **Discussion of Phase I ESA and Previous PEA Equivalent Items**

The Phase I ESA found no evidence of the storage or release of hazardous materials during the on-site inspection at the School property with the exception of the storage of small quantities of gasoline, cleaning chemicals and oil storage as janitorial supplies. During review of regulatory databases, Colfax Charter Elementary School was identified in the Phase I ESA as a large quantity waste generator, as a result of past school renovation activities, which included the abatement of asbestos, lead-based paint (LBP) and polychlorinated biphenyl (PCB) containing equipment. Based on the site reconnaissance and records reviewed as part of the Phase I ESA, the following RECs were identified:

- Potential presence of LBP residue in shallow soils around the drip lines of the existing and former buildings at the Site.
- Potential presence of organochlorine pesticides (OCPs) in shallow soils around the foundation of the existing and former buildings at the Site and in areas of former horticulture/agriculture at the School property.
- Potential presence of arsenic in shallow soils under pavement at the School property from possible historic use of arsenical herbicides.
- Potential presence of asbestos containing material (ACM) in building materials at the School property.

A hazardous material survey was recommended in the Phase I ESA to address concerns regarding hazardous materials in construction materials (ACM, LBP, and universal wastes). The hazardous material survey is not part of Leighton's scope for this SSI.

DTSC guidance indicates that LBP residue from paint or surface coatings may be present in soil around school structures that are adjacent or near unpaved areas where runoff could occur and were constructed prior to January 1993 (DTSC, 2006). OCPs were commonly used as insecticides for termite control, around structures between 1948 and 1989 (DTSC, 2006). PCBs were used widely in caulking and elastic sealant materials, particularly from 1950 through the 1970s until the manufacturing of PCBs was banned in 1979. DTSC guidance indicates that PCBs may exist in soil near exterior caulking present in buildings meeting the age criteria and adjacent to unpaved areas (DTSC, 2006). PCBs in shallow



soil are commonly evaluated at the Phase I ESA Addendum/PEA Equivalent stage of assessment at school sites that meet the age criteria.

Leighton was contracted by the District in 2016 to complete a PEA Equivalent study to address soil concerns identified in the Phase I ESA, specifically to collect shallow soil samples within two areas referred to as the east and west development areas (delineated in yellow on Figure 2). The goal of the study was to assess potential environmental concerns associated with shallow soil that may be encountered during the Colfax Charter Elementary School Classroom Addition Project. Between March 21 and 22, 2016, sixty-one (61) soil borings were advanced to a maximum depth of 2.5 feet bgs using a hand auger. Soil samples were collected from 0.5, 1.5 and 2.5 feet bgs and select samples were analyzed for COPCs including lead, arsenic, OCPs, and PCBs. From these samples, all of the 0.5 and 1.5 feet bgs samples were analyzed along with 4 of the 2.5 feet bgs samples for lead, arsenic, and/or OCPs. Approximately 10% of the 0.5 feet samples (8 of the 61 samples) were analyzed to screen shallow soil for PCBs.

Based on the results of shallow soil sampling, lead, arsenic, OCPs, and PCBs were either below laboratory detection limits or below regulatory screening levels. The 2016 PEA Equivalent Report concluded that no further action was warranted for arsenic, lead, OCPs and PCBs in shallow soil within the proposed development areas (Leighton Consulting, 2016).

## 2.0 SAMPLING ACTIVITIES

The SSI field sampling activities presented herein were conducted on October 20, October 27, November 3, and December 21, 2018, and were designed to assess lead, arsenic, mercury, OCPs, total petroleum hydrocarbons (TPH), and PCBs which were the chemicals of potential concern (COPCs) identified for shallow soil at the Site. Initially, 29 sampling locations were completed on October 27, 2018, with an additional 11 sampling locations completed on November 3, 2018 and December 21, 2018, to delineate the extent of elevated chemical concentrations identified within four (4) sampling locations which were equivalent to or exceeded regulatory screening criteria.

Where lateral delineation sampling was warranted, step-out soil sampling locations were advanced approximately five (5) feet from the original sampling location in a “V” pattern. Step-out sample locations were identified in the sample identification (ID) using the cardinal direction traveled from the original sample location (e.g., a step-out sampling location was completed five (5) feet to the northeast of location PER12 and therefore named PER12NE [Figures 2 and 3]). A second round of step-out sampling was completed on December 21, 2018 near boring location PER1. Step-out samples completed on December 21, 2018 were collected at distances ranging from approximately 17 to 35 feet away from the initial boring location in order to assess the lateral extent of OCP-impacted soil in this area (includes soil borings PER1-S, PER1-SE2, and PER1-SW2). Field observations of the soil samples did not provide an indication of hydrocarbon staining and/or odors. Appendix B contains soil boring logs and boring locations are shown on Figure 2. Appendix C contains a photographic log showing representative soil boring locations from the sampling events.

The sampling consisted of the collection of select at-depth soil samples to screen shallow soil for lead, arsenic, mercury, OCPs, TPH, and PCB concentrations. Sampling activities consisted of the following components discussed below.

### 2.1 Objectives

The primary objectives of this SSI were:

- To assess shallow soil for potential environmental concerns identified in the Phase I ESA for the Site; and
- To evaluate the overall Site health risk based on soil analytical screening results.

## **2.2 Utility Clearance**

Prior to collecting the soil samples, Underground Service Alert (USA) was notified more than 48-hours prior to initiation of field sampling activities for marking subsurface utilities in and around the Site. The Site boundary was clearly marked with white water-based chalk spray paint on October 12, 2018, prior to USA notification.

In addition to USA notification, Spectrum Geophysics completed a geophysical survey on October 20 and 27, 2018, to identify potential underground utilities or obstructions in conflict with the proposed soil boring locations. Based on the geophysical survey, select proposed boring locations were adjusted in the field where necessary to minimize risk to damaging underground utilities.

## **2.3 Health & Safety Plan**

A Site-specific health and safety plan (HASP) was prepared for the field activities. The HASP addressed issues regarding chemical exposure, personal protective equipment (PPE), physical and biological hazards that might be expected at the Site, an emergency response plan, and route to the nearest hospital. Site personnel engaged in field activities were required to read and sign the HASP. Subcontractor(s) were required to prepare and follow their own HASP during field activities, considering the Site-specific conditions.

## **2.4 Field Procedures**

Collection of environmental samples of high integrity is important to the quality of chemical data to be generated. To this end, strict field procedures have been developed. General descriptions of field methods that were employed at various locations during various phases of the field investigation are described below.

### **2.4.1 Sample Collection and Analysis**

Soil borings were advanced by Strongarm Environmental Services, Inc. (Strongarm), a State of California licensed driller, using hand-auger tools. Each boring was advanced to a maximum total depth of three (3) feet bgs. Soil samples were generally collected from the borings at 0.5, 1.5 and 3 feet bgs, where feasible. Lithologic information and soil descriptions from the soil borings were recorded by Leighton's on-site staff and reviewed by

a California Professional Geologist. Boring Logs are provided in Appendix B.

Specific sampling approaches are outlined below:

- Discrete soil samples were obtained from 0.5 feet, 1.5 feet and 3 feet bgs depths from each boring. Soil samples were collected in laboratory-supplied, 8-ounce glass jars.
- The upper 0.5 feet samples were analyzed for lead, arsenic, mercury, OCPs, and TPH as shown in Tables 1 and 2. Approximately 20% of the samples collected from the 0.5 feet bgs interval (8 samples) were analyzed for PCBs. Select 1.5 and 3.0 feet bgs samples were analyzed for arsenic, TPH, and/or OCPs and a majority of the 1.5 and 3.0 feet bgs samples were placed on hold. The 1.5 and 3.0 feet bgs samples were intended to allow analysis in a tiered fashion for vertical delineation of soil contamination, such that the deeper 1.5 and 3.0 feet bgs samples would be analyzed if shallow sample results revealed significant concentrations of metals, TPH, OCPs, or PCBs. A detailed summary of the sample analytical results is included in Tables 1, 2, and 3.
- Field duplicate samples were collected during the SSI sampling activities at an approximate ratio of 1 duplicate sample for every 10 original samples. The duplicate sample was collected immediately after the original sample. Due to the heterogeneity of the soil matrix, the results for duplicate samples may vary from the results of the original sample. The duplicate samples were analyzed for the same parameters as the original samples collected from the same boring and similar interval.
- Equipment rinsate blanks, EB-1 and EB-2, were collected from the reusable sampling equipment (hand auger) during sampling events on October 27, 2018 and November 3, 2018. The equipment blanks were collected by pouring laboratory-supplied deionized water over the cleaned and rinsed hand auger bucket and collecting the poured water in laboratory supplied sample container(s). The equipment blank samples were analyzed for the same parameters as the soil matrix sample(s) collected during the investigation.

Samples were analyzed for the following compounds:

- Lead by EPA Method 6010B;
- Arsenic by EPA Method 6020;
- Mercury by EPA Method 7471A;
- OCPs by EPA Method 8081A;
- PCBs by EPA Method 8082; and
- TPH carbon chain by EPA Method 8015.

#### **2.4.2 Sample Handling and Storage**

In the field, each sample container was marked with a unique sample identification along with the date and time of sample collection. Each of the sample containers were wiped with clean paper towels, sealed in a plastic bag, and securely packed in a cooler on ice, in preparation for delivery to the laboratory.

#### **2.4.3 Sample Custody**

An entry was made on a chain-of-custody form supplied by the laboratory for each sample that was submitted to the laboratory for analysis. The information recorded included the sampling date and time, sample identification number, matrix type, requested analyses and methods, preservatives, and the sampler's name. Sampling team members maintained custody of the samples until they were relinquished to laboratory personnel or professional courier service. The chain-of-custody form accompanied the samples from the time of collection until received by the laboratory. Each party in possession of the samples signed the chain-of-custody form signifying receipt.

Collected soil samples were transported using standard chain-of-custody protocol to Advanced Technology Laboratories of Signal Hill, California, an analytical testing laboratory accredited by the California Department of Public Health (CDPH). Upon receipt, the laboratory inspected the condition of the sample containers and reported the information on the chain-of-custody or similar form.

A copy of the original completed chain-of-custody form was provided by the laboratory along with the report of results. Appendix D contains copies of the laboratory analytical reports.

#### **2.4.4 Equipment Decontamination**

Sampling equipment that came into contact with potentially contaminated soil was decontaminated consistently to assure the quality of samples collected. Decontamination occurred prior to and after each use of a reusable piece of equipment. The sampling devices used (e.g., hand auger) were decontaminated using the following procedures:

- Non-phosphate detergent and tap water scrub, using a brush if necessary;
- Tap water rinse; and
- Final deionized/distilled water rinse.

#### **2.5 Laboratory Quality Control**

The laboratory data package provided includes quality control sample results for blanks, matrix spike/matrix spike duplicates, surrogate recoveries, and laboratory control samples/laboratory control sample duplicates, as specified by the method. The laboratory also provided narrative stating whether or not quality control guidelines were met and listed discrepancies and laboratory data qualifiers. The laboratory reports containing the quality control results are included in Appendix D.

#### **2.6 Abandonment of Soil Borings**

Upon completion of sampling, all soil borings were backfilled with native soil (soil cuttings) and tamped per the request of District personnel.

#### **2.7 Investigation Derived Waste Management**

In the process of collecting environmental samples during the SSI activities, different types of potentially contaminated Investigation Derived Waste (IDW) were generated that included used PPE, and decontamination fluids.

Listed below are the procedures that were followed for handling the IDW:

- Used PPE were double bagged and placed in a municipal refuse dumpster. These wastes are not considered hazardous and could be sent to a municipal landfill.
- Decontamination wastewater utilized during the investigation was placed in a U.S. Department of Transportation (DOT)-approved 55-gallon steel drum. The drum was labeled and sealed, pending receipt of analytical results, waste profiling and off-site disposal.

One water sample was collected directly from the 55-gallon drum containing decontamination wastewater after the completion of the soil borings on November 3, 2018 (Sample ID" DRUM COMPOSITE", Appendix D). The IDW sample was analyzed for the following compounds:

- California Code of Regulations (CCR) Title 22 Code of Administrative Manual (CAM) 17 metals (CAM 17 metals) by EPA Method 6010B/7471A;
- Volatile Organic Compounds (VOCs) and Gasoline Range Organics (GRO) by EPA Method 8260B;
- OCPs by EPA Method 8081A; and
- Diesel Range Organics (DRO) and Oil Range Organics (ORO) by EPA Method 8015B.

Additionally, two discrete soil samples from the SSI field activities (PER15-0.5 and PER24-0.5) were analyzed for lead using the Waste Extraction Test for Soluble Threshold Limit Concentration (STLC) by EPA Method 6010B, because the Total Threshold Limit Concentration (TTLC) lead result in this sample was greater than 50 mg/kg. The result for PER24.05 was above the STLC regulatory limit of 5 milligrams per liter (mg/L), and therefore the material is considered hazardous under California waste disposal regulations, per the California Code of Regulations, Title 22, Chapter 11, Article 3.

The IDW sample results indicate that the decontamination water is classified as nonhazardous waste. The single drum of nonhazardous waste was removed from the Site on November 28, 2018 by Belshire Environmental Services, Inc. and transported to DeMenno/Kerdoon in Compton, California for disposal. Appendix E provides waste disposal documentation.

### 3.0 RESULTS

Information collected from the hand-auger soil borings (Appendix B) indicated that the upper approximately 2 to 3 inches from each boring was characterized as top soil which often exhibited varying amounts of organic material (grass, rootlets, wood chips, leaves, etc.). Between 4 inches and 3.0 feet bgs, Leighton typically observed poorly graded sand and some silty sand at depth. In general, the soil was observed to be grayish brown in color and moist with no chemical odor or visible hydrocarbon staining. Groundwater was not encountered in any of the boreholes during the sampling activities.

During the SSI, soil samples were collected from three depth intervals (0.5, 1.5 and 3.0 feet bgs) from the initial 29 distinct soil borings completed on October 27, 2018. From these samples, all of the 0.5 feet bgs samples were analyzed for lead, arsenic, mercury, and OCPs. Approximately 20% of the 0.5 feet samples (8 of the 40 soil samples) were analyzed to screen shallow soil for PCBs. With the exception of 14 sample locations, deeper soil samples, collected at 1.5 and 3.0 feet bgs, were not analyzed based on the laboratory results from the shallower samples, which were below screening levels and did not require vertical delineation. Additional step-out and step-down sample analysis was completed to laterally and vertically assess elevated concentrations of arsenic, OCPs, and TPH that were greater than or equal to regulatory screening criteria. Results of the delineation efforts are detailed in the sections below.

Duplicate samples show varying results to the original samples likely resulting from the observed heterogeneity of the soil matrix. When comparing analytical results of primary and associated duplicate samples, the maximum concentration was utilized in the human health screening evaluation and presented on Figure 3. The equipment blank sample results indicated that arsenic, lead, mercury, TPH, OCPs, and PCBs were not detected above laboratory detection limits (see laboratory analytical results for Samples EB-1 and EB-2 in Appendix D).

Field procedures (sampling and decontamination) were conducted in compliance with the above procedures. Laboratory procedures were in compliance with the method requirements, including acceptable reporting limits, laboratory selection, and laboratory reporting of quality control information. Acceptable sensitivity was achieved by selecting analytical methods with reporting limits suitable for comparison with action levels. Overall, the dataset is considered to be of acceptable quality. As such, the data set is considered acceptable for use in assessing human health risk at the Site.



Soil analytical results are presented in Tables 1 through 3 and Figure 3 and briefly discussed below.

### **3.1 Arsenic Results**

Arsenic was detected in 42 soil samples with concentrations ranging from an estimated 0.98 milligrams per kilogram (mg/kg) (PER14SE at 1.5 feet bgs) to 13 mg/kg (PER14 at 1.5 feet bgs [Table 1]). The arsenic concentrations detected during this investigation were below the DTSC-adopted background arsenic concentration of 12 mg/kg (DTSC, 2008) in all soil samples with the exception of three (3) samples. Duplicate sample DUP-2 (collected at PER12 at 0.5 feet bgs) and PER14-0.5 reported arsenic concentrations of 12 mg/kg and PER14-1.5 reported a concentration of 13 mg/kg. Step-out and step-down soil samples were collected to laterally and vertically assess the elevated concentrations of arsenic detected at sample locations PER12 and PER14 (Figure 5).

### **3.2 Lead Results**

Lead was detected in 32 soil samples with concentrations ranging from an estimated 0.63 mg/kg (duplicate sample DUP-1 for PER1 at 0.5 feet bgs) to 67 mg/kg (PER15 at 0.5 feet bgs [Table 1]). The lead concentrations detected during this investigation are below the EPA Region 9 Regional Screening Level (RSL) of 400 mg/kg for residential land use (EPA, 2018) and below the DTSC-modified screening level (DTSC SL) of 80 mg/kg (screening level for use in human health risk assessments [DTSC, 2018]).

Lead concentrations exceeding 50 mg/kg were analyzed for the California Waste Extraction Test for STLC as part of a waste-disposal criteria determination effort. Soil samples PER15-0.5 and PER24-0.5 reported soluble lead concentrations of 3.7 and 8.3 mg/L, respectively (Table 1). The soluble lead concentration for PER24-0.5 exceeds the STLC of 5 mg/L, and therefore the material is considered California-restricted non-RCRA hazardous waste under California waste disposal regulations, per the California Code of Regulations, Title 22, Chapter 11, Article 3.

### **3.3 Mercury Results**

Mercury was detected in 32 soil samples with concentrations ranging from an estimated 0.02 mg/kg (PER17 at 0.5 feet bgs) to an estimated 0.10 mg/kg

(PER12 at 0.5 feet bgs). The mercury concentrations detected during this investigation are below the RSL of 11 mg/kg for residential land use and below the DTSC SL of 1.0 mg/kg (Table 1).

### 3.4 **TPH Results**

TPH analytical results were divided into three carbon-chain ranges including GRO (C5-C12), DRO (C10-C28), and ORO (C18-C36). GRO was not detected above the laboratory method detection limit (MDL) in the 32 soil samples analyzed. DRO was detected in 37 soil samples with concentrations ranging from 1.2 mg/kg (PER28 at 0.5 feet bgs) to 500 mg/kg (duplicate DUP-3 for sample location PER22 at 0.5 feet bgs). ORO was detected in 37 soil samples with concentrations ranging from 1.6 mg/kg (duplicate DUP-1 for sample location PER1 at 0.5 feet bgs) to 830 mg/kg (duplicate DUP-3 for sample location PER22 at 0.5 feet bgs).

TPH concentrations detected during this investigation were below the San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs) (SFRWQCB, 2016) with the exception of the DRO concentration of 500 mg/kg in DUP-3 (sample location PER22 at 0.5 feet bgs [Table 1]).

### 3.5 **OCP Results**

Concentrations of 13 individual OCP compounds were detected in soil collected during this investigation (Table 2). Detected compounds included 4,4-DDD, 4,4-DDE, 4,4-DDT, aldrin, alpha-BHC, alpha-chlordane, beta-BHC, chlordane, delta-BHC, dieldrin, gamma-BHC, gamma-chlordane, and heptachlor epoxide. Of these 13 compounds identified in soil at the Site, only two compounds, chlordane and dieldrin, were detected at concentrations exceeding a regulatory screening level.

Chlordane was reported in 17 soil samples and ranged between an estimated 1.4 micrograms per kilogram ( $\mu\text{g/kg}$ ) (PER20 at 0.5 feet bgs) and 2,600  $\mu\text{g/kg}$  (PER1-SW2 at 0.5 feet bgs). Two chlordane concentrations reported in step-out soil boring PER1-SW2 were either equal to or exceed the DTSC SL of 440  $\mu\text{g/kg}$ .

Dieldrin was reported in nine (9) soil samples and ranged between 2.7  $\mu\text{g/kg}$  (PER1-SW at 1.5 feet bgs) and 93  $\mu\text{g/kg}$  (PER1 at 0.5 feet bgs). Dieldrin concentrations for PER1-0.5 (93  $\mu\text{g/kg}$ ), PER1-SE-0.5 (36  $\mu\text{g/kg}$ ), PER1-SW-0.5

(39 µg/kg), and PER1-SW2-0.5 (70 µg/kg) exceed the RSL of 34 µg/kg for residential land use.

### **3.6 PCB Results**

Laboratory results indicate that PCB concentrations were below the laboratory method detection limit in the subset of soil samples chosen for PCB analysis (eight samples and three duplicates collected from a depth of 0.5 feet bgs [Table 3]).

#### 4.0 HUMAN HEALTH SCREENING EVALUATION

Areas investigated as part of this SSI were unpaved and adjacent to the perimeter sidewalk that borders the School property. As these areas are not paved or otherwise covered, a direct exposure pathway exists for members of the public and students who come in direct contact with surface soil or fugitive dust generated by soil disturbance. It is Leighton's understanding that one of the goals of this SSI was to assess shallow soil for COPCs identified in the Phase I ESA (WorleyParsons, 2016). Data obtained during this SSI will help to evaluate reuse and disposal options for soil that may be disturbed during planned perimeter upgrades.

Elevated levels of arsenic, DRO, chlordane, and dieldrin were identified at the Site based on the soil sampling activities conducted on October 27, 2018, November 3, 2018, and December 21, 2018, during which select samples were analyzed for arsenic, lead, mercury, TPH, OCPs, and PCBs (Tables 1 through 3), as described in Section 3. Results for lead, mercury, and PCBs were below their respective screening levels (Human Health Risk Assessment Note #3, and RSLs). Arsenic, DRO, chlordane and dieldrin are considered chemicals of concern (COCs) for the Site and are discussed in detail below.

**Arsenic in Soil:** A 12 mg/kg concentration of arsenic in soil represents an upper-bound value for background ambient levels of arsenic found in southern California and is actually a 95% upper confidence limit (UCL). The 12 mg/kg concentration was used as the screening level for arsenic at the Site (DTSC, 2008).

As summarized in Table 1, arsenic was detected in 42 soil samples with concentrations ranging from an estimated 0.98 mg/kg (PER14SE at 1.5 feet bgs) to 13 mg/kg (PER14 at 1.5 feet bgs). Due to the presence of sample results at or above 12 mg/kg in three (3) of the samples, a 95% upper confidence limit (UCL) analysis was completed. The analysis used the 42 detections above the MDL to determine if arsenic in soil exceeded the screening level, and would potentially present a human health risk to current or future occupants of the Site. The 95% UCL Analysis Report is included as Appendix F. The suggested UCL result for arsenic based on the ProUCL calculation was 6.304 mg/kg (95% adjusted gamma UCL). The median arsenic result is 4.5 mg/kg.

Adequate lateral and vertical delineation of elevated arsenic was accomplished by analysis of step-out and step-down samples adjacent to impacted sample locations PER12 and PER14 (Figures 3 and 5). Shallow soil where elevated arsenic concentrations were detected should be targeted for removal such that arsenic

remaining at the Site is below the DTSC-recommended ambient background concentration of 12 mg/kg (DTSC, 2008).

**DRO in Soil:** Concentrations of TPH were detected in every soil sample analyzed by EPA Method 8015B during this SSI. With the exception of the DRO concentration of 500 mg/kg detected in duplicate sample DUP-3 for sample location PER22 at 0.5 feet bgs, all other concentrations of GRO, DRO, and ORO were below laboratory detection limits and/or regulatory screening levels (Table 1).

Adequate lateral and vertical delineation of elevated DRO was accomplished by analysis of step-out and step-down samples adjacent to impacted sample location PER22 (Figure 3). It is recommended that shallow soil where elevated DRO results were reported be targeted for removal, so that DRO remaining at the Site is below the SFRWQCB ESL (230 mg/kg).

**Dieldrin in Soil:** Dieldrin was reported in nine (9) soil samples and ranged between 2.7 µg/kg (PER1-SW at 1.5 feet bgs) and 93 µg/kg (PER1 at 0.5 feet bgs). Dieldrin concentrations for PER1-0.5 (93 µg/kg), PER1-SE-0.5 (36 µg/kg), PER1-SW-0.5 (39 µg/kg), and PER1-SW2-0.5 (70 µg/kg) exceed the RSL of 34 µg/kg for residential land use (Table 2).

Based on the limited number of detected concentrations of dieldrin, the impacted area appears to be limited to the upper one foot of soil within the landscaped area at the northeast corner of the School property (Figure 3). Shallow soil where elevated dieldrin results were reported should be targeted for removal, so that dieldrin remaining at the Site is below the EPA RSL of 34 µg/kg (EPA, 2018).

**Chlordane in Soil:** Chlordane was reported in 17 soil samples and ranged between an estimated 1.4 µg/kg (PER20 at 0.5 feet bgs) and 2,600 µg/kg (PER1-SW2 at 0.5 feet bgs). Two chlordane concentrations reported in step-out soil boring PER1-SW2 were either equal to or exceed the DTSC SL of 440 µg/kg (Table 2).

Similar to dieldrin, elevated chlordane appears to be limited to the landscaped area in the vicinity of soil boring PER1. Only one boring contained soil concentrations of chlordane at or above regulatory screening levels (PER1-SW2). Elevated chlordane concentrations are collocated with shallow soil impacted by dieldrin. Shallow soil where chlordane results exceed a screening level should be targeted for removal, so that chlordane remaining at the Site is below the DTSC SL of 440 µg/kg.

**Other COPCs in Soil (lead, mercury, GRO, ORO, PCBs, and the remaining OCPs):**

With the exception of limited areas with elevated arsenic, DRO, chlordane, and dieldrin, the SSI sampling results presented in this report demonstrate that soil analytical results for lead, mercury, GRO, ORO, PCBs, and the remaining OCPs were either below the laboratory detection limits or below regulatory screening levels.

As discussed in Section 3.2, the soil sample collected at 0.5 feet bgs at boring location PER24 contained a reported a total lead concentration of 64 mg/kg. Although this concentration of lead is below the DTSC-recommended screening level for lead of 80 mg/kg, the soil is classified as California-restricted non-RCRA hazardous waste based on a soluble lead concentration above the regulatory limit of 5 mg/L (STLC). Given the identified presence of readily soluble lead, soil with elevated lead should be targeted for removal in the vicinity of soil boring PER24.

Arsenic, DRO, chlordane, and dieldrin have been identified as COCs in soil. Based on District preference to remove soil with elevated arsenic, lead, TPH, and OCPs, further action appears warranted at the Site.

## 5.0 COMMUNITY PROFILE

### 5.1 Community Demographics

A brief summary of the community demographics for the zip code 91607 in Los Angeles County according to the 2010 US Census (factfinder.census.gov) is as follows:

- Total Population: 27,927
- Male: 13,635 (48.8%)
- Female: 14,292 (51.2%)
- Median Age: 38.2
- Population 18 Years and Over: 82.5%
- Total Housing Units: 12,859
- Average Household Size: 2.15
- Population by Race:
  - White: 18,523 (66.3%)
  - Hispanic or Latino: 5,463 (19.6%)
  - Asian: 1,586 (5.7%)
  - Black or African American: 1,470 (5.3%)
  - Other: 885 (3.1%)

### 5.2 Local Participation and Involvement

At the time of this investigation, Leighton is not aware of any current or past media coverage with relation to the School property or the Site. A work notice, in the form of a flyer, was produced in English and Spanish (double-sided) to provide members of the community with details regarding the SSI including who would perform the work, project schedule, when and where the results of the investigation would be posted, and who to contact regarding additional information. On October 17 and 18, 2018, this work notice flyer was handed out to all Colfax Charter Elementary School staff, mailed to all parents of students and interested community members added to the work notice mailing list at the community meeting, hand-delivered to all line-of-site neighbors of the School, and posted along the boundary fence of the School property.

No specific environmental concerns or issues have been brought to the District's attention regarding the on-site activities at this time. In terms of project visibility, the on-site work took place outside of School hours (three consecutive Saturdays and Friday during a holiday break) to minimize any interference with school activities. Line-of-site neighbors, School staff, parents and interested community members were given copies of the work notice flyer. At this time, Leighton is unaware of environmental concerns or issues with relation to neighboring sites.



## 6.0 OPINION OF ENVIRONMENTAL PROFESSIONAL

Based on the SSI sampling results (Tables 1 through 3), elevated levels of arsenic, DRO, chlordane, and dieldrin were reported for soil in limited areas of the Site (Figure 3) and further action appears warranted. A removal action should be completed to target the four areas (PER1, PER12, PER14, and PER22) where impacted soils were identified above regulatory screening levels. Additionally, lead in soil that exceeds the STLC (PER24 at 0.5 feet bgs) should be targeted for removal (Figure 6).

Arsenic and DRO-impacted soil above regulatory screening levels appears limited based on the step-out and step-down sampling completed during the SSI. Figures 5 and 6 include approximate areas where soil excavation is recommended to address elevated arsenic and DRO concentrations identified at the Site.

Step-down sampling for dieldrin confirmed that impacted soil is generally within the upper 6 to 12 inches bgs, however, step-out sampling conducted in five (5) locations surrounding the original boring location (PER1) indicate that dieldrin concentrations above the RSL are laterally extensive in the northeast landscaped area. While delineating soil impacted by dieldrin, elevated chlordane concentrations above the DTSC SL were identified in step-out boring PER1-SW2. Leighton recommends that limited soil excavation be conducted to remove shallow soil with dieldrin and/or chlordane concentrations above a screening level (34 µg/kg for dieldrin and 440 µg/kg for chlordane). The recommended excavation area for OCP-impacted soil is shown on Figure 4.

The elevated concentrations of arsenic, DRO, and OCPs were detected in limited areas and were not significantly higher than applicable environmental screening levels. The data set generated as part of this SSI appears adequate to address the limited areas where impacted soil was identified. With the exception of excavation bottom and sidewall confirmation sampling, additional sampling at the Site does not appear warranted at this time.

Although total concentrations of lead detected in soil samples during this investigation were below residential screening levels, one discrete sample contained soluble lead above the STLC, thus meeting the criteria for classification as a California-restricted non-RCRA hazardous waste. It is recommended that the shallow soil designated as a hazardous waste be removed from the Site in addition to the four (4) health-risk based soil removals discussed above (see Figure 6).

The impacted material identified in this SSI can likely be removed and segregated from other soils being disturbed during the implementation of the Colfax Charter Elementary Perimeter Upgrade Project. Alternatively, the District could also conduct a housekeeping excavation with confirmation sampling to provide separate documentation for the removal of impacted soils at the Site.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The Site consists of the perimeter area around the Colfax Charter Elementary School property boundary and represents proposed development areas associated with the Colfax Charter Elementary School Perimeter Upgrade Project (Figure 2). The primary objectives of this SSI were to assess shallow soil for potential environmental concerns identified in the Phase I ESA for the Site; and to evaluate the overall Site health risk based on soil analytical screening results for COPCs (lead, arsenic, mercury, OCPs TPH, and PCBs).

As presented in this SSI report, elevated levels of dieldrin, chlordane, arsenic, and DRO were reported for soil in limited areas at the Site (Figure 3) and further action appears warranted. Based on the laboratory analytical results, limited soil excavation is recommended to remove soil impacted by COCs above appropriate regulatory screening levels. Recommended areas for soil removal are presented in Figures 4, 5, and 6 and described below.

- Removal of OCP-impacted soil is recommended in the vicinity of soil samples PER1, PER1-SW, PER1-SE, and PER1-SW2. Based on step-out sampling results for dieldrin in this area, a conservative excavation footprint of 60 feet by 25 feet is proposed (see Figure 4). Total depth of the excavation should extend to a minimum of 1-foot bgs, where feasible. During the investigation, mature trees were noted within the landscaped area surrounding borings PER1 and PER2. Tree roots associated with these trees may limit the amount of soil that can be removed within the proposed excavation area. Following feasible soil removal activities, six sidewall confirmation samples (two samples along the north and south wall plus one sample along the east and west walls) should be collected at a depth of 0.5 feet bgs at the lateral limits of the completed excavation. Two confirmation samples should be collected from the completed excavation bottom (one of the bottom samples should be located in the vicinity of boring PER1-SW2 to verify that chlordane concentrations of remaining soil are below 440 µg/kg. Confirmation samples should be analyzed for OCPs by EPA Method 8081A. If confirmation samples contain concentrations of OCPs above appropriate regulatory screening levels, additional soil removal and confirmation sampling should be conducted, as appropriate.
- An excavation of arsenic-impacted soil is recommended in the vicinity of sample locations PER12 and PER14. Based on low arsenic concentrations reported in step-out samples collected near PER12 and PER14, excavation areas of approximately 8 feet by 8 feet are recommended around PER12 and PER14 (Figure

- 5). The proposed excavation around sample location PER12 should extend to a minimum depth of 1-foot bgs while the proposed excavation around PER14 should extend to a minimum depth of 3 feet bgs. Confirmation samples should be collected at approximately 0.5 feet bgs from each sidewall at PER 12 and at 1.5 feet bgs from each sidewall at PER14 and one confirmation sample should be collected from the completed excavation bottom (five samples per excavation). Confirmation samples should be analyzed for arsenic by EPA Method 6020. If confirmation samples contain concentrations of arsenic at or above 12 mg/kg (upper-bound limit for background arsenic in soil), further soil removal and confirmation sampling should be conducted, as appropriate.
- An excavation of DRO-impacted soil is recommended in the vicinity of sample location PER22. Based on low DRO concentrations reported in step-out samples collected near PER22, an excavation area of approximately 8 feet by 8 feet is recommended around PER22 (Figure 6). The proposed excavation should extend to a minimum depth of 1-foot bgs. Confirmation samples should be collected at approximately 0.5 feet bgs from each sidewall in the excavation and one confirmation sample should be collected from the completed excavation bottom (five samples total). Confirmation samples should be analyzed for DRO by EPA Method 8015B. If confirmation samples contain concentrations of DRO above 230 mg/kg (SFRWQCB ESLs), additional soil removal and confirmation sampling should be conducted, as appropriate.
  - An excavation of soil with lead above the STLC is recommended in the vicinity of sample location PER24. The impacted area does not propose an immediate health risk (total lead reported for soil is below the DTSC SL of 80 mg/kg), however, the material is classified as California-restricted non-RCRA hazardous waste and should be segregated for proper disposal. An excavation measuring approximately 5 feet by 5 feet is recommended around location PER24 (Figure 6). The proposed excavation should extend to a minimum of 1-foot bgs. Confirmation samples should be collected at approximately 0.5 feet bgs from each sidewall in the excavation and one confirmation sample should be collected from the completed excavation bottom (five samples total). Confirmation samples should be analyzed for total lead by EPA Method 6010. If confirmation samples contain concentrations of total lead above 50 mg/kg, a California Waste Extraction Test should be performed to confirm that soluble lead is below the STLC of 5 mg/L. If confirmation samples exceed the STLC for lead, additional soil removal and confirmation sampling should be conducted, as appropriate.

Leighton understands that soil disturbance activities independent of the recommended soil removals in this SSI report are anticipated as part of the Colfax Charter Elementary School Perimeter Upgrade Project. At this time, Leighton is not aware of specific Perimeter Upgrade Project excavation or soil reuse details. Should the District choose to conduct the remedial soil excavations described above concurrently with Perimeter Upgrade Project soil disturbance, soil removed from the four remedial excavation areas should be segregated and not permitted as backfill material at the Site. Soil generated from the proposed remedial excavation areas should be appropriately secured from public access, sampled in accordance with District waste characterization procedures, and profiled for offsite disposal at an LAUSD approved disposal facility.

In general, observations should be made during all trenching/excavation activities for areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, stained soil or odorous soils. Should such materials be encountered, further investigation and analysis may be necessary at that time. Although below residential health screening criteria, one soil sample collected during this SSI, PER24-0.5, contained a concentration of lead exceeding the STLC (as described in Section 3.2). Should soil generated from the vicinity of sample location PER24 require disposal, laboratory analytical data obtained during this SSI supports classification of the soil as California-restricted non-RCRA hazardous waste.

Given the limited extent of soil containing elevated COC concentrations, and due to the fact that dieldrin is not included on the list of “toxic air contaminants” in the South Coast Air Quality Management District (AQMD) Rule 1466 (AQMD, 2017), it is not anticipated that the total volume of soil disturbance involving material impacted by COCs considered as “toxic air contaminants” will exceed the minimum 50 cubic yards as described in the Rule. A summary of the approximate soil volumes recommended for removal is provided in the following table:

<b>Location</b>	<b>Approximate Volume of Soil Applicable to AQMD Rule 1466 (cubic yards)</b>	<b>Approximate Volume of Soil Not Applicable to AQMD Rule 1466 (cubic yards)</b>
PER1	3.7	51.8
PER12	2.4	
PER14	7.1	
PER22		2.4
PER24	0.9	
<b>Totals</b>	<b>14.1</b>	<b>54.2</b>

In an effort to control fugitive dust during all earth-moving activities, it is recommended that the District and its contractors follow the best available control measures described in Table 1 of AQMD Rule 403 for the control of fugitive dust during applicable earth-moving activities such as, but not limited to, trenching, stockpiling, and truck loading (AQMD, 2005).

## 8.0 LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. Opinions, conclusions, and recommendations contained in this report apply to conditions existing when the services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. Where subsurface exploratory work, monitoring, and/or testing was performed, our professional opinions and conclusions are based in part on interpretation of data from discrete sampling or measurement locations that may not represent actual conditions at un-sampled or un-measured locations. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of the services. We assume no responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when the services were performed. We do not warranty the accuracy of information supplied by others, or the use of segregated portions of this report.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Leighton should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

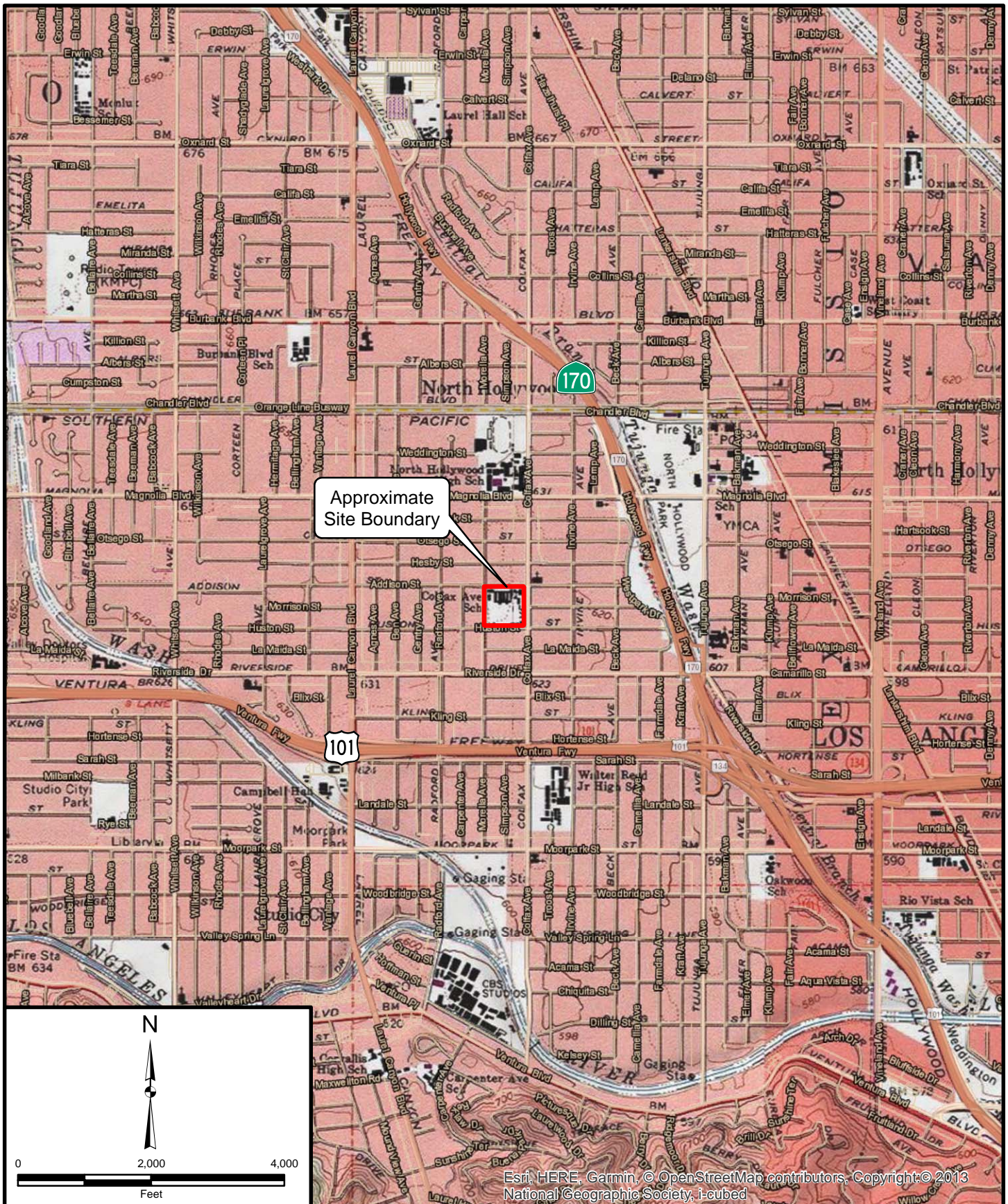
Leighton's professional opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited subsurface assessment and chemical analyses data. Further assessment of potential adverse environmental impacts from past on-site and/or nearby use of hazardous materials may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated; however, conditions can vary significantly between and beyond the sampling locations. Variations in soil conditions likely exist beyond the points explored in this assessment and related excavation.

# FIGURES



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## SITE LOCATION MAP

Los Angeles Unified School District -  
Colfax Charter Elementary School  
11724 Addison Street  
Valley Village, California

Figure 1



Leighton

Project: 11640.008

Eng/Geol: RES

Scale: 1" = 2,000'

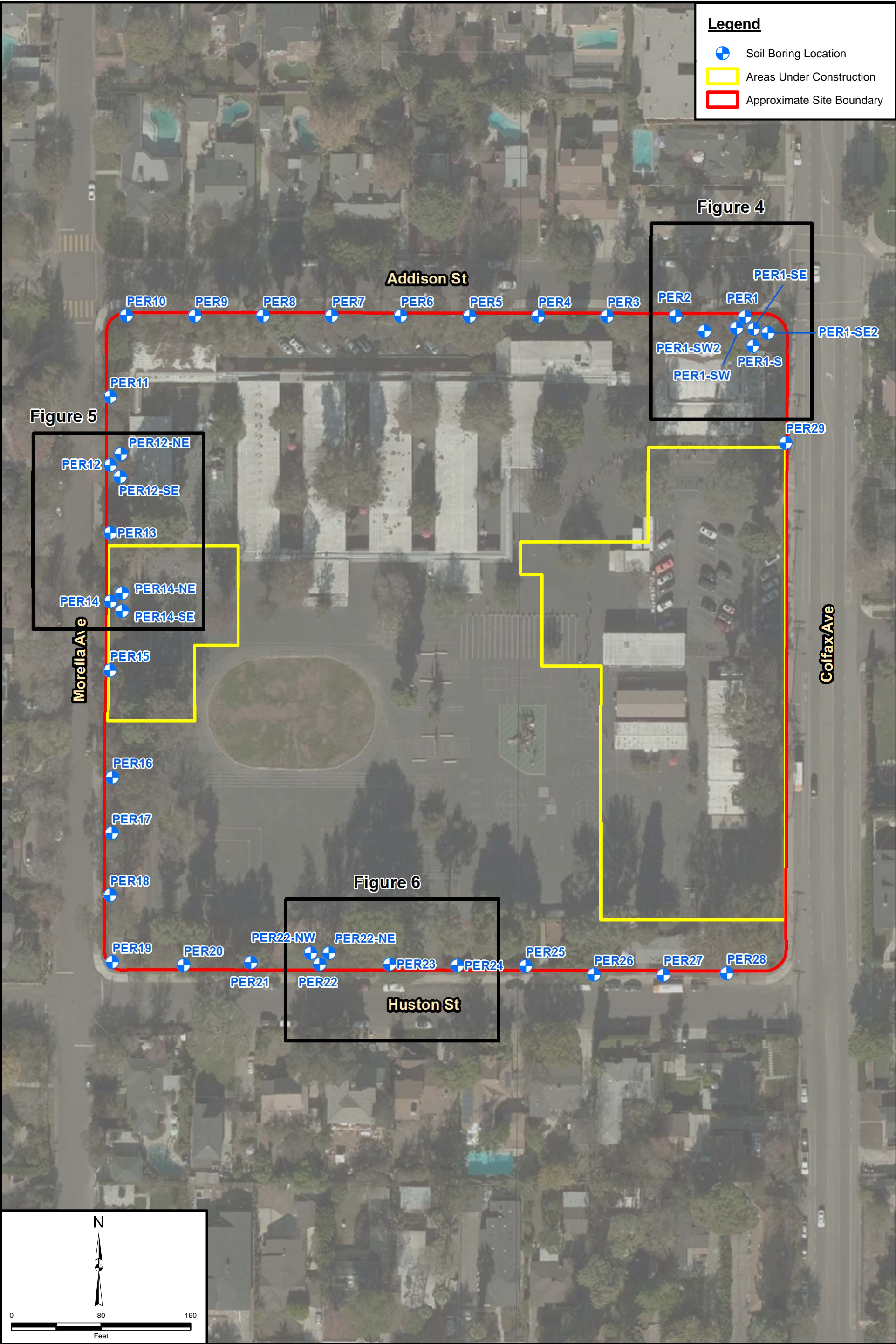
Date: November 2018

Base Map: ESRI ArcGIS Online 2018

Thematic Information: Leighton

Author: Leighton Geomatics (btran)






Project: 11640.008	Eng/Geol: RES
Scale: 1 " = 80 '	Date: January 2019
Base Map: Bing Maps, 2016	
Author: Leighton Geomatics (btran)	



**SITE PLAN**  
Los Angeles Unified School District - Colfax Charter Elementary School  
11724 Addison Street  
Valley Village, California

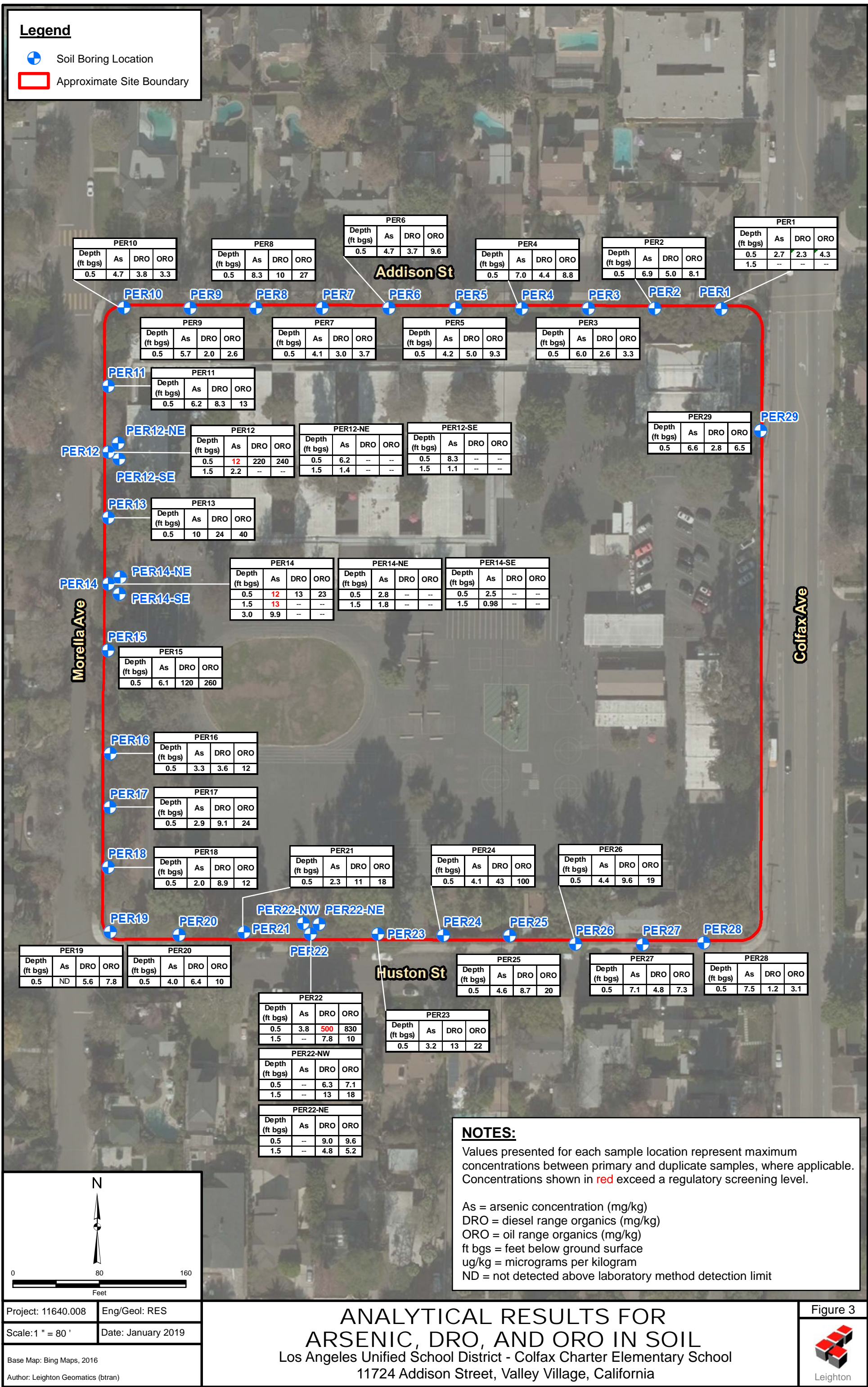
Figure 2

  
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Legend

-  Soil Boring Location
-  Approximate Site Boundary





## Legend



Soil Boring Location



Recommended Excavation Area



Approximate Site Boundary

## Notes:

Values presented for each sample location represent maximum concentrations between primary and duplicate samples, where applicable. Concentrations shown in **red** exceed a regulatory screening level.

OCP = organochlorine pesticide

Cldn = chlordane concentration (ug/kg)

Dldn = dieldrin concentration (ug/kg)

ft bgs = feet below ground surface

ug/kg = micrograms per kilogram

ND = not detected above laboratory method detection limit

## Addison Street

**Approximate Soil Volume for Removal**  
60'x25'x1'=55.5 Cubic Yards

PER2

PER2		
Depth (ft bgs)	Cldn	Dldn
0.5	63	33

**Approximate Soil Volume Applicable to AQMD Rule 1466**  
10'x10'x1'=3.7 Cubic Yards

PER1-SW2		
Depth (ft bgs)	Cldn	Dldn
0.5	2600	70
1.0	440	12

PER1-SW		
Depth (ft bgs)	Cldn	Dldn
0.5	94	39
1.5	7.1	2.7

PER1

PER1		
Depth (ft bgs)	Cldn	Dldn
0.5	57	93
1.5	ND	ND

PER1-SE

PER1-SE		
Depth (ft bgs)	Cldn	Dldn
0.5	210	36
1.5	ND	ND

PER1-SW2

PER1-SW

PER1-SE

PER1-SE2

PER1-SE2		
Depth (ft bgs)	Cldn	Dldn
0.5	27	6.4

PER1-S

PER1-S		
Depth (ft bgs)	Cldn	Dldn
0.5	180	30

Colfax Avenue

N



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Distribution Airbus DS

Project: 11640.008

Eng/Geol: RES

Scale: 1" = 20'

Date: January 2019

Base Map: ESRI ArcGIS Online 2019

Thematic Information: Leighton

Author: Leighton Geomatics (btran)




**RECOMMENDED EXCAVATION AREA  
FOR OCP-IMPACTED SOIL**  
Los Angeles Unified School District -  
Colfax Charter Elementary School  
11724 Addison Street, Valley Village, California

Figure 4



Leighton

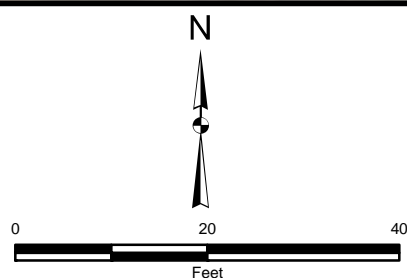
## Legend

-  Soil Boring Location
-  Recommended Excavation Area
-  Approximate Site Boundary

Morella Avenue

**Notes:**  
Values presented for each sample location represent maximum concentrations between primary and duplicate samples, where applicable. Concentrations shown in **red** exceed a regulatory screening level.

As = arsenic concentration (mg/kg)  
ft bgs = feet below ground surface  
mg/kg = milligrams per kilogram



PER12	
Depth (ft bgs)	As
0.5	<b>12</b>
1.5	2.2

PER12-NE	
Depth (ft bgs)	As
0.5	6.2
1.5	1.4

**PER12-NE**

PER12-SE	
Depth (ft bgs)	As
0.5	8.3
1.5	1.1

**PER12-SE**

Approximate Soil Volume for Removal:  
 $8' \times 8' \times 1' = 2.4$  Cubic Yards

**PER13**

PER12	
Depth (ft bgs)	As
0.5	10

PER14-NE	
Depth (ft bgs)	As
0.5	2.8
1.5	1.8

**PER14-NE**

PER14-SE	
Depth (ft bgs)	As
0.5	2.5
1.5	0.98

**PER14-SE**

Approximate Soil Volume for Removal:  
 $8' \times 8' \times 3' = 7.1$  Cubic Yards

**PER14**

PER14	
Depth (ft bgs)	As
0.5	<b>12</b>
1.5	<b>13</b>
3.0	9.9

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Distribution Airbus DS

Project: 11640.008    Eng/Geol: RES  
Scale: 1" = 20'    Date: December 2018

Base Map: ESRI ArcGIS Online 2018  
Thematic Information: Leighton  
Author: Leighton Geomatics (btran)




**RECOMMENDED EXCAVATION AREAS  
FOR ARSENIC-IMPACTED SOIL**  
Los Angeles Unified School District -  
Colfax Charter Elementary School  
11724 Addison Street, Valley Village, California

Figure 5



Leighton

# Legend

-  Soil Boring Location
-  Recommended Excavation Area
-  Approximate Site Boundary

## Notes:

Values presented for each sample location represent maximum concentrations between primary and duplicate samples, where applicable. Concentrations shown in **red** exceed a regulatory screening level.

DRO = diesel range organics (mg/kg)  
 ORO = oil range organics (mg/kg)  
 ft bgs = feet below ground surface  
 mg/kg = milligrams per kilogram

**Approximate of DRO-Impacted Soil  
 Volume For Removal:  
 8' x 8' x 1' = 2.4 Cubic Yards**

PER22-NW		
Depth (ft bgs)	DRO	ORO
0.5	6.3	7.1
1.5	13	18

PER22-NE		
Depth (ft bgs)	DRO	ORO
0.5	9.0	9.6
1.5	4.8	5.2

**Approximate Lead-Impacted Soil  
 Volume For Removal:  
 5' x 5' x 1' = 0.9 Cubic Yards**

PER22-NW   PER22-NE  
 PER22

PER23 

PER24 

PER22		
Depth (ft bgs)	DRO	ORO
0.5	500	830
1.5	7.8	10

**Huston St**

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Project: 11640.008 Eng/Geol: RES

Scale: 1" = 20' Date: January 2019

Base Map: ESRI ArcGIS Online 2019  
 Thematic Information: Leighton  
 Author: Leighton Geomatics (btran)

**RECOMMENDED EXCAVATION AREA  
 FOR DRO-IMPACTED AND LEAD-IMPACTED SOIL**  
 Los Angeles Unified School District -  
 Colfax Charter Elementary School  
 11724 Addison Street, Valley Village, California

Figure 6



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# TABLES



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Table 1

11640.008

**Summary of Metal and Total Petroleum Hydrocarbon Results in Soil**  
LAUSD - Colfax Charter Elementary School, Los Angeles, California

Sample ID	Depth (ft bgs)	Sample Date	EPA 6020 (mg/kg)	EPA 6010 (mg/kg)	CA-WET (mg/L)	EPA 7471A (mg/kg)	EPA Method 8015B (mg/kg)		
			Arsenic	Lead	STLC (Lead)	Mercury	GRO	DRO	ORO
Regulatory Guidance Screening Levels (mg/kg)									
USEPA RSL <sup>2</sup>			0.68	400	--	11	--	--	--
DTSC SLs <sup>3</sup>			0.11	80 <sup>5</sup>	--	1.0	--	--	--
DTSC Background <sup>4</sup>			12	--	--	--	--	--	--
SFRWQCB ESLs <sup>6</sup>			0.067	80	--	13	100	230	5,100
STLC (mg/L)			--	--	5	--	--	--	--
PER1-0.5	0.5	10/27/18	2.0 D1	4.0	--	0.05 J	ND<0.20	1.5	4.3
DUP-1	0.5	10/27/18	2.7 D1	0.63 J	--	0.03 J	ND<0.20	2.3	1.6
PER2-0.5	0.5	10/27/18	6.9 D1	2.8	--	0.06 J	ND<0.20	5.0	8.1
PER3-0.5	0.5	10/27/18	6.0 D1	5.4	--	0.05 J	ND<0.20	2.6	3.3
PER4-0.5	0.5	10/27/18	7.0 D1	15	--	0.05 J	ND<0.20	4.4	8.8
PER5-0.5	0.5	10/27/18	4.2 D1	6.6	--	0.07 J	ND<0.20	5.0	9.3
PER6-0.5	0.5	10/27/18	4.7 D1	1.6	--	0.08 J	ND<0.20	3.7	9.6
PER7-0.5	0.5	10/27/18	4.1 D1	1.6	--	0.07 J	ND<0.20	3.0	3.7
PER8-0.5	0.5	10/27/18	8.3 D1	9.4	--	0.07 J	ND<0.20	10	27
PER9-0.5	0.5	10/27/18	5.7 D1	0.98 J	--	0.08 J	ND<0.20	2.0	2.6
PER10-0.5	0.5	10/27/18	4.7 D1	0.71 J	--	0.06 J	ND<0.20	3.8	3.3
PER11-0.5	0.5	10/27/18	6.2 D1	1.4	--	0.03 J	ND<0.20	8.3	13
PER12-0.5	0.5	10/27/18	11 D1	18	--	0.10 J	ND<0.20	110	140
DUP-2	0.5	10/27/18	12 D1	20	--	0.06 J	ND<0.20	220	240
PER12-1.5	1.5	10/27/18	2.2 D1	--	--	--	--	--	--
PER12-NE-0.5	0.5	11/03/18	6.2 D1	--	--	--	--	--	--
PER12-NE-1.5	1.5	11/03/18	1.4 D1	--	--	--	--	--	--
PER12-SE-0.5	0.5	11/03/18	8.3 D1	--	--	--	--	--	--
PER12-SE-1.5	1.5	11/03/18	1.1 D1	--	--	--	--	--	--
PER13-0.5	0.5	10/27/18	10 D1	13	--	0.04 J	ND<0.20	24	40
PER14-0.5	0.5	10/27/18	12 D1	14	--	0.04 J	ND<0.20	13	23
PER14-1.5	1.5	10/27/18	13 D1	--	--	--	--	--	--
PER14-3.0	3	10/27/18	9.9 D1	--	--	--	--	--	--
PER14-NE-0.5	0.5	11/03/18	2.8 D1	--	--	--	--	--	--
PER14-NE-1.5	1.5	11/03/18	1.8 D1	--	--	--	--	--	--
PER14-SE-0.5	0.5	11/03/18	2.5 D1	--	--	--	--	--	--
PER14-SE-1.5	1.5	11/03/18	0.98 J D1	--	--	--	--	--	--
PER15-0.5	0.5	10/27/18	6.1 D1	67	3.7	0.07 J	ND<0.20	120	260
PER16-0.5	0.5	10/27/18	3.3 D1	7.3	--	0.05 J	ND<0.20	3.6	12
PER17-0.5	0.5	10/27/18	2.9 D1	2.0	--	0.02 J	ND<0.20	9.1	24
PER18-0.5	0.5	10/27/18	2.0 D1	3.6	--	0.03 J	ND<0.20	8.9	12
PER19-0.5	0.5	10/27/18	ND<0.04	1.8	--	0.03 J	ND<0.20	5.6	7.8
PER20-0.5	0.5	10/27/18	4.0 D1	7.8	--	0.03 J	ND<0.20	6.4	10
PER21-0.5	0.5	10/27/18	2.3 D1	2.6	--	0.05 J	ND<0.20	11	18
PER22-0.5	0.5	10/27/18	3.8 D1	8.2	--	0.05 J	ND<0.20	74	110
DUP-3	0.5	10/27/18	3.8 D1	34	--	0.05 J	ND<0.20	500	830
PER22-1.5	1.5	10/27/18	--	--	--	--	--	7.8	10
PER22-NW-0.5	0.5	11/03/18	--	--	--	--	--	6.3	7.1
PER22-NW-1.5	1.5	11/03/18	--	--	--	--	--	13	18
PER22-NE-0.5	0.5	11/03/18	--	--	--	--	--	9.0	9.6
PER22-NE-1.5	1.5	11/03/18	--	--	--	--	--	4.8	5.2



Table 1

11640.008

**Summary of Metal and Total Petroleum Hydrocarbon Results in Soil**  
LAUSD - Colfax Charter Elementary School, Los Angeles, California

Sample ID	Depth (ft bgs)	Sample Date	EPA 6020 (mg/kg)	EPA 6010 (mg/kg)	CA-WET (mg/L)	EPA 7471A (mg/kg)	EPA Method 8015B (mg/kg)		
			Arsenic	Lead	STLC (Lead)	Mercury	GRO	DRO	ORO
Regulatory Guidance Screening Levels (mg/kg)									
USEPA RSL <sup>2</sup>			0.68	400	--	11	--	--	--
DTSC SLs <sup>3</sup>			0.11	80 <sup>5</sup>	--	1.0	--	--	--
DTSC Background <sup>4</sup>			12	--	--	--	--	--	--
SFRWQCB ESLs <sup>6</sup>			0.067	80	--	13	100	230	5,100
STLC (mg/L)			--	--	5	--	--	--	--
PER23-0.5	0.5	10/27/18	3.2 D1	3.0	--	0.04 J	ND<0.20	13	22
PER24-0.5	0.5	10/27/18	4.1 D1	64	8.3	0.06 J	ND<0.20	43	100
PER25-0.5	0.5	10/27/18	4.6 D1	37	--	0.05 J	ND<0.20	8.7	20
PER26-0.5	0.5	10/27/18	4.4 D1	2.9	--	0.04 J	ND<0.20	9.6	19
PER27-0.5	0.5	10/27/18	7.1 D1	2.3	--	0.05 J	ND<0.20	4.8	7.3
PER28-0.5	0.5	10/27/18	7.5 D1	1.5	--	0.06 J	ND<0.20	1.2	3.1
PER29-0.5	0.5	10/27/18	6.6 D1	2.1	--	0.06 J	ND<0.20	2.8	6.5

Notes and Abbreviations:

- Bold** value indicates analyte detected above the laboratory method detection limit (MDL). A yellow-shaded cell indicates where a chemical concentration exceeds a regulatory screening level.
  - USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites (May 2018). Criteria selected: Residential soil, Total Hazard Quotient = 1.0, Target risk of 1.0E-6
  - Department of Toxic Substances Control (DTSC), Modified Screening Levels (SLs), Human Health Risk Assessment Note 3, June 2018. Criteria selected: residential soil, lowest value of the cancer and non-cancer endpoint
  - DTSC, Determination of a Southern California Regional Background Arsenic Concentration in Soil (March 2008)
  - DTSC recommends that a 95% upper confidence limit on the arithmetic mean calculated to be 80 mg/kg or less is protective of human health
  - San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 2016)
- ND: Analyte is not detected at or above the denoted method detection limit
- J: Estimated concentration. The value falls between the laboratory MDL and the practical quantitation limit (PQL)
- D1: Sample required dilution due to possible matrix interference
- CA-WET: California Title 22 waste extraction test
- STLC: soluble threshold limit concentration
- mg/kg: milligrams per kilogram
- mg/L: milligrams per liter
- ft bgs: feet below ground surface
- : not analyzed or no published value

Table 2  
Summary of Organochlorine Pesticide Results in Soil  
LAUSD - Colfax Charter Elementary School, Los Angeles, California

Sample ID	Depth (ft bgs)	Sample Date	EPA Method 8081A (µg/kg)																					
			Dichlorodiphenyldichloroethane (4,4'-DDD)	Dichlorodiphenyldichloroethylene (4,4'-DDE)	Dichlorodiphenyltrichloroethane (4,4'-DDT)	Aldrin	Alpha-hexachlorocyclohexane (alpha-BHC)	Alpha-Chlordane	Beta-hexachlorocyclohexane (beta-BHC)	Chlordane (technical)	Delta-hexachlorocyclohexane (delta-BHC)	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin Ketone	Gamma-BHC (Lindane)	Gamma-Chlordane	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
PER1-0.5	0.5	10/27/2018	1.6 J	ND<0.53	ND<1.0	ND<0.37	ND<1.1	10	ND<0.6	57 J	ND<0.33	93	ND<1.0	ND<0.29	ND<0.77	ND<0.39	ND<3.1	ND<1.3	ND<1.0	4.9 J	ND<0.47	4.4 J	ND<1.8	ND<47
DUP-1	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER1-1.5	1.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER1-S-0.5	0.5	12/21/18	ND<0.07	5.9	5.0	ND<0.12	ND<0.11	18	ND<0.06	180	ND<0.12	30	ND<0.10	ND<0.15	ND<0.16	ND<0.14	ND<0.31	ND<0.13	ND<0.10	13	ND<0.12	3.1	ND<0.18	ND<4.7
PER1-SE-0.5	0.5	11/03/18	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	23	ND<0.06	210	ND<0.03	36	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	17	ND<0.05	6.4	ND<0.18	ND<4.7
PER1-SE-1.5	1.5	11/03/18	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER1-SE2-0.5	0.5	12/21/18	ND<0.07	ND<0.11	ND<0.10	ND<0.12	ND<0.11	2.9	ND<0.06	27	ND<0.12	6.4	ND<0.10	ND<0.15	ND<0.16	ND<0.14	ND<0.31	ND<0.13	ND<0.10	1.9	ND<0.12	0.66 J	ND<0.18	ND<4.7
PER1-SW-0.5	0.5	11/03/18	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	10	ND<0.06	94	ND<0.03	39	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	7.1	ND<0.05	5.8	ND<0.18	ND<4.7
PER1-SW-1.5	1.5	11/03/18	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	0.70 J	ND<0.06	7.1 J	ND<0.03	2.7	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	0.43 J	ND<0.05	0.64 J	ND<0.18	ND<4.7
PER1-SW2-0.5	0.5	12/21/18	ND<0.7	ND<1.1	ND<1.0	ND<1.2	ND<1.1	320	ND<0.60	2600	ND<1.2	70	ND<1.0	ND<1.5	ND<1.6	ND<1.4	ND<3.1	ND<1.3	ND<1.0	190	ND<1.2	38	ND<1.8	ND<47
PER1-SW2-1.0	1	12/21/18	ND<0.35	ND<0.54	ND<0.50	ND<0.62	ND<0.53	63	ND<0.30	440	ND<0.62	12	ND<0.50	ND<0.77	ND<0.80	ND<0.68	ND<1.6	ND<0.63	ND<0.52	40	ND<0.59	ND<0.44	ND<0.89	ND<23
PER2-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	6.6	ND<0.06	63	ND<0.03	33	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	3.4	ND<0.05	3.4	ND<0.18	ND<4.7
PER3-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER4-0.5	0.5	10/27/2018	ND<0.07	1.6 J	ND<0.10	ND<0.04	ND<0.11	4.1	ND<0.06	49	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	2.1	ND<0.05	3.8	ND<0.18	ND<4.7
PER5-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER6-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER7-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	0.21 J	ND<0.06	3.3 J	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	0.27 J	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER8-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	4.2	ND<0.06	40	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	1.9	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER9-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	0.13 J	ND<0.18	ND<4.7
PER10-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER11-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	0.12 J	ND<0.18	ND<4.7
PER12-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	1.9	ND<0.12	ND<0.06	ND<1.1	0.89 J	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
DUP-2	0.5	10/27/2018	ND<0.07	7.9	ND<0.10	1.1	ND<0.11	ND<0.12	ND<0.06	ND<1.1	2.0	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER13-0.5	0.5	10/27/2018	0.35 J	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER14-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	0.79 J	ND<0.06	8.8	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	0.87 J	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER15-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	10	ND<0.04	ND<0.11	6.5	ND<0.06	72	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	5.8	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER16-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER17-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.07	ND<0.05	ND<0.09	ND<0.18	ND<4.7
PER18-0.5	0.5	10/27/2018	ND<0.07	ND<0.05	ND<0.10	ND<0.04	ND<0.11	ND<0.12	ND<0.06	ND<1.1	ND<0.03	ND<0.13	ND<0.10	ND<0.03	ND<0.08	ND<0.04	ND<0.31	ND<0.13	ND<0.10	ND<0.0				

**Table 3**  
**Summary of Polychlorinated Biphenyl Results in Soil**  
 LAUSD - Colfax Charter Elementary School, Los Angeles, California

Sample ID	Depth (ft bgs)	Sample Date	EPA Method 8082 (µg/kg)								
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
PER1-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
DUP-1	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER11-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
DUP-2	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER21-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER22-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
DUP-3	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER24-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER25-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER27-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
PER28-0.5	0.5	10/27/2018	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6
Regulatory Guidance Screening Levels (µg/kg)											
USEPA RSL <sup>2</sup>			4,100	200	170	230	230	240	240	--	--
DTSC SLs <sup>3</sup>			--	--	--	--	--	--	440	--	--

Notes and Abbreviations:

1. **Bold** value indicates analyte detected above the laboratory method detection limit (MDL)
2. USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites (May 2018). Criteria selected: Residential soil, Total Hazard Quotient = 1.0, Target risk of 1.0E-6
3. Department of Toxic Substances Control (DTSC), Modified Screening Levels (SLs), Human Health Risk Assessment Note 3, June 2018. Criteria selected: residential soil, lowest value of the cancer and non-cancer endpoint

ND: Analyte is not detected at or above the denoted method detection limit.

µg/kg: micrograms per kilogram

ft bgs: feet below ground surface

# APPENDIX A

## REFERENCES



Leighton

## APPENDIX A

### References

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













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# APPENDIX B

## BORING LOGS



Leighton

MAJOR DIVISIONS					TYPICAL NAMES
COARSE GRAINED SOILS More than Half > #200 sieve	GRAVELS  MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 15% FINES	GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS  MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS, GRAVELLY SANDS
			SP		POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
			SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS More than Half < #200 sieve	SILTS AND CLAYS  LIQUID LIMIT LESS THAN 50	ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
		CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
		OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS  LIQUID LIMIT GREATER THAN 50	MH		INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
		CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
		OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
		HIGHLY ORGANIC SOILS		Pt	

### SYMBOLS AND NOTES



= Sample Interval (Glass Jar)



= Sample Interval (Sleeve/Ring)



= Water Level at Time of Drilling



= Water Level After Drilling

USCS = Unified Soil Classification System

PID = Photoionization Detector

ppm = Parts Per Million

#### CLAST SIZE (Field Classification)

Gravel = >0.2 inches

Sand = 0.003 - 0.2 inches

Silt = <0.003 (not plastic)

Clay = <0.003 (plastic)

#### DENSITY DESCRIPTORS (Sands)

4-10 blows per foot = Loose

10-30 blows per foot = Medium Dense

30-50 blows per foot = Dense

>50 blows per foot = Very Dense

#### DESCRIPTORS

Trace = 1% - 5%

Some = 6% - 10%

With = 11% - 25%

Clast Size + "y" = 26% - 40%

And = >40%

#### DENSITY DESCRIPTORS (Sils/Clays)

2-4 blows per foot = Soft

4-8 blows per foot = Medium Stiff

8-15 blows per foot = Stiff

15-30 blows per foot = Very Stiff

>30 blows per foot = Hard

## BORING LOG EXPLANATION







# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER1  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER1-0.5 / DUP-1					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER1-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, rootlets present, no staining, no odor
3			PER1-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER1-S  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 12/21/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY KCH GROUND WATER ELEVATION  
REMARKS Boring completed by Leighton Consulting, Inc.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER1-S-0.5			SM		@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER1-S-1.5					@0.5': SILT: light brown, soft, moist, no staining, no odor
3								Total Depth = 1.5 feet bgs Total Sampled Depth = 1.5 feet bgs No groundwater encountered Backfilled boring with ~6 -inches of hydrated bentonite (bottom) and capped with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER1-SE  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet southeast of PER1.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER1-SE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER1-SE-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, rootlets present, no staining, no odor
3			PER1-SE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER1-SE2  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 12/21/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY KCH GROUND WATER ELEVATION  
REMARKS Boring completed by Leighton Consulting, Inc.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER1-SE2-0.5			SM		@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER1-SE2-1.5					@0.5': SILT: light brown, soft, moist, no staining, no odor
3								Total Depth = 1.5 feet bgs Total Sampled Depth = 1.5 feet bgs No groundwater encountered Backfilled boring with ~6 -inches of hydrated bentonite (bottom) and capped with native material
4								
5								



# SOIL BORING LOG

**PROJECT NUMBER** 11640.008 **BORING/WELL NUMBER** PER1-SW  
**PROJECT NAME** LAUSD Colfax Elementary School SSI **DATE DRILLED** 11/3/2018  
**LOCATION** 11724 Addison Street, Valley Village, CA **CASING TYPE/DIAMETER** NA / NA  
**DRILLING METHOD** Hand Auger **SCREEN TYPE/SLOT** NA / NA  
**SAMPLING METHOD** Glass Jar **GRAVEL PACK TYPE** NA  
**GROUND ELEVATION** **GROUT TYPE/QUANTITY** NA / NA  
**TOP OF CASING** NA **DEPTH TO WATER** --  
**LOGGED BY** SAG/RAL **GROUND WATER ELEVATION**  
**REMARKS** Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet southwest of PER1.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER1-SW-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER1-SW-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, rootlets present, no staining, no odor
3			PER1-SW-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG






PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER1-SW2  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 12/21/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY KCH GROUND WATER ELEVATION  
REMARKS Boring completed by Leighton Consulting, Inc.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			PER1-SW2-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
						SM		@0.5': SILT: light brown, soft, moist, no staining, no odor
1			PER1-SW2-1.0					Total Depth = 1.0 feet bgs Total Sampled Depth = 1.0 feet bgs Hand auger refusal at 1.0 feet bgs due to tree roots No groundwater encountered Backfilled boring with ~6 -inches of hydrated bentonite (bottom) and capped with native material
2								
3								
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER2  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER2-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER2-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, no staining, no odor
3			PER2-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER3  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER3-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER3-1.5			SM		@1.5: Silty SAND: very dark grayish brown, loose, moist, fine-grained, rootlets present, no staining, no odor
3			PER3-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								





# SOIL BORING LOG






PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER4  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER4-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER4-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER4-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER5  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER5-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER5-1.5			SM		@1.5: Silty SAND: dark grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER5-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER6  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER6-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER6-1.5			SM		@1.5: Silty SAND: dark grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER6-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER7  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER7-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER7-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, no staining, no odor
3			PER7-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER8  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER8-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER8-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER8-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER9  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER9-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER9-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER9-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER10  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER10-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER10-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER10-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER11  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER11-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER11-1.5			SP		@1.5: Poorly-graded SAND: dark grayish brown, loose, moist, fine-grained, with silt, no staining, no odor
3			PER11-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								





# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER12  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER12-0.5 / DUP-2					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER12-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER12-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER12-NE  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet northeast of PER12.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER12-NE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER12-NE-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER12-NE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

**PROJECT NUMBER** 11640.008 **BORING/WELL NUMBER** PER12-SE  
**PROJECT NAME** LAUSD Colfax Elementary School SSI **DATE DRILLED** 11/3/2018  
**LOCATION** 11724 Addison Street, Valley Village, CA **CASING TYPE/DIAMETER** NA / NA  
**DRILLING METHOD** Hand Auger **SCREEN TYPE/SLOT** NA / NA  
**SAMPLING METHOD** Glass Jar **GRAVEL PACK TYPE** NA  
**GROUND ELEVATION** **GROUT TYPE/QUANTITY** NA / NA  
**TOP OF CASING** NA **DEPTH TO WATER** --  
**LOGGED BY** SAG/RAL **GROUND WATER ELEVATION**  
**REMARKS** Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet southeast of PER12.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER12-SE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER12-SE-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER12-SE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER13  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER13-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER13-1.5			SP		@1.5: Poorly-graded SAND: dark grayish brown, loose, moist, fine-grained, with silt, no staining, no odor
3			PER13-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER14  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER14-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER14-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER14-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER14-NE  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet northeast of PER14.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER14-NE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER14-NE-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER14-NE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER14-SE  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet southeast of PER14.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER14-SE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER14-SE-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER14-SE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER15  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER15-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER15-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER15-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								





# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER16  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER16-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER16-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER16-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER17  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER17-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER17-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER17-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER18  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER18-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER18-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER18-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER19  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER19-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER19-1.5			SP		@1.5: Poorly-graded SAND: dark grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER19-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER20  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER20-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER20-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, wood fragments present, no staining, no odor
3			PER20-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER21  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER21-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER21-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER21-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER22  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER22-0.5 / DUP-3					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER22-1.5			SM		@1.5: Silty SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER22-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER22-NE  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet northeast of PER22.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER22-NE-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER22-NE-1.5			SM		@1.5: Silty SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER22-NE-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								





# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER22-NW  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 11/3/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental. Step-out boring location located approximately 5 feet northwest of PER22.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER22-NW-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER22-NW-1.5			SM		@1.5: Silty SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER22-NW-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG







PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER23  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER23-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER23-1.5			SM		@1.5: Silty SAND: brown, loose, moist, fine-grained, no staining, no odor
3			PER23-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG



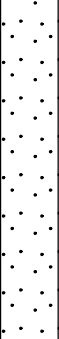

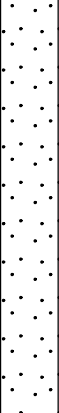
PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER24  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER24-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER24-1.5			SM		@1.5: Silty SAND: dark grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER24-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER25  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER25-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER25-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER25-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER26  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER26-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER26-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER26-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER27  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER27-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER27-1.5			SP		@1.5: Poorly-graded SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER27-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER28  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER28-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER28-1.5			SP		@1.5: Poorly-graded SAND: light grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER28-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# SOIL BORING LOG

PROJECT NUMBER 11640.008 BORING/WELL NUMBER PER29  
PROJECT NAME LAUSD Colfax Elementary School SSI DATE DRILLED 10/27/2018  
LOCATION 11724 Addison Street, Valley Village, CA CASING TYPE/DIAMETER NA / NA  
DRILLING METHOD Hand Auger SCREEN TYPE/SLOT NA / NA  
SAMPLING METHOD Glass Jar GRAVEL PACK TYPE NA  
GROUND ELEVATION GROUT TYPE/QUANTITY NA / NA  
TOP OF CASING NA DEPTH TO WATER --  
LOGGED BY SAG/RAL GROUND WATER ELEVATION  
REMARKS Boring completed by Strongarm Environmental

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1			PER29-0.5					@Surface: Top soil, varying amounts of organic material (rootlets, wood chips, leaves, etc.)
2			PER29-1.5			SM		@1.5: Silty SAND: grayish brown, loose, moist, fine-grained, no staining, no odor
3			PER29-3.0					Total Depth = 3.0 feet bgs Total Sampled Depth = 3.0 feet bgs No groundwater encountered Backfilled boring with native material
4								
5								



# APPENDIX C

## PHOTOGRAPHIC LOG



Leighton



Leighton Consulting, Inc.

## PHOTOGRAPHIC LOG

10/27/18, 11/3/18, and 12/21/18

**Client Name:**

**Los Angeles Unified School District**

**Site Location: Colfax Elementary School,**

**11724 Addison Street, Valley Village, California**

**Project No.**

**11640.008**

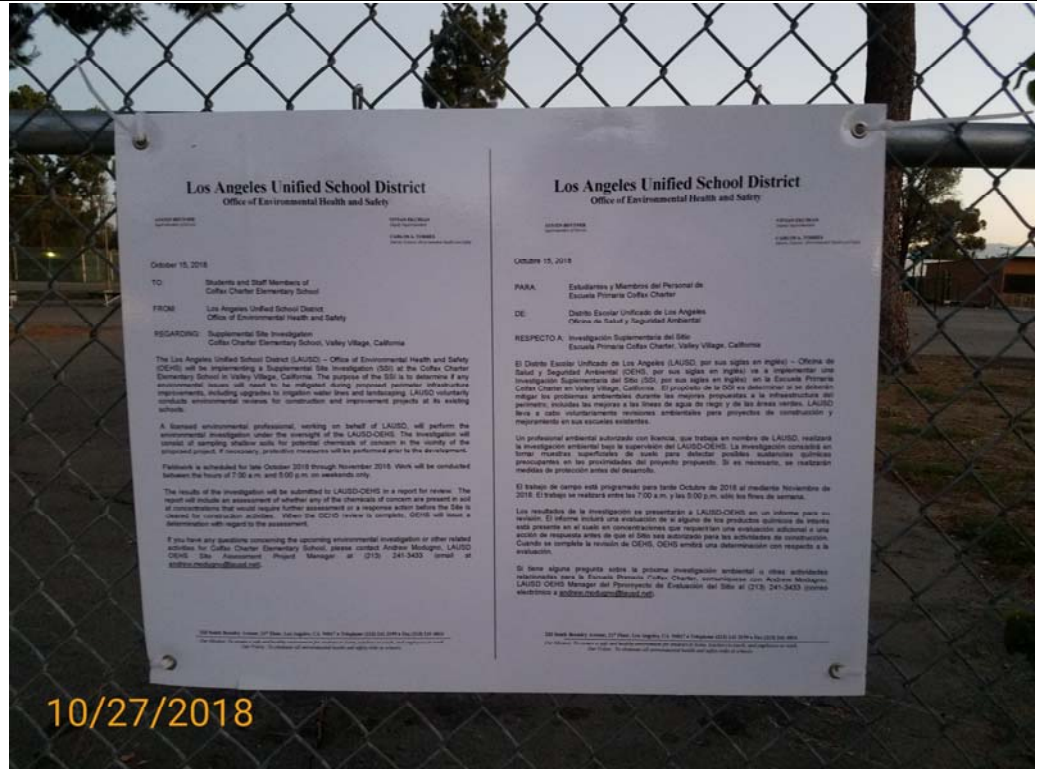
**Photo No. 1**

**View Direction of Photo:**

North

**Description:**

Poster-board sized field notification posted along the southern boundary fence of the Site.



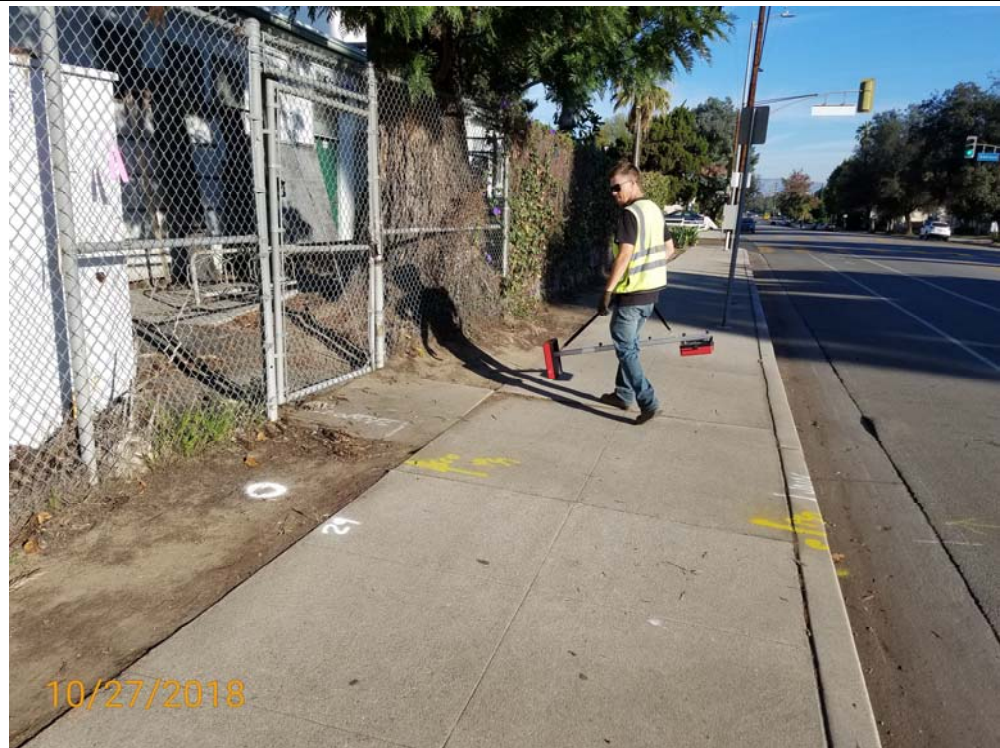
**Photo No. 2**

**View Direction of Photo:**

North

**Description:**

Geophysical survey at sample location PER29 to determine if the location was in conflict with underground utilities.







## PHOTOGRAPHIC LOG

10/27/18, 11/3/18, and 12/21/18

<b>Client Name:</b> Los Angeles Unified School District	<b>Site Location:</b> Colfax Elementary School, 11724 Addison Street, Valley Village, California	<b>Project No.</b> 11640.008
--	---	---------------------------------

<b>Photo No. 3</b>	
<b>View Direction of Photo:</b>  North	
<b>Description:</b> Soil boring advancement using a hand auger at sample location PER3.	

<b>Photo No. 4</b>	
<b>View Direction of Photo:</b>  North	
<b>Description:</b> Soil from discrete depths was placed into 8-ounce glass jars for laboratory analysis.	



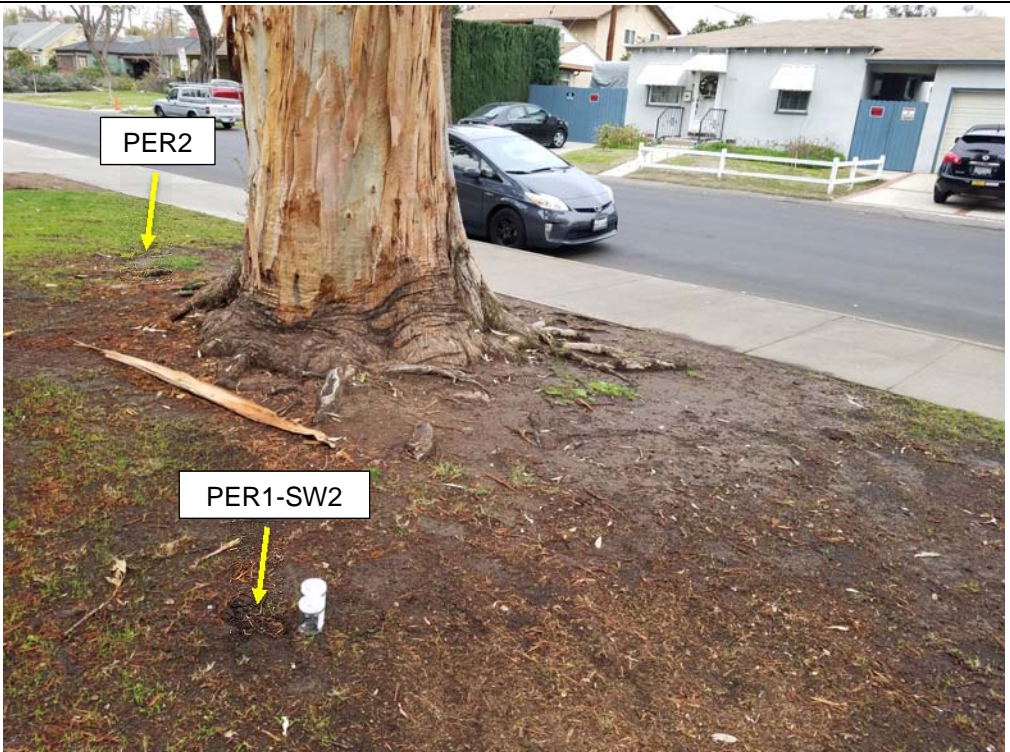


## PHOTOGRAPHIC LOG

10/27/18, 11/3/18, and 12/21/18

<b>Client Name:</b> Los Angeles Unified School District	<b>Site Location:</b> Colfax Elementary School, 11724 Addison Street, Valley Village, California	<b>Project No.</b> 11640.008
--	---	---------------------------------

<b>Photo No. 5</b>	
<b>View Direction of Photo:</b>  Southwest	
<b>Description:</b> Step-out soil boring location PER1-S is located approximately 5 feet from a building.	

<b>Photo No. 6</b>	
<b>View Direction of Photo:</b>  Northwest	
<b>Description:</b> Large trees are present within the area of recommended OCP-impacted soil removal.	

APPENDIX D

LABORATORY ANALYTICAL REPORTS



Leighton



November 09, 2018

Ross Surrency  
Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614  
Tel: (949) 250-1421  
Fax: (949) 757-7230

ELAP No.: 1838  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Re: ATL Work Order Number : 1804036  
Client Reference : LAUSD- Colfax ES, 11640.008

Enclosed are the results for sample(s) received on October 29, 2018 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eddie Rodriguez', with a small 'ER' monogram below it.

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PER1-0.5	1804036-01	Soil	10/27/18 7:38	10/29/18 10:48
PER1-1.5	1804036-02	Soil	10/27/18 7:39	10/29/18 10:48
PER2-0.5	1804036-04	Soil	10/27/18 7:45	10/29/18 10:48
PER3-0.5	1804036-07	Soil	10/27/18 7:51	10/29/18 10:48
DUP-1	1804036-10	Soil	10/27/18 7:40	10/29/18 10:48
PER4-0.5	1804036-11	Soil	10/27/18 8:05	10/29/18 10:48
PER5-0.5	1804036-14	Soil	10/27/18 8:18	10/29/18 10:48
PER6-0.5	1804036-17	Soil	10/27/18 8:27	10/29/18 10:48
PER7-0.5	1804036-20	Soil	10/27/18 8:37	10/29/18 10:48
PER8-0.5	1804036-23	Soil	10/27/18 8:45	10/29/18 10:48
PER9-0.5	1804036-26	Soil	10/27/18 8:53	10/29/18 10:48
PER10-0.5	1804036-29	Soil	10/27/18 9:01	10/29/18 10:48
PER11-0.5	1804036-32	Soil	10/27/18 9:26	10/29/18 10:48
PER12-0.5	1804036-35	Soil	10/27/18 9:35	10/29/18 10:48
PER12-1.5	1804036-36	Soil	10/27/18 9:37	10/29/18 10:48
DUP-2	1804036-38	Soil	10/27/18 9:36	10/29/18 10:48
PER13-0.5	1804036-39	Soil	10/27/18 10:11	10/29/18 10:48
PER14-0.5	1804036-42	Soil	10/27/18 10:17	10/29/18 10:48
PER14-1.5	1804036-43	Soil	10/27/18 10:19	10/29/18 10:48
PER14-3.0	1804036-44	Soil	10/27/18 10:20	10/29/18 10:48
PER15-0.5	1804036-45	Soil	10/27/18 10:24	10/29/18 10:48
PER16-0.5	1804036-48	Soil	10/27/18 10:51	10/29/18 10:48
PER17-0.5	1804036-51	Soil	10/27/18 10:57	10/29/18 10:48
PER18-0.5	1804036-54	Soil	10/27/18 11:04	10/29/18 10:48
PER19-0.5	1804036-57	Soil	10/27/18 11:10	10/29/18 10:48
PER20-0.5	1804036-60	Soil	10/27/18 11:15	10/29/18 10:48
PER21-0.5	1804036-63	Soil	10/27/18 11:23	10/29/18 10:48
DUP-3	1804036-66	Soil	10/27/18 11:35	10/29/18 10:48
PER22-0.5	1804036-67	Soil	10/27/18 11:33	10/29/18 10:48
PER22-1.5	1804036-68	Soil	10/27/18 11:36	10/29/18 10:48
PER23-0.5	1804036-70	Soil	10/27/18 11:41	10/29/18 10:48
PER24-0.5	1804036-73	Soil	10/27/18 11:48	10/29/18 10:48
PER25-0.5	1804036-76	Soil	10/27/18 12:34	10/29/18 10:48
PER26-0.5	1804036-79	Soil	10/27/18 12:41	10/29/18 10:48
PER27-0.5	1804036-82	Soil	10/27/18 12:46	10/29/18 10:48
PER28-0.5	1804036-85	Soil	10/27/18 12:52	10/29/18 10:48
PER29-0.5	1804036-88	Soil	10/27/18 12:59	10/29/18 10:48



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

EB-1

1804036-91

Water

10/27/18 9:50

10/29/18 10:48

### CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER1-0.5**

**Lab ID: 1804036-01**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.0	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:12	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:20	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:31	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.5	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:44	
ORO	4.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:44	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	1.6	20	0.70	10	B8J0820	10/30/2018	10/31/18 20:28	J
alpha-Chlordane	10	10	1.2	10	B8J0820	10/30/2018	10/31/18 20:28	
Chlordane [2C]	57	85	11	10	B8J0820	10/30/2018	10/31/18 20:28	J
Dieldrin	93	20	1.3	10	B8J0820	10/30/2018	10/31/18 20:28	
gamma-Chlordane	4.9	10	0.70	10	B8J0820	10/30/2018	10/31/18 20:28	J
Heptachlor epoxide [2C]	4.4	10	0.89	10	B8J0820	10/30/2018	10/31/18 20:28	J



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER2-0.5**

**Lab ID: 1804036-04**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.8	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:16	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.9	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 13:01	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:41	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:10	
ORO	8.1	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:10	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	6.6	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 21:50	
Chlordane	63	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 21:50	
Dieldrin [2C]	33	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 21:50	
gamma-Chlordane [2C]	3.4	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 21:50	
Heptachlor epoxide	3.4	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 21:50	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER3-0.5**

**Lab ID: 1804036-07**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:17	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:25	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:42	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:27	
ORO	3.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:27	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID DUP-1**

**Lab ID: 1804036-10**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.63	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:19	J

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:25	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:44	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:18	
ORO	1.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:18	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER4-0.5**

**Lab ID: 1804036-11**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	15	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:20	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:26	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:50	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	4.4	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 22:52	
ORO	8.8	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 22:52	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDE [2C]	1.6	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:22	J
alpha-Chlordane	4.1	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:22	
Chlordane [2C]	49	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:22	
gamma-Chlordane	2.1	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:22	
Heptachlor epoxide [2C]	3.8	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:22	



## Certificate of Analysis

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17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER5-0.5**

**Lab ID: 1804036-14**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	6.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:21	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.2	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:29	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:52	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:10	
ORO	9.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:10	



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### DETECTION SUMMARY

**Client Sample ID PER6-0.5**

**Lab ID: 1804036-17**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:22	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 13:02	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.08	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:54	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.7	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:18	
ORO	9.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:18	



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### DETECTION SUMMARY

**Client Sample ID PER7-0.5**

**Lab ID: 1804036-20**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:55	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.1	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:30	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:56	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:35	
ORO	3.7	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:35	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	0.21	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:53	J
Chlordane [2C]	3.3	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:53	J
gamma-Chlordane [2C]	0.27	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:53	J





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### DETECTION SUMMARY

**Client Sample ID PER8-0.5**

**Lab ID: 1804036-23**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	9.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:56	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	8.3	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:31	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:58	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	10	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:44	
ORO	27	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:44	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	4.2	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:04	
Chlordane	40	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:04	
gamma-Chlordane	1.9	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:04	



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### DETECTION SUMMARY

**Client Sample ID PER9-0.5**

**Lab ID: 1804036-26**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.98	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:58	J

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	5.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:32	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.08	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:00	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:35	
ORO	2.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:35	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Heptachlor epoxide [2C]	0.13	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:14	J



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### DETECTION SUMMARY

**Client Sample ID PER10-0.5**

**Lab ID: 1804036-29**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.71	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:59	J

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:33	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:01	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.8	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:00	
ORO	3.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:00	



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### DETECTION SUMMARY

Client Sample ID PER11-0.5

Lab ID: 1804036-32

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:00	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.2	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:34	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:03	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:27	
ORO	13	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:27	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Heptachlor epoxide [2C]	0.12	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:35	J



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Project Number : LAUSD- Colfax ES, 11640.008  
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### DETECTION SUMMARY

Client Sample ID PER12-0.5

Lab ID: 1804036-35

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	18	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:02	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	11	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:35	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.10	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:05	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	110	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 00:54	
ORO	140	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 00:54	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-BHC	1.9	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:45	
delta-BHC [2C]	0.89	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:45	J

Client Sample ID PER12-1.5

Lab ID: 1804036-36

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.2	1.0	0.04	20	B8K0091	11/02/2018	11/04/18 14:49	D1



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### DETECTION SUMMARY

**Client Sample ID DUP-2**

**Lab ID: 1804036-38**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	20	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:03	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	12	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:35	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:07	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	220	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 01:11	
ORO	240	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 01:11	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDE	7.9	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:56	
Aldrin [2C]	1.1	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:56	
delta-BHC [2C]	2.0	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:56	



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### DETECTION SUMMARY

Client Sample ID PER13-0.5

Lab ID: 1804036-39

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	13	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:04	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	10	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:36	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:13	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	24	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:19	
ORO	40	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:19	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD [2C]	0.35	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:06	J



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Project Number : LAUSD- Colfax ES, 11640.008  
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### DETECTION SUMMARY

Client Sample ID PER14-0.5

Lab ID: 1804036-42

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	14	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:05	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	12	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:39	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:14	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:01	
ORO	23	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:01	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	0.79	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:17	J
Chlordane [2C]	8.8	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:17	
gamma-Chlordane	0.87	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:17	J

Client Sample ID PER14-1.5

Lab ID: 1804036-43

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	13	1.0	0.04	20	B8K0091	11/02/2018	11/04/18 14:52	D1





## Certificate of Analysis

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Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER14-3.0**

**Lab ID: 1804036-44**

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	9.9	1.0	0.04	20	B8K0289	11/08/2018	11/08/18 14:57	D1



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17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER15-0.5**

**Lab ID: 1804036-45**

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	67	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:06	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.1	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:40	D1

#### STLC Metals by ICP-AES by EPA 6010B

Analyst: KEK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.7	1.0		20	B8K0286	11/08/2018	11/08/18 15:07	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:16	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	120	10	10	10	B8J0859	10/31/2018	11/01/18 00:36	
ORO	260	10	10	10	B8J0859	10/31/2018	11/01/18 00:36	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDT	10	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:27	
alpha-Chlordane	6.5	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:27	
Chlordane	72	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:27	
gamma-Chlordane [2C]	5.8	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:27	



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### DETECTION SUMMARY

**Client Sample ID PER16-0.5**

**Lab ID: 1804036-48**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.3	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:13	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.3	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:40	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:18	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:52	
ORO	12	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:52	



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### DETECTION SUMMARY

**Client Sample ID PER17-0.5**

**Lab ID: 1804036-51**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.0	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:14	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.9	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:41	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.02	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:20	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.1	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:08	
ORO	24	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:08	



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### DETECTION SUMMARY

**Client Sample ID PER18-0.5**

**Lab ID: 1804036-54**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.6	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:45	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.0	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:44	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:26	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.9	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:50	
ORO	12	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:50	



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### DETECTION SUMMARY

**Client Sample ID PER19-0.5**

**Lab ID: 1804036-57**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.8	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:50	

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:39 J	

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.6	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:16	
ORO	7.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:16	



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### DETECTION SUMMARY

**Client Sample ID PER20-0.5**

**Lab ID: 1804036-60**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.8	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:51	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.0	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:50	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:41	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	6.4	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:00	
ORO	10	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:00	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.13	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 10:50	J
alpha-Chlordane [2C]	0.12	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 10:50	J
Chlordane	1.4	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 10:50	J
gamma-Chlordane	0.09	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 10:50	J



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### DETECTION SUMMARY

Client Sample ID PER21-0.5

Lab ID: 1804036-63

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.6	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:52	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.3	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:50	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:43	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	11	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:42	
ORO	18	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:42	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.15	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:01	J





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### DETECTION SUMMARY

**Client Sample ID DUP-3**

**Lab ID: 1804036-66**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	34	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:53	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.8	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:51	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:45	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	500	10	10	10	B8J0879	10/31/2018	11/01/18 07:44	
ORO	830	10	10	10	B8J0879	10/31/2018	11/01/18 07:44	



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Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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### DETECTION SUMMARY

**Client Sample ID PER22-0.5**

**Lab ID: 1804036-67**

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.2	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:57	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.8	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:52	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:47	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	74	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:52	
ORO	110	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:52	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
beta-BHC	0.70	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:22	J
gamma-BHC [2C]	0.37	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:22	J

**Client Sample ID PER22-1.5**

**Lab ID: 1804036-68**

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	7.8	1.0	1.0	1	B8K0152	11/05/2018	11/06/18 12:27	
ORO	10	1.0	1.0	1	B8K0152	11/05/2018	11/06/18 12:27	



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### DETECTION SUMMARY

**Client Sample ID PER23-0.5**

**Lab ID: 1804036-70**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.0	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:58	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.2	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:53	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:48	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:25	
ORO	22	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:25	



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### DETECTION SUMMARY

**Client Sample ID PER24-0.5**

**Lab ID: 1804036-73**

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Lead</b>	<b>64</b>	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:59	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Arsenic</b>	<b>4.1</b>	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:54	D1

#### STLC Metals by ICP-AES by EPA 6010B

Analyst: KEK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Lead</b>	<b>8.3</b>	1.0		20	B8K0286	11/08/2018	11/08/18 15:11	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Mercury</b>	<b>0.06</b>	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:50	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>43</b>	5.0	5.0	5	B8J0879	10/31/2018	11/01/18 08:02	
<b>ORO</b>	<b>100</b>	5.0	5.0	5	B8J0879	10/31/2018	11/01/18 08:02	

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>alpha-BHC</b>	<b>1.7</b>	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>alpha-Chlordane</b>	<b>2.7</b>	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>Chlordane [2C]</b>	<b>27</b>	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>gamma-Chlordane</b>	<b>2.4</b>	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:43	



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### DETECTION SUMMARY

**Client Sample ID PER25-0.5**

**Lab ID: 1804036-76**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	37	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:01	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.6	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:55	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:52	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.7	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:27	
ORO	20	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:27	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDE [2C]	1.8	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:53	J
alpha-Chlordane	0.85	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:53	J
Chlordane [2C]	8.8	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:53	
gamma-Chlordane	0.69	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:53	J



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

**Client Sample ID PER26-0.5**

**Lab ID: 1804036-79**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.9	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:02	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.4	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:55	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:58	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.6	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:09	
ORO	19	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:09	



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Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

### DETECTION SUMMARY

Client Sample ID PER27-0.5

Lab ID: 1804036-82

#### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.3	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:03	

#### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.1	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:56	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:00	J

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	4.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:17	
ORO	7.3	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:17	



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Project Number : LAUSD- Colfax ES, 11640.008  
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### DETECTION SUMMARY

**Client Sample ID PER28-0.5**

**Lab ID: 1804036-85**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.5	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:04	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.5	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:59	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:02	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.2	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 03:59	
ORO	3.1	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 03:59	

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.10	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:25	J





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Project Number : LAUSD- Colfax ES, 11640.008  
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### DETECTION SUMMARY

**Client Sample ID PER29-0.5**

**Lab ID: 1804036-88**

#### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.1	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:05	

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.6	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 13:00	D1

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:04	J

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:34	
ORO	6.5	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:34	

**Client Sample ID EB-1**

**Lab ID: 1804036-91**

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	0.12	0.05	0.05	1	B8K0020	11/01/2018	11/01/18 12:30	
ORO	0.11	0.05	0.05	1	B8K0020	11/01/2018	11/01/18 12:30	



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Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER1-0.5**

**Lab ID: 1804036-01**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.0	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:12	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:20	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:31	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 10:08	
Surrogate: 4-Bromofluorobenzene	104 %		42 - 153		B8J0773	10/30/2018	10/30/18 10:08	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.5	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:44	
ORO	4.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:44	
Surrogate: p-Terphenyl	54.3 %		34 - 158		B8J0859	10/31/2018	10/31/18 21:44	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	1.6	20	0.70	10	B8J0820	10/30/2018	10/31/18 20:28	J
4,4'-DDE	ND	20	0.53	10	B8J0820	10/30/2018	10/31/18 20:28	
4,4'-DDT	ND	20	1.0	10	B8J0820	10/30/2018	10/31/18 20:28	



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Project Number : LAUSD- Colfax ES, 11640.008  
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Reported : 11/09/2018

**Client Sample ID PER1-0.5**

**Lab ID: 1804036-01**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	10	0.37	10	B8J0820	10/30/2018	10/31/18 20:28	
alpha-BHC	ND	10	1.1	10	B8J0820	10/30/2018	10/31/18 20:28	
<b>alpha-Chlordane</b>	<b>10</b>	10	1.2	10	B8J0820	10/30/2018	10/31/18 20:28	
beta-BHC	ND	10	0.60	10	B8J0820	10/30/2018	10/31/18 20:28	
<b>Chlordane [2C]</b>	<b>57</b>	85	11	10	B8J0820	10/30/2018	10/31/18 20:28	J
delta-BHC	ND	10	0.33	10	B8J0820	10/30/2018	10/31/18 20:28	
<b>Dieldrin</b>	<b>93</b>	20	1.3	10	B8J0820	10/30/2018	10/31/18 20:28	
Endosulfan I	ND	10	1.0	10	B8J0820	10/30/2018	10/31/18 20:28	
Endosulfan II	ND	20	0.29	10	B8J0820	10/30/2018	10/31/18 20:28	
Endosulfan sulfate	ND	20	0.77	10	B8J0820	10/30/2018	10/31/18 20:28	
Endrin	ND	20	0.39	10	B8J0820	10/30/2018	10/31/18 20:28	
Endrin aldehyde	ND	20	3.1	10	B8J0820	10/30/2018	10/31/18 20:28	
Endrin ketone	ND	20	1.3	10	B8J0820	10/30/2018	10/31/18 20:28	
gamma-BHC	ND	10	1.0	10	B8J0820	10/30/2018	10/31/18 20:28	
<b>gamma-Chlordane</b>	<b>4.9</b>	10	0.70	10	B8J0820	10/30/2018	10/31/18 20:28	J
Heptachlor	ND	10	0.47	10	B8J0820	10/30/2018	10/31/18 20:28	
<b>Heptachlor epoxide [2C]</b>	<b>4.4</b>	10	0.89	10	B8J0820	10/30/2018	10/31/18 20:28	J
Methoxychlor	ND	50	1.8	10	B8J0820	10/30/2018	10/31/18 20:28	
Toxaphene	ND	500	47	10	B8J0820	10/30/2018	10/31/18 20:28	
<i>Surrogate: Decachlorobiphenyl</i>	<i>50.4 %</i>	<i>43 - 84</i>			B8J0820	10/30/2018	10/31/18 20:28	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>50.8 %</i>	<i>54 - 118</i>			B8J0820	10/30/2018	10/31/18 20:28	S10

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 10:22	
<i>Surrogate: Decachlorobiphenyl</i>	<i>51.0 %</i>	<i>43 - 84</i>		B8K0014	11/01/2018	11/01/18 10:22	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>65.1 %</i>	<i>54 - 118</i>		B8K0014	11/01/2018	11/01/18 10:22	



## Certificate of Analysis

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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER1-1.5**

**Lab ID: 1804036-02**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0267	11/07/2018	11/07/18 18:12	
4,4'-DDE	ND	2.0	0.05	1	B8K0267	11/07/2018	11/07/18 18:12	
4,4'-DDT	ND	2.0	0.10	1	B8K0267	11/07/2018	11/07/18 18:12	
Aldrin	ND	1.0	0.04	1	B8K0267	11/07/2018	11/07/18 18:12	
alpha-BHC	ND	1.0	0.11	1	B8K0267	11/07/2018	11/07/18 18:12	
alpha-Chlordane	ND	1.0	0.12	1	B8K0267	11/07/2018	11/07/18 18:12	
beta-BHC	ND	1.0	0.06	1	B8K0267	11/07/2018	11/07/18 18:12	
Chlordane	ND	8.5	1.1	1	B8K0267	11/07/2018	11/07/18 18:12	
delta-BHC	ND	1.0	0.03	1	B8K0267	11/07/2018	11/07/18 18:12	
Dieldrin	ND	2.0	0.13	1	B8K0267	11/07/2018	11/07/18 18:12	
Endosulfan I	ND	1.0	0.10	1	B8K0267	11/07/2018	11/07/18 18:12	
Endosulfan II	ND	2.0	0.03	1	B8K0267	11/07/2018	11/07/18 18:12	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0267	11/07/2018	11/07/18 18:12	
Endrin	ND	2.0	0.04	1	B8K0267	11/07/2018	11/07/18 18:12	
Endrin aldehyde	ND	2.0	0.31	1	B8K0267	11/07/2018	11/07/18 18:12	
Endrin ketone	ND	2.0	0.13	1	B8K0267	11/07/2018	11/07/18 18:12	
gamma-BHC	ND	1.0	0.10	1	B8K0267	11/07/2018	11/07/18 18:12	
gamma-Chlordane	ND	1.0	0.07	1	B8K0267	11/07/2018	11/07/18 18:12	
Heptachlor	ND	1.0	0.05	1	B8K0267	11/07/2018	11/07/18 18:12	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0267	11/07/2018	11/07/18 18:12	
Methoxychlor	ND	5.0	0.18	1	B8K0267	11/07/2018	11/07/18 18:12	
Toxaphene	ND	50	4.7	1	B8K0267	11/07/2018	11/07/18 18:12	
Surrogate: Decachlorobiphenyl	35.0 %		43 - 84		B8K0267	11/07/2018	11/07/18 18:12	S10
Surrogate: Tetrachloro-m-xylene	32.0 %		54 - 118		B8K0267	11/07/2018	11/07/18 18:12	S10



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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

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**Client Sample ID PER2-0.5**

**Lab ID: 1804036-04**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.8	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:16	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.9	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 13:01	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:41	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 10:26	
Surrogate: 4-Bromofluorobenzene	75.1 %		42 - 153		B8J0773	10/30/2018	10/30/18 10:26	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:10	
ORO	8.1	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:10	
Surrogate: p-Terphenyl	65.7 %		34 - 158		B8J0859	10/31/2018	10/31/18 21:10	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 21:50	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 21:50	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 21:50	



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Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER2-0.5**

**Lab ID: 1804036-04**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 21:50	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 21:50	
<b>alpha-Chlordane</b>	<b>6.6</b>	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 21:50	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 21:50	
<b>Chlordane</b>	<b>63</b>	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 21:50	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 21:50	
<b>Dieldrin [2C]</b>	<b>33</b>	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 21:50	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 21:50	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 21:50	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 21:50	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 21:50	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 21:50	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 21:50	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 21:50	
<b>gamma-Chlordane [2C]</b>	<b>3.4</b>	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 21:50	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 21:50	
<b>Heptachlor epoxide</b>	<b>3.4</b>	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 21:50	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 21:50	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 21:50	
<i>Surrogate: Decachlorobiphenyl</i>	<i>52.1 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	<i>10/30/18 21:50</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>63.2 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	<i>10/30/18 21:50</i>	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER3-0.5**

**Lab ID: 1804036-07**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:17	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:25	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:42	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 10:45	
Surrogate: 4-Bromofluorobenzene	101 %		42 - 153		B8J0773	10/30/2018	10/30/18 10:45	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:27	
ORO	3.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 21:27	
Surrogate: p-Terphenyl	52.7 %		34 - 158		B8J0859	10/31/2018	10/31/18 21:27	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:01	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:01	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:01	



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17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER3-0.5**

**Lab ID: 1804036-07**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:01	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:01	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:01	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:01	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:01	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:01	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:01	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:01	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:01	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:01	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:01	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:01	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:01	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:01	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:01	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:01	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:01	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:01	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:01	
Surrogate: Decachlorobiphenyl	34.6 %		43 - 84		B8J0820	10/30/2018	10/30/18 22:01	S10
Surrogate: Tetrachloro-m-xylene	45.4 %		54 - 118		B8J0820	10/30/2018	10/30/18 22:01	S10





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Leighton Consulting, Inc.  
17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID DUP-1**

**Lab ID: 1804036-10**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.63	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:19	J

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:25	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:44	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 11:04	
Surrogate: 4-Bromofluorobenzene	98.3 %		42 - 153		B8J0773	10/30/2018	10/30/18 11:04	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:18	
ORO	1.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:18	
Surrogate: p-Terphenyl	91.6 %		34 - 158		B8J0859	10/31/2018	10/31/18 20:18	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:11	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:11	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:11	



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Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID DUP-1**

**Lab ID: 1804036-10**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:11	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:11	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:11	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:11	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:11	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:11	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:11	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:11	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:11	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:11	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:11	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:11	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:11	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:11	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:11	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:11	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:11	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:11	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:11	
Surrogate: Decachlorobiphenyl	49.2 %	43 - 84			B8J0820	10/30/2018	10/30/18 22:11	
Surrogate: Tetrachloro-m-xylene	68.0 %	54 - 118			B8J0820	10/30/2018	10/30/18 22:11	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 10:41	
Surrogate: Decachlorobiphenyl	51.1 %	43 - 84		B8K0014	11/01/2018	11/01/18 10:41	
Surrogate: Tetrachloro-m-xylene	87.6 %	54 - 118		B8K0014	11/01/2018	11/01/18 10:41	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER4-0.5**

**Lab ID: 1804036-11**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	15	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:20	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.0	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:26	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:50	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 11:22	
Surrogate: 4-Bromofluorobenzene	112 %		42 - 153		B8J0773	10/30/2018	10/30/18 11:22	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	4.4	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 22:52	
ORO	8.8	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 22:52	
Surrogate: p-Terphenyl	59.7 %		34 - 158		B8J0859	10/31/2018	10/31/18 22:52	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:22	
4,4'-DDE [2C]	1.6	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:22	J
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:22	



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17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
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**Client Sample ID PER4-0.5**

**Lab ID: 1804036-11**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:22	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:22	
<b>alpha-Chlordane</b>	<b>4.1</b>	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:22	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:22	
<b>Chlordane [2C]</b>	<b>49</b>	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:22	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:22	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:22	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:22	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:22	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:22	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:22	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:22	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:22	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:22	
<b>gamma-Chlordane</b>	<b>2.1</b>	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:22	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:22	
<b>Heptachlor epoxide [2C]</b>	<b>3.8</b>	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:22	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:22	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:22	
<i>Surrogate: Decachlorobiphenyl</i>	<i>46.8 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	<i>10/30/18 22:22</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>56.6 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	<i>10/30/18 22:22</i>	



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17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER5-0.5**

**Lab ID: 1804036-14**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	6.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:21	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.2	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:29	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:52	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 11:41	
Surrogate: 4-Bromofluorobenzene	108 %		42 - 153		B8J0773	10/30/2018	10/30/18 11:41	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:10	
ORO	9.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:10	
Surrogate: p-Terphenyl	85.0 %		34 - 158		B8J0859	10/31/2018	10/31/18 23:10	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:32	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:32	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:32	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

**Client Sample ID PER5-0.5**

**Lab ID: 1804036-14**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:32	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:32	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:32	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:32	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:32	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:32	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:32	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:32	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:32	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:32	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:32	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:32	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:32	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:32	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:32	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:32	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:32	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:32	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:32	
Surrogate: Decachlorobiphenyl	47.5 %		43 - 84		B8J0820	10/30/2018	10/30/18 22:32	
Surrogate: Tetrachloro-m-xylene	59.2 %		54 - 118		B8J0820	10/30/2018	10/30/18 22:32	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER6-0.5**

**Lab ID: 1804036-17**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 11:22	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 13:02	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.08	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:54	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 11:59	
Surrogate: 4-Bromofluorobenzene	82.2 %		42 - 153		B8J0773	10/30/2018	10/30/18 11:59	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.7	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:18	
ORO	9.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:18	
Surrogate: p-Terphenyl	81.6 %		34 - 158		B8J0859	10/31/2018	10/31/18 17:18	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:43	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:43	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:43	



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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER6-0.5**

**Lab ID: 1804036-17**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:43	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:43	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:43	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:43	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:43	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:43	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:43	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:43	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:43	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:43	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:43	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:43	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:43	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:43	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:43	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:43	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:43	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:43	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:43	
Surrogate: Decachlorobiphenyl	44.7 %		43 - 84		B8J0820	10/30/2018	10/30/18 22:43	
Surrogate: Tetrachloro-m-xylene	55.7 %		54 - 118		B8J0820	10/30/2018	10/30/18 22:43	





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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER7-0.5**

**Lab ID: 1804036-20**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.6	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:55	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.1	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:30	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:56	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 12:18	
Surrogate: 4-Bromofluorobenzene	100 %		42 - 153		B8J0773	10/30/2018	10/30/18 12:18	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:35	
ORO	3.7	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:35	
Surrogate: p-Terphenyl	43.9 %		34 - 158		B8J0859	10/31/2018	10/31/18 17:35	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:53	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:53	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:53	



## Certificate of Analysis

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Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER7-0.5**

**Lab ID: 1804036-20**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:53	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 22:53	
<b>alpha-Chlordane</b>	<b>0.21</b>	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 22:53	J
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 22:53	
<b>Chlordane [2C]</b>	<b>3.3</b>	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 22:53	J
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:53	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:53	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:53	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 22:53	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 22:53	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 22:53	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 22:53	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 22:53	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 22:53	
<b>gamma-Chlordane [2C]</b>	<b>0.27</b>	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 22:53	J
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 22:53	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 22:53	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 22:53	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 22:53	
<i>Surrogate: Decachlorobiphenyl</i>	<i>41.5 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	10/30/18 22:53	S10
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>54.1 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	10/30/18 22:53	



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17781 Cowan Street

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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER8-0.5**

**Lab ID: 1804036-23**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	9.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:56	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	8.3	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:31	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 11:58	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 12:37	
Surrogate: 4-Bromofluorobenzene	88.0 %		42 - 153		B8J0773	10/30/2018	10/30/18 12:37	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	10	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:44	
ORO	27	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:44	
Surrogate: p-Terphenyl	75.0 %		34 - 158		B8J0859	10/31/2018	10/31/18 23:44	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:04	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:04	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:04	



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Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER8-0.5**

**Lab ID: 1804036-23**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:04	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:04	
<b>alpha-Chlordane</b>	<b>4.2</b>	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:04	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:04	
<b>Chlordane</b>	<b>40</b>	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:04	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:04	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:04	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:04	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:04	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:04	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:04	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:04	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:04	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:04	
<b>gamma-Chlordane</b>	<b>1.9</b>	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:04	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:04	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:04	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:04	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:04	
<i>Surrogate: Decachlorobiphenyl</i>	<i>56.6 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	<i>10/30/18 23:04</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>62.6 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	<i>10/30/18 23:04</i>	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER9-0.5**

**Lab ID: 1804036-26**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.98	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:58	J

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	5.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:32	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.08	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:00	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 12:55	
Surrogate: 4-Bromofluorobenzene	105 %		42 - 153		B8J0773	10/30/2018	10/30/18 12:55	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.0	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:35	
ORO	2.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:35	
Surrogate: p-Terphenyl	77.3 %		34 - 158		B8J0859	10/31/2018	10/31/18 20:35	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:14	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:14	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:14	



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Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER9-0.5**

**Lab ID: 1804036-26**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:14	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:14	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:14	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:14	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:14	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:14	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:14	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:14	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:14	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:14	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:14	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:14	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:14	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:14	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:14	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:14	
<b>Heptachlor epoxide [2C]</b>	<b>0.13</b>	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:14	J
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:14	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:14	
<hr/>								
Surrogate: Decachlorobiphenyl	50.8 %		43 - 84		B8J0820	10/30/2018	10/30/18 23:14	
Surrogate: Tetrachloro-m-xylene	65.0 %		54 - 118		B8J0820	10/30/2018	10/30/18 23:14	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER10-0.5**

**Lab ID: 1804036-29**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.71	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 15:59	J

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.7	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:33	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:01	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 13:14	
Surrogate: 4-Bromofluorobenzene	100 %		42 - 153		B8J0773	10/30/2018	10/30/18 13:14	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.8	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:00	
ORO	3.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 17:00	
Surrogate: p-Terphenyl	89.8 %		34 - 158		B8J0859	10/31/2018	10/31/18 17:00	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:24	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:24	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:24	



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**Client Sample ID PER10-0.5**

**Lab ID: 1804036-29**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:24	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:24	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:24	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:24	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:24	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:24	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:24	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:24	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:24	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:24	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:24	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:24	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:24	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:24	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:24	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:24	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:24	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:24	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:24	
Surrogate: Decachlorobiphenyl	46.2 %		43 - 84		B8J0820	10/30/2018	10/30/18 23:24	
Surrogate: Tetrachloro-m-xylene	56.2 %		54 - 118		B8J0820	10/30/2018	10/30/18 23:24	





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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER11-0.5**

**Lab ID: 1804036-32**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.4	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:00	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.2	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:34	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:03	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 13:32	
Surrogate: 4-Bromofluorobenzene	109 %		42 - 153		B8J0773	10/30/2018	10/30/18 13:32	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.3	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:27	
ORO	13	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 23:27	
Surrogate: p-Terphenyl	81.0 %		34 - 158		B8J0859	10/31/2018	10/31/18 23:27	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:35	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:35	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:35	



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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER11-0.5**

**Lab ID: 1804036-32**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:35	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:35	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:35	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:35	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:35	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:35	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:35	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:35	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:35	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:35	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:35	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:35	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:35	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:35	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:35	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:35	
<b>Heptachlor epoxide [2C]</b>	<b>0.12</b>	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:35	J
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:35	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:35	
<i>Surrogate: Decachlorobiphenyl</i>	<i>47.1 %</i>	<i>43 - 84</i>			B8J0820	10/30/2018	10/30/18 23:35	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>64.5 %</i>	<i>54 - 118</i>			B8J0820	10/30/2018	10/30/18 23:35	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 10:59	
<i>Surrogate: Decachlorobiphenyl</i>	<i>67.0 %</i>	<i>43 - 84</i>		B8K0014	11/01/2018	11/01/18 10:59	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>86.1 %</i>	<i>54 - 118</i>		B8K0014	11/01/2018	11/01/18 10:59	



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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
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**Client Sample ID PER12-0.5**

**Lab ID: 1804036-35**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	18	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:02	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	11	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:35	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.10	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:05	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 13:51	
Surrogate: 4-Bromofluorobenzene	75.1 %		42 - 153		B8J0773	10/30/2018	10/30/18 13:51	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	110	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 00:54	
ORO	140	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 00:54	
Surrogate: p-Terphenyl	37.9 %		34 - 158		B8J0859	10/31/2018	11/01/18 00:54	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:45	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:45	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:45	



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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER12-0.5**

**Lab ID: 1804036-35**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:45	
<b>alpha-BHC</b>	<b>1.9</b>	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:45	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:45	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:45	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:45	
<b>delta-BHC [2C]</b>	<b>0.89</b>	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:45	J
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:45	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:45	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:45	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:45	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:45	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:45	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:45	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:45	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:45	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:45	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:45	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:45	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:45	
<i>Surrogate: Decachlorobiphenyl</i>	<i>40.6 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	<i>10/30/18 23:45</i>	S10
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>68.5 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	<i>10/30/18 23:45</i>	



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Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

**Client Sample ID PER12-1.5**

**Lab ID: 1804036-36**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.2	1.0	0.04	20	B8K0091	11/02/2018	11/04/18 14:49	D1



## Certificate of Analysis

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Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID DUP-2**

**Lab ID: 1804036-38**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	20	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:03	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	12	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:35	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:07	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0773	10/30/2018	10/30/18 14:09	
Surrogate: 4-Bromofluorobenzene	90.2 %		42 - 153		B8J0773	10/30/2018	10/30/18 14:09	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	220	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 01:11	
ORO	240	5.0	5.0	5	B8J0859	10/31/2018	11/01/18 01:11	
Surrogate: p-Terphenyl	35.1 %		34 - 158		B8J0859	10/31/2018	11/01/18 01:11	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:56	
4,4'-DDE	7.9	2.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:56	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:56	



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Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID DUP-2**

**Lab ID: 1804036-38**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Aldrin [2C]</b>	<b>1.1</b>	1.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:56	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/30/18 23:56	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/30/18 23:56	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/30/18 23:56	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/30/18 23:56	
<b>delta-BHC [2C]</b>	<b>2.0</b>	1.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:56	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:56	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:56	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/30/18 23:56	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/30/18 23:56	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/30/18 23:56	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/30/18 23:56	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/30/18 23:56	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/30/18 23:56	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/30/18 23:56	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/30/18 23:56	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/30/18 23:56	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/30/18 23:56	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/30/18 23:56	
<i>Surrogate: Decachlorobiphenyl</i>	<i>46.2 %</i>	<i>43 - 84</i>			B8J0820	10/30/2018	<i>10/30/18 23:56</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>73.6 %</i>	<i>54 - 118</i>			B8J0820	10/30/2018	<i>10/30/18 23:56</i>	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 11:18	
<i>Surrogate: Decachlorobiphenyl</i>	<i>56.8 %</i>	<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 11:18</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>75.3 %</i>	<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 11:18</i>	



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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER13-0.5**

**Lab ID: 1804036-39**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	13	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:04	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	10	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:36	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:13	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 19:13	
Surrogate: 4-Bromofluorobenzene	64.5 %		42 - 153		B8J0812	10/30/2018	10/30/18 19:13	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	24	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:19	
ORO	40	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:19	
Surrogate: p-Terphenyl	52.4 %		34 - 158		B8J0859	10/31/2018	11/01/18 00:19	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD [2C]	0.35	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:06	J
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:06	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:06	





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**Client Sample ID PER13-0.5**

**Lab ID: 1804036-39**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:06	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:06	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:06	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:06	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:06	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:06	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:06	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:06	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:06	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:06	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:06	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:06	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:06	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:06	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:06	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:06	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:06	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:06	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:06	
Surrogate: Decachlorobiphenyl	36.0 %		43 - 84		B8J0820	10/30/2018	10/31/18 00:06	S10
Surrogate: Tetrachloro-m-xylene	49.7 %		54 - 118		B8J0820	10/30/2018	10/31/18 00:06	S10



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17781 Cowan Street

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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER14-0.5**

**Lab ID: 1804036-42**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	14	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:05	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	12	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:39	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:14	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8K0002	11/01/2018	11/01/18 10:05	
Surrogate: 4-Bromofluorobenzene	97.6 %		42 - 153		B8K0002	11/01/2018	11/01/18 10:05	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:01	
ORO	23	1.0	1.0	1	B8J0859	10/31/2018	11/01/18 00:01	
Surrogate: p-Terphenyl	55.8 %		34 - 158		B8J0859	10/31/2018	11/01/18 00:01	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:17	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:17	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:17	



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**Client Sample ID PER14-0.5**

**Lab ID: 1804036-42**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:17	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:17	
<b>alpha-Chlordane</b>	<b>0.79</b>	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:17	J
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:17	
<b>Chlordane [2C]</b>	<b>8.8</b>	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:17	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:17	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:17	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:17	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:17	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:17	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:17	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:17	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:17	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:17	
<b>gamma-Chlordane</b>	<b>0.87</b>	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:17	J
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:17	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:17	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:17	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:17	
<i>Surrogate: Decachlorobiphenyl</i>	<i>49.8 %</i>		<i>43 - 84</i>		B8J0820	10/30/2018	<i>10/31/18 00:17</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>62.8 %</i>		<i>54 - 118</i>		B8J0820	10/30/2018	<i>10/31/18 00:17</i>	



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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

**Client Sample ID PER14-1.5**

**Lab ID: 1804036-43**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	13	1.0	0.04	20	B8K0091	11/02/2018	11/04/18 14:52	D1



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Project Number : LAUSD- Colfax ES, 11640.008

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Reported : 11/09/2018

**Client Sample ID PER14-3.0**

**Lab ID: 1804036-44**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	<b>9.9</b>	1.0	0.04	20	B8K0289	11/08/2018	11/08/18 14:57	D1



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Project Number : LAUSD- Colfax ES, 11640.008  
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Reported : 11/09/2018

**Client Sample ID PER15-0.5**

**Lab ID: 1804036-45**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	67	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:06	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.1	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:40	D1

### STLC Metals by ICP-AES by EPA 6010B

**Analyst: KEK**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.7	1.0	20	B8K0286	11/08/2018	11/08/18 15:07	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.07	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:16	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 19:32	
Surrogate: 4-Bromofluorobenzene	96.2 %		42 - 153		B8J0812	10/30/2018	10/30/18 19:32	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	120	10	10	10	B8J0859	10/31/2018	11/01/18 00:36	
ORO	260	10	10	10	B8J0859	10/31/2018	11/01/18 00:36	
Surrogate: p-Terphenyl	0%		34 - 158		B8J0859	10/31/2018	11/01/18 00:36	S4



## Certificate of Analysis

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**Client Sample ID PER15-0.5**

**Lab ID: 1804036-45**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:27	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:27	
<b>4,4'-DDT</b>	<b>10</b>	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:27	
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:27	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:27	
<b>alpha-Chlordane</b>	<b>6.5</b>	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:27	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:27	
<b>Chlordane</b>	<b>72</b>	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:27	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:27	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:27	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:27	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:27	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:27	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:27	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:27	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:27	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:27	
<b>gamma-Chlordane [2C]</b>	<b>5.8</b>	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:27	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:27	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:27	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:27	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:27	
<i>Surrogate: Decachlorobiphenyl</i>	<i>93.0 %</i>	<i>43 - 84</i>			B8J0820	10/30/2018	<i>10/31/18 00:27</i>	S10
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>62.3 %</i>	<i>54 - 118</i>			B8J0820	10/30/2018	<i>10/31/18 00:27</i>	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER16-0.5**

**Lab ID: 1804036-48**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.3	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:13	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.3	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:40	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:18	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 19:50	
Surrogate: 4-Bromofluorobenzene	78.4 %		42 - 153		B8J0812	10/30/2018	10/30/18 19:50	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	3.6	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:52	
ORO	12	1.0	1.0	1	B8J0859	10/31/2018	10/31/18 20:52	
Surrogate: p-Terphenyl	79.9 %		34 - 158		B8J0859	10/31/2018	10/31/18 20:52	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:37	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:37	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:37	





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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER16-0.5**

**Lab ID: 1804036-48**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:37	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:37	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:37	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:37	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:37	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:37	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:37	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:37	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:37	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:37	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:37	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:37	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:37	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:37	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:37	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:37	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:37	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:37	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:37	
Surrogate: Decachlorobiphenyl	50.9 %		43 - 84		B8J0820	10/30/2018	10/31/18 00:37	
Surrogate: Tetrachloro-m-xylene	69.6 %		54 - 118		B8J0820	10/30/2018	10/31/18 00:37	



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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER17-0.5**

**Lab ID: 1804036-51**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.0	1.0	0.18	1	B8J0805	10/30/2018	10/31/18 16:14	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.9	1.0	0.04	20	B8K0006	10/31/2018	11/01/18 12:41	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.02	0.10	0.006	1	B8J0808	10/30/2018	11/01/18 12:20	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 20:09	
Surrogate: 4-Bromofluorobenzene	88.8 %		42 - 153		B8J0812	10/30/2018	10/30/18 20:09	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.1	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:08	
ORO	24	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:08	
Surrogate: p-Terphenyl	77.9 %		34 - 158		B8J0879	10/31/2018	11/01/18 05:08	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:48	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:48	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:48	



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Project Number : LAUSD- Colfax ES, 11640.008  
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**Client Sample ID PER17-0.5**

**Lab ID: 1804036-51**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:48	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:48	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:48	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:48	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:48	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:48	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:48	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:48	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:48	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:48	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:48	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:48	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:48	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:48	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:48	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:48	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:48	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:48	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:48	
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Surrogate: Decachlorobiphenyl [2C]	57.0 %		43 - 84		B8J0820	10/30/2018	10/31/18 00:48	
Surrogate: Tetrachloro-m-xylene	58.6 %		54 - 118		B8J0820	10/30/2018	10/31/18 00:48	



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Project Number : LAUSD- Colfax ES, 11640.008  
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Reported : 11/09/2018

**Client Sample ID PER18-0.5**

**Lab ID: 1804036-54**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.6	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:45	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.0	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:44	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:26	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8K0002	11/01/2018	11/01/18 09:47	
Surrogate: 4-Bromofluorobenzene	104 %		42 - 153		B8K0002	11/01/2018	11/01/18 09:47	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.9	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:50	
ORO	12	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:50	
Surrogate: p-Terphenyl	48.1 %		34 - 158		B8J0879	10/31/2018	11/01/18 04:50	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:58	
4,4'-DDE	ND	2.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:58	
4,4'-DDT	ND	2.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:58	



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**Client Sample ID PER18-0.5**

**Lab ID: 1804036-54**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:58	
alpha-BHC	ND	1.0	0.11	1	B8J0820	10/30/2018	10/31/18 00:58	
alpha-Chlordane	ND	1.0	0.12	1	B8J0820	10/30/2018	10/31/18 00:58	
beta-BHC	ND	1.0	0.06	1	B8J0820	10/30/2018	10/31/18 00:58	
Chlordane	ND	8.5	1.1	1	B8J0820	10/30/2018	10/31/18 00:58	
delta-BHC	ND	1.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:58	
Dieldrin	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:58	
Endosulfan I	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:58	
Endosulfan II	ND	2.0	0.03	1	B8J0820	10/30/2018	10/31/18 00:58	
Endosulfan sulfate	ND	2.0	0.08	1	B8J0820	10/30/2018	10/31/18 00:58	
Endrin	ND	2.0	0.04	1	B8J0820	10/30/2018	10/31/18 00:58	
Endrin aldehyde	ND	2.0	0.31	1	B8J0820	10/30/2018	10/31/18 00:58	
Endrin ketone	ND	2.0	0.13	1	B8J0820	10/30/2018	10/31/18 00:58	
gamma-BHC	ND	1.0	0.10	1	B8J0820	10/30/2018	10/31/18 00:58	
gamma-Chlordane	ND	1.0	0.07	1	B8J0820	10/30/2018	10/31/18 00:58	
Heptachlor	ND	1.0	0.05	1	B8J0820	10/30/2018	10/31/18 00:58	
Heptachlor epoxide	ND	1.0	0.09	1	B8J0820	10/30/2018	10/31/18 00:58	
Methoxychlor	ND	5.0	0.18	1	B8J0820	10/30/2018	10/31/18 00:58	
Toxaphene	ND	50	4.7	1	B8J0820	10/30/2018	10/31/18 00:58	
Surrogate: Decachlorobiphenyl	82.0 %		43 - 84		B8J0820	10/30/2018	10/31/18 00:58	
Surrogate: Tetrachloro-m-xylene	79.6 %		54 - 118		B8J0820	10/30/2018	10/31/18 00:58	



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Project Number : LAUSD- Colfax ES, 11640.008  
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Reported : 11/09/2018

**Client Sample ID PER19-0.5**

**Lab ID: 1804036-57**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.8	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:50	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:49	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:39	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 20:46	
Surrogate: 4-Bromofluorobenzene	112 %		42 - 153		B8J0812	10/30/2018	10/30/18 20:46	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	5.6	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:16	
ORO	7.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 04:16	
Surrogate: p-Terphenyl	55.8 %		34 - 158		B8J0879	10/31/2018	11/01/18 04:16	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 15:34	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 15:34	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 15:34	



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**Client Sample ID PER19-0.5**

**Lab ID: 1804036-57**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 15:34	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 15:34	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 15:34	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 15:34	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 15:34	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 15:34	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 15:34	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 15:34	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 15:34	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 15:34	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 15:34	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 15:34	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 15:34	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 15:34	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 15:34	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 15:34	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 15:34	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 15:34	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 15:34	
Surrogate: Decachlorobiphenyl	67.9 %		43 - 84		B8K0014	11/01/2018	11/01/18 15:34	
Surrogate: Tetrachloro-m-xylene	59.3 %		54 - 118		B8K0014	11/01/2018	11/01/18 15:34	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER20-0.5**

**Lab ID: 1804036-60**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.8	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:51	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.0	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:50	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.03	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:41	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 21:04	
Surrogate: 4-Bromofluorobenzene	112 %		42 - 153		B8J0812	10/30/2018	10/30/18 21:04	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	6.4	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:00	
ORO	10	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:00	
Surrogate: p-Terphenyl	74.5 %		34 - 158		B8J0879	10/31/2018	11/01/18 06:00	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.13	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 10:50	J
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 10:50	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 10:50	





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER20-0.5**

**Lab ID: 1804036-60**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 10:50	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 10:50	
<b>alpha-Chlordane [2C]</b>	<b>0.12</b>	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 10:50	J
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 10:50	
<b>Chlordane</b>	<b>1.4</b>	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 10:50	J
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 10:50	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 10:50	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 10:50	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 10:50	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 10:50	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 10:50	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 10:50	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 10:50	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 10:50	
<b>gamma-Chlordane</b>	<b>0.09</b>	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 10:50	J
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 10:50	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 10:50	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 10:50	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 10:50	
<i>Surrogate: Decachlorobiphenyl</i>	<i>51.2 %</i>		<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 10:50</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>56.2 %</i>		<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 10:50</i>	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER21-0.5**

**Lab ID: 1804036-63**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.6	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:52	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.3	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:50	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:43	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 21:23	
Surrogate: 4-Bromofluorobenzene	116 %		42 - 153		B8J0812	10/30/2018	10/30/18 21:23	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	11	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:42	
ORO	18	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:42	
Surrogate: p-Terphenyl	67.0 %		34 - 158		B8J0879	10/31/2018	11/01/18 05:42	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.15	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:01	J
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:01	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:01	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

Client Sample ID PER21-0.5

Lab ID: 1804036-63

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:01	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:01	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:01	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:01	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:01	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:01	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:01	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:01	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:01	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:01	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:01	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:01	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:01	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:01	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:01	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:01	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:01	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:01	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:01	
Surrogate: Decachlorobiphenyl	42.5 %	43 - 84			B8K0014	11/01/2018	11/01/18 11:01	S10
Surrogate: Tetrachloro-m-xylene	56.8 %	54 - 118			B8K0014	11/01/2018	11/01/18 11:01	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 11:37	
Surrogate: Decachlorobiphenyl	55.4 %	43 - 84		B8K0014	11/01/2018	11/01/18 11:37	
Surrogate: Tetrachloro-m-xylene	71.8 %	54 - 118		B8K0014	11/01/2018	11/01/18 11:37	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID DUP-3**

**Lab ID: 1804036-66**

### Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	34	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:53	

### Total Metals by ICP-MS EPA 6020

Analyst: PT

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.8	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:51	D1

### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:45	J

### Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 21:41	
Surrogate: 4-Bromofluorobenzene	92.7 %		42 - 153		B8J0812	10/30/2018	10/30/18 21:41	

### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	500	10	10	10	B8J0879	10/31/2018	11/01/18 07:44	
ORO	830	10	10	10	B8J0879	10/31/2018	11/01/18 07:44	
Surrogate: p-Terphenyl	147 %		34 - 158		B8J0879	10/31/2018	11/01/18 07:44	

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:11	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:11	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:11	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID DUP-3**

**Lab ID: 1804036-66**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:11	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:11	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:11	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:11	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:11	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:11	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:11	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:11	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:11	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:11	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:11	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:11	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:11	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:11	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:11	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:11	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:11	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:11	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:11	
Surrogate: Decachlorobiphenyl [2C]	83.6 %	43 - 84			B8K0014	11/01/2018	11/01/18 11:11	
Surrogate: Tetrachloro-m-xylene	70.4 %	54 - 118			B8K0014	11/01/2018	11/01/18 11:11	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 11:56	
Surrogate: Decachlorobiphenyl	53.1 %	43 - 84		B8K0014	11/01/2018	11/01/18 11:56	
Surrogate: Tetrachloro-m-xylene	77.6 %	54 - 118		B8K0014	11/01/2018	11/01/18 11:56	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER22-0.5**

**Lab ID: 1804036-67**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.2	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:57	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.8	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:52	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:47	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 22:00	
Surrogate: 4-Bromofluorobenzene	110 %		42 - 153		B8J0812	10/30/2018	10/30/18 22:00	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	74	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:52	
ORO	110	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:52	
Surrogate: p-Terphenyl	48.2 %		34 - 158		B8J0879	10/31/2018	11/01/18 06:52	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:22	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:22	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:22	



## Certificate of Analysis

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17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER22-0.5**

**Lab ID: 1804036-67**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:22	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:22	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:22	
<b>beta-BHC</b>	<b>0.70</b>	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:22	J
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:22	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:22	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:22	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:22	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:22	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:22	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:22	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:22	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:22	
<b>gamma-BHC [2C]</b>	<b>0.37</b>	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:22	J
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:22	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:22	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:22	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:22	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:22	
<i>Surrogate: Decachlorobiphenyl</i>	<i>66.7 %</i>	<i>43 - 84</i>			B8K0014	11/01/2018	<i>11/01/18 11:22</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>79.4 %</i>	<i>54 - 118</i>			B8K0014	11/01/2018	<i>11/01/18 11:22</i>	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 12:15	
<i>Surrogate: Decachlorobiphenyl</i>	<i>54.6 %</i>	<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 12:15</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>110 %</i>	<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 12:15</i>	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

**Client Sample ID PER22-1.5**

**Lab ID: 1804036-68**

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>7.8</b>	1.0	1.0	1	B8K0152	11/05/2018	11/06/18 12:27	
<b>ORO</b>	<b>10</b>	1.0	1.0	1	B8K0152	11/05/2018	11/06/18 12:27	
<i>Surrogate: p-Terphenyl</i>	<i>72.1 %</i>		<i>34 - 158</i>		B8K0152	11/05/2018	<i>11/06/18 12:27</i>	





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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER23-0.5**

**Lab ID: 1804036-70**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.0	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:58	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	3.2	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:53	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:48	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 22:18	
Surrogate: 4-Bromofluorobenzene	115 %		42 - 153		B8J0812	10/30/2018	10/30/18 22:18	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:25	
ORO	22	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 05:25	
Surrogate: p-Terphenyl	63.0 %		34 - 158		B8J0879	10/31/2018	11/01/18 05:25	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:32	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:32	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:32	



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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER23-0.5**

**Lab ID: 1804036-70**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:32	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:32	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:32	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:32	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:32	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:32	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:32	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:32	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:32	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:32	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:32	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:32	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:32	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:32	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:32	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:32	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:32	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:32	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:32	
Surrogate: Decachlorobiphenyl	85.7 %		43 - 84		B8K0014	11/01/2018	11/01/18 11:32	S10
Surrogate: Tetrachloro-m-xylene	64.9 %		54 - 118		B8K0014	11/01/2018	11/01/18 11:32	



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17781 Cowan Street  
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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER24-0.5**

**Lab ID: 1804036-73**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	64	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 10:59	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.1	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:54	D1

### STLC Metals by ICP-AES by EPA 6010B

**Analyst: KEK**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.3	1.0	20	B8K0286	11/08/2018	11/08/18 15:11	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:50	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 22:37	
Surrogate: 4-Bromofluorobenzene	86.1 %		42 - 153		B8J0812	10/30/2018	10/30/18 22:37	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	43	5.0	5.0	5	B8J0879	10/31/2018	11/01/18 08:02	
ORO	100	5.0	5.0	5	B8J0879	10/31/2018	11/01/18 08:02	
Surrogate: p-Terphenyl	38.2 %		34 - 158		B8J0879	10/31/2018	11/01/18 08:02	



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**Client Sample ID PER24-0.5**

**Lab ID: 1804036-73**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:43	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:43	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:43	
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>alpha-BHC</b>	<b>1.7</b>	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>alpha-Chlordane</b>	<b>2.7</b>	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:43	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>Chlordane [2C]</b>	<b>27</b>	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:43	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:43	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:43	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:43	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:43	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:43	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:43	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:43	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:43	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:43	
<b>gamma-Chlordane</b>	<b>2.4</b>	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:43	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:43	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:43	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:43	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:43	
<i>Surrogate: Decachlorobiphenyl</i>	<i>43.9 %</i>		<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 11:43</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>74.3 %</i>		<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 11:43</i>	



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17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

**Client Sample ID PER24-0.5**

**Lab ID: 1804036-73**

### Polychlorinated Biphenyls by EPA 8082

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 12:33	
<i>Surrogate: Decachlorobiphenyl</i>	<i>53.4 %</i>	<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 12:33</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>80.7 %</i>	<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 12:33</i>	



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Project Number : LAUSD- Colfax ES, 11640.008

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Reported : 11/09/2018

**Client Sample ID PER25-0.5**

**Lab ID: 1804036-76**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	37	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:01	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.6	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:55	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:52	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 22:56	
Surrogate: 4-Bromofluorobenzene	111 %		42 - 153		B8J0812	10/30/2018	10/30/18 22:56	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	8.7	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:27	
ORO	20	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:27	
Surrogate: p-Terphenyl	62.2 %		34 - 158		B8J0879	10/31/2018	11/01/18 07:27	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:53	
4,4'-DDE [2C]	1.8	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:53	J
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:53	



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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER25-0.5**

**Lab ID: 1804036-76**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:53	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 11:53	
<b>alpha-Chlordane</b>	<b>0.85</b>	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 11:53	J
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 11:53	
<b>Chlordane [2C]</b>	<b>8.8</b>	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 11:53	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:53	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:53	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:53	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 11:53	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 11:53	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 11:53	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 11:53	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 11:53	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 11:53	
<b>gamma-Chlordane</b>	<b>0.69</b>	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 11:53	J
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 11:53	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 11:53	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 11:53	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 11:53	
<i>Surrogate: Decachlorobiphenyl</i>	<i>44.4 %</i>		<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 11:53</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>62.2 %</i>		<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 11:53</i>	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 12:52	
<i>Surrogate: Decachlorobiphenyl</i>	<i>56.5 %</i>		<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 12:52</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>81.2 %</i>		<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 12:52</i>



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER26-0.5**

**Lab ID: 1804036-79**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.9	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:02	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	4.4	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:55	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.04	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 12:58	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 23:14	
Surrogate: 4-Bromofluorobenzene	114 %		42 - 153		B8J0812	10/30/2018	10/30/18 23:14	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.6	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:09	
ORO	19	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 07:09	
Surrogate: p-Terphenyl	71.7 %		34 - 158		B8J0879	10/31/2018	11/01/18 07:09	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:04	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:04	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:04	





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER26-0.5**

**Lab ID: 1804036-79**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:04	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 12:04	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 12:04	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 12:04	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 12:04	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:04	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:04	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:04	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:04	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 12:04	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:04	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 12:04	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:04	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:04	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:04	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:04	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 12:04	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 12:04	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 12:04	
<i>Surrogate: Decachlorobiphenyl</i>	<i>37.2 %</i>		<i>43 - 84</i>		B8K0014	11/01/2018	<i>11/01/18 12:04</i>	S10
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>51.3 %</i>		<i>54 - 118</i>		B8K0014	11/01/2018	<i>11/01/18 12:04</i>	S10



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER27-0.5**

**Lab ID: 1804036-82**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.3	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:03	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.1	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:56	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.05	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:00	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 23:33	
Surrogate: 4-Bromofluorobenzene	105 %		42 - 153		B8J0812	10/30/2018	10/30/18 23:33	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	4.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:17	
ORO	7.3	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:17	
Surrogate: p-Terphenyl	68.3 %		34 - 158		B8J0879	10/31/2018	11/01/18 06:17	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:14	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:14	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:14	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Currency

Reported : 11/09/2018

**Client Sample ID PER27-0.5**

**Lab ID: 1804036-82**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:14	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 12:14	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 12:14	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 12:14	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 12:14	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:14	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:14	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:14	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:14	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 12:14	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:14	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 12:14	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:14	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:14	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:14	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:14	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 12:14	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 12:14	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 12:14	
Surrogate: Decachlorobiphenyl	48.2 %	43 - 84			B8K0014	11/01/2018	11/01/18 12:14	
Surrogate: Tetrachloro-m-xylene	49.3 %	54 - 118			B8K0014	11/01/2018	11/01/18 12:14	S10

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 13:11	
Surrogate: Decachlorobiphenyl	54.0 %	43 - 84		B8K0014	11/01/2018	11/01/18 13:11	
Surrogate: Tetrachloro-m-xylene	76.4 %	54 - 118		B8K0014	11/01/2018	11/01/18 13:11	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER28-0.5**

**Lab ID: 1804036-85**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.5	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:04	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	7.5	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 12:59	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:02	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/30/18 23:51	
Surrogate: 4-Bromofluorobenzene	109 %		42 - 153		B8J0812	10/30/2018	10/30/18 23:51	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.2	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 03:59	
ORO	3.1	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 03:59	
Surrogate: p-Terphenyl	73.1 %		34 - 158		B8J0879	10/31/2018	11/01/18 03:59	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	0.10	2.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:25	J
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:25	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:25	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER28-0.5**

**Lab ID: 1804036-85**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:25	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/01/18 12:25	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/01/18 12:25	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/01/18 12:25	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/01/18 12:25	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:25	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:25	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:25	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/01/18 12:25	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/01/18 12:25	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/01/18 12:25	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/01/18 12:25	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/01/18 12:25	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/01/18 12:25	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/01/18 12:25	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/01/18 12:25	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/01/18 12:25	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/01/18 12:25	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/01/18 12:25	
Surrogate: Decachlorobiphenyl	32.4 %	43 - 84			B8K0014	11/01/2018	11/01/18 12:25	S10
Surrogate: Tetrachloro-m-xylene	47.4 %	54 - 118			B8K0014	11/01/2018	11/01/18 12:25	S10

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1221	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1232	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1242	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1248	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1254	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1260	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1262	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Aroclor 1268	ND	16	1	B8K0014	11/01/2018	11/01/18 13:47	
Surrogate: Decachlorobiphenyl	59.9 %	43 - 84		B8K0014	11/01/2018	11/01/18 13:47	
Surrogate: Tetrachloro-m-xylene	68.2 %	54 - 118		B8K0014	11/01/2018	11/01/18 13:47	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Currency  
Reported : 11/09/2018

**Client Sample ID PER29-0.5**

**Lab ID: 1804036-88**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.1	1.0	0.18	1	B8J0806	10/30/2018	10/31/18 11:05	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.6	1.0	0.04	20	B8K0007	10/31/2018	11/01/18 13:00	D1

### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.06	0.10	0.006	1	B8J0809	10/30/2018	11/01/18 13:04	J

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	0.20	1	B8J0812	10/30/2018	10/31/18 00:10	
Surrogate: 4-Bromofluorobenzene	94.8 %		42 - 153		B8J0812	10/30/2018	10/31/18 00:10	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	2.8	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:34	
ORO	6.5	1.0	1.0	1	B8J0879	10/31/2018	11/01/18 06:34	
Surrogate: p-Terphenyl	91.6 %		34 - 158		B8J0879	10/31/2018	11/01/18 06:34	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0014	11/01/2018	11/02/18 11:29	
4,4'-DDE	ND	2.0	0.05	1	B8K0014	11/01/2018	11/02/18 11:29	
4,4'-DDT	ND	2.0	0.10	1	B8K0014	11/01/2018	11/02/18 11:29	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

**Client Sample ID PER29-0.5**

**Lab ID: 1804036-88**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	1.0	0.04	1	B8K0014	11/01/2018	11/02/18 11:29	
alpha-BHC	ND	1.0	0.11	1	B8K0014	11/01/2018	11/02/18 11:29	
alpha-Chlordane	ND	1.0	0.12	1	B8K0014	11/01/2018	11/02/18 11:29	
beta-BHC	ND	1.0	0.06	1	B8K0014	11/01/2018	11/02/18 11:29	
Chlordane	ND	8.5	1.1	1	B8K0014	11/01/2018	11/02/18 11:29	
delta-BHC	ND	1.0	0.03	1	B8K0014	11/01/2018	11/02/18 11:29	
Dieldrin	ND	2.0	0.13	1	B8K0014	11/01/2018	11/02/18 11:29	
Endosulfan I	ND	1.0	0.10	1	B8K0014	11/01/2018	11/02/18 11:29	
Endosulfan II	ND	2.0	0.03	1	B8K0014	11/01/2018	11/02/18 11:29	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0014	11/01/2018	11/02/18 11:29	
Endrin	ND	2.0	0.04	1	B8K0014	11/01/2018	11/02/18 11:29	
Endrin aldehyde	ND	2.0	0.31	1	B8K0014	11/01/2018	11/02/18 11:29	
Endrin ketone	ND	2.0	0.13	1	B8K0014	11/01/2018	11/02/18 11:29	
gamma-BHC	ND	1.0	0.10	1	B8K0014	11/01/2018	11/02/18 11:29	
gamma-Chlordane	ND	1.0	0.07	1	B8K0014	11/01/2018	11/02/18 11:29	
Heptachlor	ND	1.0	0.05	1	B8K0014	11/01/2018	11/02/18 11:29	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0014	11/01/2018	11/02/18 11:29	
Methoxychlor	ND	5.0	0.18	1	B8K0014	11/01/2018	11/02/18 11:29	
Toxaphene	ND	50	4.7	1	B8K0014	11/01/2018	11/02/18 11:29	
Surrogate: Decachlorobiphenyl	55.3 %		43 - 84		B8K0014	11/01/2018	11/02/18 11:29	
Surrogate: Tetrachloro-m-xylene	42.2 %		54 - 118		B8K0014	11/01/2018	11/02/18 11:29	S10



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**Client Sample ID EB-1**

**Lab ID: 1804036-91**

### Total Metals by ICP-AES EPA 6010B

**Analyst: KEK**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	0.0047	1	B8K0013	11/01/2018	11/01/18 16:18	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	0.39	1	B8J0802	10/30/2018	10/30/18 15:03	

### Mercury by AA (Cold Vapor) EPA 7470A

**Analyst: KEK**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20		1	B8K0015	11/01/2018	11/01/18 16:41	

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.20	0.05	1	B8J0827	10/31/2018	10/31/18 12:21	
Surrogate: 4-Bromofluorobenzene	106 %		70 - 130		B8J0827	10/31/2018	10/31/18 12:21	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	0.12	0.05	0.05	1	B8K0020	11/01/2018	11/01/18 12:30	
ORO	0.11	0.05	0.05	1	B8K0020	11/01/2018	11/01/18 12:30	
Surrogate: p-Terphenyl	94.2 %		32 - 169		B8K0020	11/01/2018	11/01/18 12:30	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	0.05	0.006	1	B8K0028	11/01/2018	11/02/18 11:19	
4,4'-DDE	ND	0.05	0.005	1	B8K0028	11/01/2018	11/02/18 11:19	
4,4'-DDT	ND	0.05	0.01	1	B8K0028	11/01/2018	11/02/18 11:19	





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**Client Sample ID EB-1**

**Lab ID: 1804036-91**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
alpha-BHC	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
alpha-Chlordane	ND	0.02	0.003	1	B8K0028	11/01/2018	11/02/18 11:19	
beta-BHC	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Chlordane	ND	0.25	0.03	1	B8K0028	11/01/2018	11/02/18 11:19	
delta-BHC	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Dieldrin	ND	0.05	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Endosulfan I	ND	0.02	0.005	1	B8K0028	11/01/2018	11/02/18 11:19	
Endosulfan II	ND	0.05	0.009	1	B8K0028	11/01/2018	11/02/18 11:19	
Endosulfan sulfate	ND	0.05	0.01	1	B8K0028	11/01/2018	11/02/18 11:19	
Endrin	ND	0.05	0.005	1	B8K0028	11/01/2018	11/02/18 11:19	
Endrin aldehyde	ND	0.05	0.003	1	B8K0028	11/01/2018	11/02/18 11:19	
Endrin ketone	ND	0.05	0.003	1	B8K0028	11/01/2018	11/02/18 11:19	
gamma-BHC	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
gamma-Chlordane	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Heptachlor	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Heptachlor epoxide	ND	0.02	0.002	1	B8K0028	11/01/2018	11/02/18 11:19	
Methoxychlor	ND	0.25	0.008	1	B8K0028	11/01/2018	11/02/18 11:19	
Toxaphene	ND	2.5	0.23	1	B8K0028	11/01/2018	11/02/18 11:19	
Surrogate: Decachlorobiphenyl	74.2 %	8 - 128			B8K0028	11/01/2018	11/02/18 11:19	
Surrogate: Tetrachloro-m-xylene	71.6 %	32 - 126			B8K0028	11/01/2018	11/02/18 11:19	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1221	ND	1.0	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1232	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1242	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1248	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1254	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1260	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1262	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Aroclor 1268	ND	0.50	1	B8K0028	11/01/2018	11/01/18 16:56	
Surrogate: Decachlorobiphenyl	66.6 %	8 - 128		B8K0028	11/01/2018	11/01/18 16:56	
Surrogate: Tetrachloro-m-xylene	95.6 %	32 - 126		B8K0028	11/01/2018	11/01/18 16:56	



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### QUALITY CONTROL SECTION

#### Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
<b>Batch B8J0805 - EPA 3050B_S</b>										
<b>Blank (B8J0805-BLK1)</b>					Prepared: 10/30/2018 Analyzed: 10/31/2018					
Lead	0.244706	1.0	0.18							J
<b>LCS (B8J0805-BS1)</b>					Prepared: 10/30/2018 Analyzed: 10/31/2018					
Lead	41.9957	1.0	0.18	50.0000		84.0	80 - 120			
<b>Duplicate (B8J0805-DUP1)</b>					Source: 1804036-01 Prepared: 10/30/2018 Analyzed: 10/31/2018					
Lead	4.34105	1.0	0.18		4.02274			7.61	20	
<b>Matrix Spike (B8J0805-MS1)</b>					Source: 1804036-01 Prepared: 10/30/2018 Analyzed: 10/31/2018					
Lead	88.0306	1.0	0.18	125.000	4.02274	67.2	30 - 113			
<b>Matrix Spike Dup (B8J0805-MSD1)</b>					Source: 1804036-01 Prepared: 10/30/2018 Analyzed: 10/31/2018					
Lead	86.3448	1.0	0.18	125.628	4.02274	65.5	30 - 113	1.93	20	



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### Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0806 - EPA 3050B\_S

##### Blank (B8J0806-BLK1)

Prepared: 10/30/2018 Analyzed: 10/31/2018

Lead ND 1.0 0.18

##### LCS (B8J0806-BS1)

Prepared: 10/30/2018 Analyzed: 10/31/2018

Lead 40.9539 1.0 0.18 50.0000 81.9 80 - 120

##### Duplicate (B8J0806-DUP1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 10/31/2018

Lead 4.24292 1.0 0.18 3.61932 15.9 20

##### Matrix Spike (B8J0806-MS1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 10/31/2018

Lead 90.2903 1.0 0.18 124.378 3.61932 69.7 30 - 113

##### Matrix Spike Dup (B8J0806-MSD1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 10/31/2018

Lead 91.6942 1.0 0.18 125.000 3.61932 70.5 30 - 113 1.54 20



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### Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0013 - EPA 3010A\_W

##### Blank (B8K0013-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Lead ND 0.0050 0.0047

##### LCS (B8K0013-BS1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Lead 0.857613 0.0050 0.0047 1.00000 85.8 80 - 120

##### Duplicate (B8K0013-DUP1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Lead ND 0.0050 0.0047 ND NR 20

##### Matrix Spike (B8K0013-MS1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Lead 2.15433 0.0050 0.0047 2.50000 ND 86.2 59 - 123

##### Matrix Spike Dup (B8K0013-MSD1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Lead 2.22662 0.0050 0.0047 2.50000 ND 89.1 59 - 123 3.30 20



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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0802 - EPA 3010A MS\_W

##### Blank (B8J0802-BLK1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Arsenic	ND	1.0	0.39	
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##### LCS (B8J0802-BS1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Arsenic	9.68134	1.0	0.39	10.0000	96.8	85 - 115
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##### Matrix Spike (B8J0802-MS1)

Source: 1804036-91

Prepared: 10/30/2018 Analyzed: 10/30/2018

Arsenic	17.9901	1.0	0.39	20.0000	ND	90.0	75 - 125
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##### Matrix Spike Dup (B8J0802-MSD1)

Source: 1804036-91

Prepared: 10/30/2018 Analyzed: 10/30/2018

Arsenic	18.1168	1.0	0.39	20.0000	ND	90.6	75 - 125	0.702	20
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##### Post Spike (B8J0802-PS1)

Source: 1804036-91

Prepared: 10/30/2018 Analyzed: 10/30/2018

Arsenic	5.03574			5.00000	0.348270	93.7	75 - 125
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0006 - EPA 3050B MS\_S

##### Blank (B8K0006-BLK1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic ND 0.25 0.01

##### LCS (B8K0006-BS1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic 3.89037 0.25 0.01 5.00000 77.8 70 - 130

##### Matrix Spike (B8K0006-MS1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic 6.24290 1.0 0.04 5.00000 2.01864 84.5 75 - 125

##### Matrix Spike Dup (B8K0006-MSD1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic 6.51565 1.0 0.04 5.00000 2.01864 89.9 75 - 125 4.28 20



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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0006 - EPA 3050B MS\_S

##### Post Spike (B8K0006-PS1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	5.30419		5.00000	1.00932	85.9	75 - 125			
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0007 - EPA 3050B MS\_S

##### Blank (B8K0007-BLK1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	0.016989	0.25	0.01							J
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##### LCS (B8K0007-BS1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	4.05139	0.25	0.01	5.00000		81.0	70 - 130			
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##### Matrix Spike (B8K0007-MS1)

Source: 1804036-54

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	6.12125	1.0	0.04	5.00000	1.99405	82.5	75 - 125			
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##### Matrix Spike Dup (B8K0007-MSD1)

Source: 1804036-54

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	7.00670	1.0	0.04	5.00000	1.99405	100	75 - 125	13.5	20	
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0007 - EPA 3050B MS\_S

##### Post Spike (B8K0007-PS1)

Source: 1804036-54

Prepared: 10/31/2018 Analyzed: 11/1/2018

Arsenic	5.31580		5.00000	0.997027	86.4	75 - 125			
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0091 - EPA 3050B MS\_S

##### Blank (B8K0091-BLK1)

Prepared: 11/2/2018 Analyzed: 11/4/2018

Arsenic	ND	0.25	0.01	
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##### LCS (B8K0091-BS1)

Prepared: 11/2/2018 Analyzed: 11/4/2018

Arsenic	3.82380	0.25	0.01	5.00000	76.5	70 - 130
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##### Matrix Spike (B8K0091-MS1)

Source: 1804036-36

Prepared: 11/2/2018 Analyzed: 11/4/2018

Arsenic	9.22514	1.0	0.04	5.00000	2.22455	140	75 - 125			M1
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##### Matrix Spike Dup (B8K0091-MSD1)

Source: 1804036-36

Prepared: 11/2/2018 Analyzed: 11/4/2018

Arsenic	9.71162	1.0	0.04	5.00000	2.22455	150	75 - 125	5.14	20	M1
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0091 - EPA 3050B MS\_S

##### Post Spike (B8K0091-PS1)

Source: 1804036-36

Prepared: 11/2/2018 Analyzed: 11/4/2018

Arsenic	5.33702		5.00000	1.11228	84.5	75 - 125			
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0289 - EPA 3050B MS\_S

##### Blank (B8K0289-BLK1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

Arsenic	0.02183	0.25	0.01							J
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##### LCS (B8K0289-BS1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

Arsenic	4.14572	0.25	0.01	5.00000		82.9	70 - 130			
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##### Matrix Spike (B8K0289-MS1)

Source: 1804036-44

Prepared: 11/8/2018 Analyzed: 11/8/2018

Arsenic	16.3129	1.0	0.04	5.00000	9.91743	128	75 - 125			M1
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##### Matrix Spike Dup (B8K0289-MSD1)

Source: 1804036-44

Prepared: 11/8/2018 Analyzed: 11/8/2018

Arsenic	16.0949	1.0	0.04	5.00000	9.91743	124	75 - 125	1.35	20	
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0289 - EPA 3050B MS\_S

##### Post Spike (B8K0289-PS1)

Source: 1804036-44

Prepared: 11/8/2018 Analyzed: 11/8/2018

Arsenic	9.90531		5.00000	4.95871	98.9	75 - 125			
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### STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0286 - STLC\_S Extraction

##### Blank (B8K0286-BLK1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead ND 1.0 0.094

##### LCS (B8K0286-BS1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 1.85858 2.00000 92.9 80 - 120

##### Duplicate (B8K0286-DUP1)

Source: 1804036-45

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 3.69599 1.0 0.094 3.70336 0.199 20

##### Duplicate (B8K0286-DUP2)

Source: 1804057-01

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 3.67602 1.0 0.094 3.73674 1.64 20

##### Matrix Spike (B8K0286-MS1)

Source: 1804036-45

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 5.73465 2.50000 3.70336 81.3 70 - 130

##### Matrix Spike (B8K0286-MS2)

Source: 1804057-01

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 5.97494 2.50000 3.73674 89.5 70 - 130

##### Matrix Spike Dup (B8K0286-MSD1)

Source: 1804036-45

Prepared: 11/8/2018 Analyzed: 11/8/2018

Lead 6.14919 2.50000 3.70336 97.8 70 - 130 6.98 20



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### Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0015 - EPA 245.1/7470\_W

##### Blank (B8K0015-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury ND 0.20 0.03

##### LCS (B8K0015-BS1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury 9.64105 0.20 0.03 10.0000 96.4 80 - 120

##### Duplicate (B8K0015-DUP1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury ND 0.20 0.03 ND NR 20

##### Matrix Spike (B8K0015-MS1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury 9.68201 0.20 0.03 10.0000 ND 96.8 70 - 130

##### Matrix Spike Dup (B8K0015-MSD1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury 10.0115 0.20 0.03 10.0000 ND 100 70 - 130 3.35 20

##### Post Spike (B8K0015-PS1)

Source: 1804036-91

Prepared: 11/1/2018 Analyzed: 11/1/2018

Mercury 5.14761 5.00000 -0.001308 103 85 - 115



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### Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0808 - EPA 7471\_S

##### Blank (B8J0808-BLK1)

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury ND 0.10 0.006

##### LCS (B8J0808-BS1)

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.799128 0.10 0.006 0.833333 95.9 80 - 120

##### Duplicate (B8J0808-DUP1)

Source: 1804036-01

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.047131 0.10 0.006 0.045198 4.19 20 J

##### Matrix Spike (B8J0808-MS1)

Source: 1804036-01

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.889280 0.10 0.006 0.819672 0.045198 103 70 - 130

##### Matrix Spike Dup (B8J0808-MSD1)

Source: 1804036-01

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.888773 0.10 0.006 0.833333 0.045198 101 70 - 130 0.0569 20





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### Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0808 - EPA 7471\_S

##### Post Spike (B8J0808-PS1)

Source: 1804036-01

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury	0.005371		5.00000E-3	5.424E-4	96.6	85 - 115			
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### Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0809 - EPA 7471\_S

##### Blank (B8J0809-BLK1)

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury ND 0.10 0.006

##### LCS (B8J0809-BS1)

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.812659 0.10 0.006 0.833333 97.5 80 - 120

##### Duplicate (B8J0809-DUP1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.044820 0.10 0.006 0.027339 48.5 20 R, J

##### Matrix Spike (B8J0809-MS1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.899073 0.10 0.006 0.819672 0.027339 106 70 - 130

##### Matrix Spike Dup (B8J0809-MSD1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury 0.897226 0.10 0.006 0.833333 0.027339 104 70 - 130 0.206 20



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### Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0809 - EPA 7471\_S

##### Post Spike (B8J0809-PS1)

Source: 1804036-54

Prepared: 10/30/2018 Analyzed: 11/1/2018

Mercury	6.5456E-3		5.00000E-3	3.281E-4	124	85 - 115			M1
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### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0773 - GCVOA\_S

##### Blank (B8J0773-BLK1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	ND	1.0	0.20						
Surrogate: 4-Bromofluorobenzene	0.2102			0.200000		105	42 - 153		

##### LCS (B8J0773-BS1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	4.13300	1.0	0.20	5.00000		82.7	70 - 130		
Surrogate: 4-Bromofluorobenzene	0.1865			0.200000		93.3	42 - 153		

##### Duplicate (B8J0773-DUP1)

Source: 1804036-01

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	ND	1.0	0.20		ND		NR	20	
Surrogate: 4-Bromofluorobenzene	0.1942			0.200000		97.1	42 - 153		

##### Matrix Spike (B8J0773-MS1)

Source: 1804029-09

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	4.54500	1.0	0.20	5.00000	ND	90.9	22 - 121		
Surrogate: 4-Bromofluorobenzene	0.2262			0.200000		113	42 - 153		

##### Matrix Spike Dup (B8J0773-MSD1)

Source: 1804029-09

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	4.48900	1.0	0.20	5.00000	ND	89.8	22 - 121	1.24	20
Surrogate: 4-Bromofluorobenzene	0.2109			0.200000		105	42 - 153		



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### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0812 - GCVOA\_S

##### Blank (B8J0812-BLK1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	ND	1.0	0.20						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1770</i>			<i>0.200000</i>		<i>88.5</i>	<i>42 - 153</i>		

##### LCS (B8J0812-BS1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	4.11000	1.0	0.20	5.00000		82.2	70 - 130		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1646</i>			<i>0.200000</i>		<i>82.3</i>	<i>42 - 153</i>		

##### Duplicate (B8J0812-DUP1)

Source: 1804036-39

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	ND	1.0	0.20		ND		NR	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1766</i>			<i>0.200000</i>		<i>88.3</i>	<i>42 - 153</i>		

##### Matrix Spike (B8J0812-MS1)

Source: 1804036-39

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	3.65500	1.0	0.20	5.00000	ND	73.1	22 - 121		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1820</i>			<i>0.200000</i>		<i>91.0</i>	<i>42 - 153</i>		

##### Matrix Spike Dup (B8J0812-MSD1)

Source: 1804036-39

Prepared: 10/30/2018 Analyzed: 10/30/2018

Gasoline Range Organics	3.59700	1.0	0.20	5.00000	ND	71.9	22 - 121	1.60	20
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1778</i>			<i>0.200000</i>		<i>88.9</i>	<i>42 - 153</i>		



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### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0827 - GCVOA\_W

##### Blank (B8J0827-BLK1)

Prepared: 10/31/2018 Analyzed: 10/31/2018

Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	0.1018			0.100000		102	70 - 130			

##### LCS (B8J0827-BS1)

Prepared: 10/31/2018 Analyzed: 10/31/2018

Gasoline Range Organics	0.965000	0.20	0.05	1.00000		96.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	0.1058			0.100000		106	70 - 130			

##### LCS Dup (B8J0827-BSD1)

Prepared: 10/31/2018 Analyzed: 10/31/2018

Gasoline Range Organics	0.985000	0.20	0.05	1.00000		98.5	70 - 130	2.05	20	
Surrogate: 4-Bromofluorobenzene	0.1030			0.100000		103	70 - 130			



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### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0002 - GCVOA\_S

##### Blank (B8K0002-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Gasoline Range Organics	ND	1.0	0.20							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.2104</i>			<i>0.200000</i>		<i>105</i>	<i>42 - 153</i>			

##### LCS (B8K0002-BS1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Gasoline Range Organics	3.61400	1.0	0.20	5.00000		72.3	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.1525</i>			<i>0.200000</i>		<i>76.2</i>	<i>42 - 153</i>			

##### Duplicate (B8K0002-DUP1)

Source: 1804036-54

Prepared: 11/1/2018 Analyzed: 11/1/2018

Gasoline Range Organics	ND	1.0	0.20		ND			NR	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.2118</i>			<i>0.200000</i>		<i>106</i>	<i>42 - 153</i>			

##### Matrix Spike (B8K0002-MS1)

Source: 1804053-01

Prepared: 11/1/2018 Analyzed: 11/1/2018

Gasoline Range Organics	4.62900	1.0	0.20	5.00000	ND	92.6	22 - 121			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.2338</i>			<i>0.200000</i>		<i>117</i>	<i>42 - 153</i>			

##### Matrix Spike Dup (B8K0002-MSD1)

Source: 1804053-01

Prepared: 11/1/2018 Analyzed: 11/1/2018

Gasoline Range Organics	4.42300	1.0	0.20	5.00000	ND	88.5	22 - 121	4.55	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.2217</i>			<i>0.200000</i>		<i>111</i>	<i>42 - 153</i>			



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### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0859 - GCSEMI\_DRO\_LL\_S

##### Blank (B8J0859-BLK1)

Prepared: 10/31/2018 Analyzed: 10/31/2018

DRO	ND	1.0	1.0
ORO	ND	1.0	1.0

Surrogate: <i>p</i> -Terphenyl	2.610		2.66667	97.9	34 - 158
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##### LCS (B8J0859-BS1)

Prepared: 10/31/2018 Analyzed: 10/31/2018

DRO	35.7553	1.0	1.0	33.3333	107	47 - 152
Surrogate: <i>p</i> -Terphenyl	2.759		2.66667	103	34 - 158	

##### Duplicate (B8J0859-DUP1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 10/31/2018

DRO	5.39200	1.0	1.0	1.54967	111	20	R
Surrogate: <i>p</i> -Terphenyl	1.507		2.66667	56.5	34 - 158		

##### Matrix Spike (B8J0859-MS1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 10/31/2018

DRO	27.0797	1.0	1.0	33.3333	1.54967	76.6	34 - 130
Surrogate: <i>p</i> -Terphenyl	2.145		2.66667	80.4	34 - 158		

##### Matrix Spike Dup (B8J0859-MSD1)

Source: 1804036-01

Prepared: 10/31/2018 Analyzed: 10/31/2018

DRO	29.2520	1.0	1.0	33.3333	1.54967	83.1	34 - 130	7.71	20
Surrogate: <i>p</i> -Terphenyl	2.266		2.66667	85.0	34 - 158				





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### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0879 - GCSEMI\_DRO\_LL\_S

##### Blank (B8J0879-BLK1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

DRO	ND	1.0	1.0
ORO	ND	1.0	1.0

Surrogate: *p*-Terphenyl 3.137 2.66667 118 34 - 158

##### LCS (B8J0879-BS1)

Prepared: 10/31/2018 Analyzed: 11/1/2018

DRO	28.7357	1.0	1.0	33.3333	86.2	47 - 152
Surrogate: <i>p</i> -Terphenyl	2.270			2.66667	85.1	34 - 158

##### Duplicate (B8J0879-DUP1)

Source: 1804036-57

Prepared: 10/31/2018 Analyzed: 11/1/2018

DRO	10.9510	1.0	1.0	5.55533	65.4	20	R
Surrogate: <i>p</i> -Terphenyl	1.709		2.66667	64.1	34 - 158		

##### Matrix Spike (B8J0879-MS1)

Source: 1804036-57

Prepared: 10/31/2018 Analyzed: 11/1/2018

DRO	20.7637	1.0	1.0	33.3333	5.55533	45.6	34 - 130
Surrogate: <i>p</i> -Terphenyl	1.448			2.66667		54.3	34 - 158

##### Matrix Spike Dup (B8J0879-MSD1)

Source: 1804036-57

Prepared: 10/31/2018 Analyzed: 11/1/2018

DRO	40.7063	1.0	1.0	33.3333	5.55533	105	34 - 130	64.9	20	R2
Surrogate: <i>p</i> -Terphenyl	1.953			2.66667		73.2	34 - 158			



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### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0020 - GCSEMI\_DRO\_W

##### Blank (B8K0020-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

DRO	ND	0.05	0.05
ORO	ND	0.05	0.05

Surrogate: *p*-Terphenyl 0.08862 8.00000E-2 111 32 - 169

##### LCS (B8K0020-BS1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

DRO	0.998590	0.05	0.05	1.00000	99.9	45 - 161
Surrogate: <i>p</i> -Terphenyl	0.08687			8.00000E-2	109	32 - 169

##### LCS Dup (B8K0020-BSD1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

DRO	1.02587	0.05	0.05	1.00000	103	45 - 161	2.70	20
Surrogate: <i>p</i> -Terphenyl	0.08333			8.00000E-2	104	32 - 169		



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Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0152 - GCSEMI\_DRO\_LL\_S

##### Blank (B8K0152-BLK1)

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	ND	1.0	1.0							
ORO	ND	1.0	1.0							

Surrogate: <i>p</i> -Terphenyl	2.391			2.66667		89.7	34 - 158			
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##### LCS (B8K0152-BS1)

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	30.9987	1.0	1.0	33.3333		93.0	47 - 152			
Surrogate: <i>p</i> -Terphenyl	2.542			2.66667		95.3	34 - 158			

##### Matrix Spike (B8K0152-MS1)

Source: 1804036-68

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	26.2097	1.0	1.0	33.3333	7.79100	55.3	34 - 130			
Surrogate: <i>p</i> -Terphenyl	1.902			2.66667		71.3	34 - 158			

##### Matrix Spike (B8K0152-MS2)

Source: 1804052-02

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	29.0940	1.0	1.0	33.3333	2.67067	79.3	34 - 130			
Surrogate: <i>p</i> -Terphenyl	2.127			2.66667		79.8	34 - 158			

##### Matrix Spike Dup (B8K0152-MSD1)

Source: 1804036-68

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	31.3290	1.0	1.0	33.3333	7.79100	70.6	34 - 130	17.8	20	
Surrogate: <i>p</i> -Terphenyl	2.143			2.66667		80.4	34 - 158			

##### Matrix Spike Dup (B8K0152-MSD2)

Source: 1804052-02

Prepared: 11/5/2018 Analyzed: 11/6/2018

DRO	25.9067	1.0	1.0	33.3333	2.67067	69.7	34 - 130	11.6	20	
Surrogate: <i>p</i> -Terphenyl	2.057			2.66667		77.1	34 - 158			



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Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S

##### Blank (B8J0820-BLK1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.05
4,4'-DDE [2C]	ND	2.0	0.05
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.04
Aldrin [2C]	ND	1.0	0.04
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.03
delta-BHC [2C]	ND	1.0	0.03
Dieldrin	ND	2.0	0.13
Dieldrin [2C]	ND	2.0	0.13
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.03
Endosulfan II [2C]	ND	2.0	0.03
Endosulfan sulfate	ND	2.0	0.08
Endosulfan Sulfate [2C]	ND	2.0	0.08
Endrin	ND	2.0	0.04
Endrin [2C]	ND	2.0	0.04
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.07
gamma-Chlordane [2C]	ND	1.0	0.07
Heptachlor	ND	1.0	0.05
Heptachlor [2C]	ND	1.0	0.05
Heptachlor epoxide	ND	1.0	0.09
Heptachlor epoxide [2C]	ND	1.0	0.09
Methoxychlor	ND	5.0	0.18



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B8J0820-BLK1) - Continued

Prepared: 10/30/2018 Analyzed: 10/30/2018

Methoxychlor [2C]	ND	5.0	0.18						
Toxaphene	ND	50	4.7						
Toxaphene [2C]	ND	50	4.7						

<i>Surrogate: Decachlorobiphenyl</i>	<i>10.79</i>			<i>16.6667</i>		<i>64.7</i>	<i>43 - 84</i>		
<i>Surrogate: Decachlorobiphenyl [</i>	<i>7.620</i>			<i>16.6667</i>		<i>45.7</i>	<i>43 - 84</i>		
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>12.32</i>			<i>16.6667</i>		<i>73.9</i>	<i>54 - 118</i>		
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>12.03</i>			<i>16.6667</i>		<i>72.2</i>	<i>54 - 118</i>		

##### LCS (B8J0820-BS1)

Prepared: 10/30/2018 Analyzed: 10/30/2018

4,4'-DDD	13.9298	2.0	0.07	16.6667		83.6	73 - 110		
4,4'-DDD [2C]	13.0453	2.0	0.07	16.6667		78.3	73 - 110		
4,4'-DDE	13.3360	2.0	0.05	16.6667		80.0	71 - 99		
4,4'-DDE [2C]	13.6525	2.0	0.05	16.6667		81.9	71 - 99		
4,4'-DDT	11.0328	2.0	0.10	16.6667		66.2	51 - 106		
4,4'-DDT [2C]	13.5797	2.0	0.10	16.6667		81.5	51 - 106		
Aldrin	12.9015	1.0	0.04	16.6667		77.4	67 - 95		
Aldrin [2C]	12.8925	1.0	0.04	16.6667		77.4	67 - 95		
alpha-BHC	13.1245	1.0	0.11	16.6667		78.7	67 - 94		
alpha-BHC [2C]	13.1420	1.0	0.11	16.6667		78.9	67 - 94		
alpha-Chlordane	13.3982	1.0	0.12	16.6667		80.4	69 - 99		
alpha-Chlordane [2C]	12.7508	1.0	0.12	16.6667		76.5	69 - 99		
beta-BHC	13.1260	1.0	0.06	16.6667		78.8	67 - 99		
beta-BHC [2C]	13.3908	1.0	0.06	16.6667		80.3	67 - 99		
delta-BHC	14.5380	1.0	0.03	16.6667		87.2	73 - 103		
delta-BHC [2C]	15.2622	1.0	0.03	16.6667		91.6	73 - 103		
Dieldrin	12.4940	2.0	0.13	16.6667		75.0	65 - 93		
Dieldrin [2C]	12.1118	2.0	0.13	16.6667		72.7	65 - 93		
Endosulfan I	11.7123	1.0	0.10	16.6667		70.3	65 - 91		
Endosulfan I [2C]	12.0663	1.0	0.10	16.6667		72.4	65 - 91		
Endosulfan II	13.3295	2.0	0.03	16.6667		80.0	65 - 102		
Endosulfan II [2C]	13.2028	2.0	0.03	16.6667		79.2	65 - 102		
Endosulfan sulfate	13.1952	2.0	0.08	16.6667		79.2	64 - 106		
Endosulfan Sulfate [2C]	13.8513	2.0	0.08	16.6667		83.1	64 - 106		
Endrin	14.0282	2.0	0.04	16.6667		84.2	64 - 111		
Endrin [2C]	14.5208	2.0	0.04	16.6667		87.1	64 - 111		
Endrin aldehyde	13.5690	2.0	0.31	16.6667		81.4	64 - 109		
Endrin aldehyde [2C]	9.57917	2.0	0.31	16.6667		57.5	64 - 109		
Endrin ketone	12.7512	2.0	0.13	16.6667		76.5	57 - 101		
Endrin ketone [2C]	13.2855	2.0	0.13	16.6667		79.7	57 - 101		
gamma-BHC	12.8382	1.0	0.10	16.6667		77.0	65 - 96		
gamma-BHC [2C]	13.1258	1.0	0.10	16.6667		78.8	65 - 96		

L4



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B8J0820-BS1) - Continued

Prepared: 10/30/2018 Analyzed: 10/30/2018

gamma-Chlordane	13.3370	1.0	0.07	16.6667		80.0	65 - 113		
gamma-Chlordane [2C]	12.3680	1.0	0.07	16.6667		74.2	65 - 113		
Heptachlor	13.2545	1.0	0.05	16.6667		79.5	61 - 96		
Heptachlor [2C]	15.5653	1.0	0.05	16.6667		93.4	61 - 96		
Heptachlor epoxide	12.4858	1.0	0.09	16.6667		74.9	64 - 89		
Heptachlor epoxide [2C]	12.9450	1.0	0.09	16.6667		77.7	64 - 89		
Methoxychlor	17.1233	5.0	0.18	16.6667		103	67 - 109		
Methoxychlor [2C]	14.4872	5.0	0.18	16.6667		86.9	67 - 109		
Surrogate: Decachlorobiphenyl	10.90			16.6667		65.4	43 - 84		
Surrogate: Decachlorobiphenyl [	8.281			16.6667		49.7	43 - 84		
Surrogate: Tetrachloro-m-xylene	12.14			16.6667		72.8	54 - 118		
Surrogate: Tetrachloro-m-xylene	12.43			16.6667		74.6	54 - 118		

##### Duplicate (B8J0820-DUP1)

Source: 1804036-10

Prepared: 10/30/2018 Analyzed: 10/31/2018

4,4'-DDD	ND	2.0	0.07		ND		20
4,4'-DDD [2C]	ND	2.0	0.07		ND		20
4,4'-DDE	ND	2.0	0.05		ND		20
4,4'-DDE [2C]	ND	2.0	0.05		ND		20
4,4'-DDT	ND	2.0	0.10		ND		20
4,4'-DDT [2C]	ND	2.0	0.10		ND		20
Aldrin	ND	1.0	0.04		ND		20
Aldrin [2C]	ND	1.0	0.04		ND		20
alpha-BHC	ND	1.0	0.11		ND		20
alpha-BHC [2C]	ND	1.0	0.11		ND		20
alpha-Chlordane	ND	1.0	0.12		ND		20
alpha-Chlordane [2C]	ND	1.0	0.12		ND		20
beta-BHC	ND	1.0	0.06		ND		20
beta-BHC [2C]	ND	1.0	0.06		ND		20
delta-BHC	ND	1.0	0.03		ND		20
delta-BHC [2C]	ND	1.0	0.03		ND		20
Dieldrin	ND	2.0	0.13		ND		20
Dieldrin [2C]	ND	2.0	0.13		ND		20
Endosulfan I	ND	1.0	0.10		ND		20
Endosulfan I [2C]	ND	1.0	0.10		ND		20
Endosulfan II	ND	2.0	0.03		ND		20
Endosulfan II [2C]	ND	2.0	0.03		ND		20
Endosulfan sulfate	ND	2.0	0.08		ND		20
Endosulfan Sulfate [2C]	ND	2.0	0.08		ND		20
Endrin	ND	2.0	0.04		ND		20
Endrin [2C]	ND	2.0	0.04		ND		20
Endrin aldehyde	ND	2.0	0.31		ND		20



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S (continued)

##### Duplicate (B8J0820-DUP1) - Continued

Source: 1804036-10

Prepared: 10/30/2018 Analyzed: 10/31/2018

Endrin aldehyde [2C]	ND	2.0	0.31		ND			20	
Endrin ketone	ND	2.0	0.13		ND			20	
Endrin ketone [2C]	ND	2.0	0.13		ND			20	
gamma-BHC	ND	1.0	0.10		ND			20	
gamma-BHC [2C]	ND	1.0	0.10		ND			20	
gamma-Chlordane	ND	1.0	0.07		ND			20	
gamma-Chlordane [2C]	ND	1.0	0.07		ND			20	
Heptachlor	ND	1.0	0.05		ND			20	
Heptachlor [2C]	ND	1.0	0.05		ND			20	
Heptachlor epoxide	ND	1.0	0.09		ND			20	
Heptachlor epoxide [2C]	ND	1.0	0.09		ND			20	
Methoxychlor	ND	5.0	0.18		ND			20	
Methoxychlor [2C]	ND	5.0	0.18		ND			20	

Surrogate: Decachlorobiphenyl	5.759			16.6667		34.6	43 - 84		S10
Surrogate: Decachlorobiphenyl [	6.190			16.6667		37.1	43 - 84		S10
Surrogate: Tetrachloro-m-xylene	11.24			16.6667		67.4	54 - 118		
Surrogate: Tetrachloro-m-xylene	10.83			16.6667		65.0	54 - 118		

##### Matrix Spike (B8J0820-MS1)

Source: 1804036-29

Prepared: 10/30/2018 Analyzed: 10/30/2018

4,4'-DDD	11.0975	2.0	0.07	16.6667	ND	66.6	73 - 110		M2
4,4'-DDD [2C]	10.6560	2.0	0.07	16.6667	ND	63.9	73 - 110		M2
4,4'-DDE	11.0168	2.0	0.05	16.6667	ND	66.1	71 - 99		M2
4,4'-DDE [2C]	10.7902	2.0	0.05	16.6667	ND	64.7	71 - 99		M2
4,4'-DDT	9.25133	2.0	0.10	16.6667	ND	55.5	51 - 106		
4,4'-DDT [2C]	10.7785	2.0	0.10	16.6667	ND	64.7	51 - 106		
Aldrin	10.2952	1.0	0.04	16.6667	ND	61.8	67 - 95		M2
Aldrin [2C]	10.1335	1.0	0.04	16.6667	ND	60.8	67 - 95		M2
alpha-BHC	10.5592	1.0	0.11	16.6667	ND	63.4	67 - 94		M2
alpha-BHC [2C]	10.8157	1.0	0.11	16.6667	ND	64.9	67 - 94		M2
alpha-Chlordane	10.7318	1.0	0.12	16.6667	ND	64.4	69 - 99		M2
alpha-Chlordane [2C]	10.5288	1.0	0.12	16.6667	ND	63.2	69 - 99		M2
beta-BHC	10.7823	1.0	0.06	16.6667	ND	64.7	67 - 99		M2
beta-BHC [2C]	10.8272	1.0	0.06	16.6667	ND	65.0	67 - 99		M2
delta-BHC	11.5543	1.0	0.03	16.6667	ND	69.3	73 - 103		M2
delta-BHC [2C]	12.3573	1.0	0.03	16.6667	ND	74.1	73 - 103		
Dieldrin	10.0660	2.0	0.13	16.6667	ND	60.4	65 - 93		M2
Dieldrin [2C]	9.72750	2.0	0.13	16.6667	ND	58.4	65 - 93		M2
Endosulfan I	9.54383	1.0	0.10	16.6667	ND	57.3	65 - 91		M2
Endosulfan I [2C]	9.74617	1.0	0.10	16.6667	ND	58.5	65 - 91		M2
Endosulfan II	10.7603	2.0	0.03	16.6667	ND	64.6	65 - 102		M2
Endosulfan II [2C]	10.6295	2.0	0.03	16.6667	ND	63.8	65 - 102		M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B8J0820-MS1) - Continued

Source: 1804036-29

Prepared: 10/30/2018 Analyzed: 10/30/2018

Endosulfan sulfate	10.4555	2.0	0.08	16.6667	ND	62.7	64 - 106		M2
Endosulfan Sulfate [2C]	11.1590	2.0	0.08	16.6667	ND	67.0	64 - 106		
Endrin	11.2487	2.0	0.04	16.6667	ND	67.5	64 - 111		
Endrin [2C]	11.6777	2.0	0.04	16.6667	ND	70.1	64 - 111		
Endrin aldehyde	11.1802	2.0	0.31	16.6667	ND	67.1	64 - 109		
Endrin aldehyde [2C]	9.22167	2.0	0.31	16.6667	ND	55.3	64 - 109		M2
Endrin ketone	9.79883	2.0	0.13	16.6667	ND	58.8	57 - 101		
Endrin ketone [2C]	9.55617	2.0	0.13	16.6667	ND	57.3	57 - 101		
gamma-BHC	10.4373	1.0	0.10	16.6667	ND	62.6	65 - 96		M2
gamma-BHC [2C]	10.6830	1.0	0.10	16.6667	ND	64.1	65 - 96		M2
gamma-Chlordane	10.4165	1.0	0.07	16.6667	ND	62.5	65 - 113		M2
gamma-Chlordane [2C]	9.28483	1.0	0.07	16.6667	ND	55.7	65 - 113		M2
Heptachlor	10.7188	1.0	0.05	16.6667	ND	64.3	61 - 96		
Heptachlor [2C]	11.4228	1.0	0.05	16.6667	ND	68.5	61 - 96		
Heptachlor epoxide	10.1132	1.0	0.09	16.6667	ND	60.7	64 - 89		M2
Heptachlor epoxide [2C]	10.4325	1.0	0.09	16.6667	ND	62.6	64 - 89		M2
Methoxychlor	11.8853	5.0	0.18	16.6667	ND	71.3	67 - 109		
Methoxychlor [2C]	11.5860	5.0	0.18	16.6667	ND	69.5	67 - 109		
Surrogate: Decachlorobiphenyl	9.090			16.6667		54.5	43 - 84		
Surrogate: Decachlorobiphenyl [	6.786			16.6667		40.7	43 - 84		S10
Surrogate: Tetrachloro-m-xylene	10.08			16.6667		60.5	54 - 118		
Surrogate: Tetrachloro-m-xylene	10.05			16.6667		60.3	54 - 118		

##### Matrix Spike Dup (B8J0820-MSD1)

Source: 1804036-29

Prepared: 10/30/2018 Analyzed: 10/30/2018

4,4'-DDD	10.5022	2.0	0.07	16.6667	ND	63.0	73 - 110	5.51	20	M2
4,4'-DDD [2C]	9.76517	2.0	0.07	16.6667	ND	58.6	73 - 110	8.72	20	M2
4,4'-DDE	10.5947	2.0	0.05	16.6667	ND	63.6	71 - 99	3.91	20	M2
4,4'-DDE [2C]	10.1447	2.0	0.05	16.6667	ND	60.9	71 - 99	6.17	20	M2
4,4'-DDT	8.73150	2.0	0.10	16.6667	ND	52.4	51 - 106	5.78	20	
4,4'-DDT [2C]	9.84233	2.0	0.10	16.6667	ND	59.1	51 - 106	9.08	20	
Aldrin	10.0142	1.0	0.04	16.6667	ND	60.1	67 - 95	2.77	20	M2
Aldrin [2C]	9.74533	1.0	0.04	16.6667	ND	58.5	67 - 95	3.91	20	M2
alpha-BHC	10.3640	1.0	0.11	16.6667	ND	62.2	67 - 94	1.87	20	M2
alpha-BHC [2C]	10.5502	1.0	0.11	16.6667	ND	63.3	67 - 94	2.49	20	M2
alpha-Chlordane	10.3258	1.0	0.12	16.6667	ND	62.0	69 - 99	3.86	20	M2
alpha-Chlordane [2C]	9.89783	1.0	0.12	16.6667	ND	59.4	69 - 99	6.18	20	M2
beta-BHC	10.5205	1.0	0.06	16.6667	ND	63.1	67 - 99	2.46	20	M2
beta-BHC [2C]	10.5100	1.0	0.06	16.6667	ND	63.1	67 - 99	2.97	20	M2
delta-BHC	11.7655	1.0	0.03	16.6667	ND	70.6	73 - 103	1.81	20	M2
delta-BHC [2C]	11.9055	1.0	0.03	16.6667	ND	71.4	73 - 103	3.72	20	M2
Dieldrin	9.62100	2.0	0.13	16.6667	ND	57.7	65 - 93	4.52	20	M2





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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8J0820 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B8J0820-MSD1) - Continued

Source: 1804036-29

Prepared: 10/30/2018 Analyzed: 10/30/2018

Dieldrin [2C]	8.87100	2.0	0.13	16.6667	ND	53.2	65 - 93	9.21	20	M2
Endosulfan I	9.63000	1.0	0.10	16.6667	ND	57.8	65 - 91	0.899	20	M2
Endosulfan I [2C]	9.07083	1.0	0.10	16.6667	ND	54.4	65 - 91	7.18	20	M2
Endosulfan II	10.1953	2.0	0.03	16.6667	ND	61.2	65 - 102	5.39	20	M2
Endosulfan II [2C]	9.79567	2.0	0.03	16.6667	ND	58.8	65 - 102	8.16	20	M2
Endosulfan sulfate	10.0293	2.0	0.08	16.6667	ND	60.2	64 - 106	4.16	20	M2
Endosulfan Sulfate [2C]	10.3268	2.0	0.08	16.6667	ND	62.0	64 - 106	7.75	20	M2
Endrin	10.7265	2.0	0.04	16.6667	ND	64.4	64 - 111	4.75	20	
Endrin [2C]	10.8195	2.0	0.04	16.6667	ND	64.9	64 - 111	7.63	20	
Endrin aldehyde	10.6760	2.0	0.31	16.6667	ND	64.1	64 - 109	4.61	20	
Endrin aldehyde [2C]	8.64017	2.0	0.31	16.6667	ND	51.8	64 - 109	6.51	20	M2
Endrin ketone	9.16433	2.0	0.13	16.6667	ND	55.0	57 - 101	6.69	20	M2
Endrin ketone [2C]	9.16550	2.0	0.13	16.6667	ND	55.0	57 - 101	4.17	20	M2
gamma-BHC	10.2137	1.0	0.10	16.6667	ND	61.3	65 - 96	2.17	20	M2
gamma-BHC [2C]	10.3818	1.0	0.10	16.6667	ND	62.3	65 - 96	2.86	20	M2
gamma-Chlordane	9.97667	1.0	0.07	16.6667	ND	59.9	65 - 113	4.31	20	M2
gamma-Chlordane [2C]	8.79233	1.0	0.07	16.6667	ND	52.8	65 - 113	5.45	20	M2
Heptachlor	10.4140	1.0	0.05	16.6667	ND	62.5	61 - 96	2.88	20	
Heptachlor [2C]	10.9987	1.0	0.05	16.6667	ND	66.0	61 - 96	3.78	20	
Heptachlor epoxide	9.66933	1.0	0.09	16.6667	ND	58.0	64 - 89	4.49	20	M2
Heptachlor epoxide [2C]	9.85367	1.0	0.09	16.6667	ND	59.1	64 - 89	5.71	20	M2
Methoxychlor	11.9380	5.0	0.18	16.6667	ND	71.6	67 - 109	0.442	20	
Methoxychlor [2C]	11.8327	5.0	0.18	16.6667	ND	71.0	67 - 109	2.11	20	
Surrogate: Decachlorobiphenyl	8.561			16.6667		51.4	43 - 84			
Surrogate: Decachlorobiphenyl [	8.023			16.6667		48.1	43 - 84			
Surrogate: Tetrachloro-m-xylene	10.01			16.6667		60.1	54 - 118			
Surrogate: Tetrachloro-m-xylene	9.794			16.6667		58.8	54 - 118			



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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S

##### Blank (B8K0014-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.05
4,4'-DDE [2C]	ND	2.0	0.05
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.04
Aldrin [2C]	ND	1.0	0.04
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.03
delta-BHC [2C]	ND	1.0	0.03
Dieldrin	ND	2.0	0.13
Dieldrin [2C]	ND	2.0	0.13
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.03
Endosulfan II [2C]	ND	2.0	0.03
Endosulfan sulfate	ND	2.0	0.08
Endosulfan Sulfate [2C]	ND	2.0	0.08
Endrin	ND	2.0	0.04
Endrin [2C]	ND	2.0	0.04
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.07
gamma-Chlordane [2C]	ND	1.0	0.07
Heptachlor	ND	1.0	0.05
Heptachlor [2C]	ND	1.0	0.05
Heptachlor epoxide	ND	1.0	0.09
Heptachlor epoxide [2C]	ND	1.0	0.09
Methoxychlor	ND	5.0	0.18



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B8K0014-BLK1) - Continued

Prepared: 11/1/2018 Analyzed: 11/1/2018

Methoxychlor [2C]	ND	5.0	0.18
Toxaphene	ND	50	4.7
Toxaphene [2C]	ND	50	4.7

<i>Surrogate: Decachlorobiphenyl</i>	<i>10.64</i>		<i>16.6667</i>	<i>63.8</i>	<i>43 - 84</i>
<i>Surrogate: Decachlorobiphenyl [</i>	<i>7.627</i>		<i>16.6667</i>	<i>45.8</i>	<i>43 - 84</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>11.88</i>		<i>16.6667</i>	<i>71.3</i>	<i>54 - 118</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>11.63</i>		<i>16.6667</i>	<i>69.8</i>	<i>54 - 118</i>

##### LCS (B8K0014-BS1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	13.9032	2.0	0.07	16.6667	83.4	73 - 110
4,4'-DDD [2C]	12.8760	2.0	0.07	16.6667	77.3	73 - 110
4,4'-DDE	12.7042	2.0	0.05	16.6667	76.2	71 - 99
4,4'-DDE [2C]	12.9537	2.0	0.05	16.6667	77.7	71 - 99
4,4'-DDT	9.34467	2.0	0.10	16.6667	56.1	51 - 106
4,4'-DDT [2C]	11.3953	2.0	0.10	16.6667	68.4	51 - 106
Aldrin	12.4868	1.0	0.04	16.6667	74.9	67 - 95
Aldrin [2C]	12.3138	1.0	0.04	16.6667	73.9	67 - 95
alpha-BHC	12.6787	1.0	0.11	16.6667	76.1	67 - 94
alpha-BHC [2C]	12.6658	1.0	0.11	16.6667	76.0	67 - 94
alpha-Chlordane	12.7655	1.0	0.12	16.6667	76.6	69 - 99
alpha-Chlordane [2C]	12.0602	1.0	0.12	16.6667	72.4	69 - 99
beta-BHC	13.0698	1.0	0.06	16.6667	78.4	67 - 99
beta-BHC [2C]	13.2680	1.0	0.06	16.6667	79.6	67 - 99
delta-BHC	15.1275	1.0	0.03	16.6667	90.8	73 - 103
delta-BHC [2C]	14.7895	1.0	0.03	16.6667	88.7	73 - 103
Dieldrin	12.1737	2.0	0.13	16.6667	73.0	65 - 93
Dieldrin [2C]	11.3960	2.0	0.13	16.6667	68.4	65 - 93
Endosulfan I	11.8808	1.0	0.10	16.6667	71.3	65 - 91
Endosulfan I [2C]	11.1542	1.0	0.10	16.6667	66.9	65 - 91
Endosulfan II	12.6028	2.0	0.03	16.6667	75.6	65 - 102
Endosulfan II [2C]	12.0338	2.0	0.03	16.6667	72.2	65 - 102
Endosulfan sulfate	12.6428	2.0	0.08	16.6667	75.9	64 - 106
Endosulfan Sulfate [2C]	13.2803	2.0	0.08	16.6667	79.7	64 - 106
Endrin	13.1450	2.0	0.04	16.6667	78.9	64 - 111
Endrin [2C]	13.1547	2.0	0.04	16.6667	78.9	64 - 111
Endrin aldehyde	13.4642	2.0	0.31	16.6667	80.8	64 - 109
Endrin aldehyde [2C]	9.40533	2.0	0.31	16.6667	56.4	64 - 109
Endrin ketone	11.0772	2.0	0.13	16.6667	66.5	57 - 101
Endrin ketone [2C]	12.5242	2.0	0.13	16.6667	75.1	57 - 101
gamma-BHC	12.5142	1.0	0.10	16.6667	75.1	65 - 96
gamma-BHC [2C]	12.6888	1.0	0.10	16.6667	76.1	65 - 96

L4



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B8K0014-BS1) - Continued

Prepared: 11/1/2018 Analyzed: 11/1/2018

gamma-Chlordane	12.8535	1.0	0.07	16.6667		77.1	65 - 113		
gamma-Chlordane [2C]	12.1615	1.0	0.07	16.6667		73.0	65 - 113		
Heptachlor	12.6930	1.0	0.05	16.6667		76.2	61 - 96		
Heptachlor [2C]	14.7955	1.0	0.05	16.6667		88.8	61 - 96		
Heptachlor epoxide	11.9672	1.0	0.09	16.6667		71.8	64 - 89		
Heptachlor epoxide [2C]	12.1378	1.0	0.09	16.6667		72.8	64 - 89		
Methoxychlor	16.3872	5.0	0.18	16.6667		98.3	67 - 109		
Methoxychlor [2C]	13.0935	5.0	0.18	16.6667		78.6	67 - 109		
Surrogate: Decachlorobiphenyl	10.95			16.6667		65.7	43 - 84		
Surrogate: Decachlorobiphenyl [	7.571			16.6667		45.4	43 - 84		
Surrogate: Tetrachloro-m-xylene	12.06			16.6667		72.3	54 - 118		
Surrogate: Tetrachloro-m-xylene	11.90			16.6667		71.4	54 - 118		

##### Duplicate (B8K0014-DUP1)

Source: 1804036-57

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	0.300833	2.0	0.07	ND		NR	20	J
4,4'-DDD [2C]	0.239667	2.0	0.07	ND		NR	20	J
4,4'-DDE	ND	2.0	0.05	ND			20	
4,4'-DDE [2C]	ND	2.0	0.05	ND			20	
4,4'-DDT	ND	2.0	0.10	ND			20	
4,4'-DDT [2C]	ND	2.0	0.10	ND			20	
Aldrin	ND	1.0	0.04	ND			20	
Aldrin [2C]	ND	1.0	0.04	ND			20	
alpha-BHC	ND	1.0	0.11	ND			20	
alpha-BHC [2C]	ND	1.0	0.11	ND			20	
alpha-Chlordane	ND	1.0	0.12	ND			20	
alpha-Chlordane [2C]	ND	1.0	0.12	ND			20	
beta-BHC	ND	1.0	0.06	ND			20	
beta-BHC [2C]	ND	1.0	0.06	ND			20	
delta-BHC	ND	1.0	0.03	ND			20	
delta-BHC [2C]	ND	1.0	0.03	ND			20	
Dieldrin	ND	2.0	0.13	ND			20	
Dieldrin [2C]	ND	2.0	0.13	ND			20	
Endosulfan I	ND	1.0	0.10	ND			20	
Endosulfan I [2C]	ND	1.0	0.10	ND			20	
Endosulfan II	ND	2.0	0.03	ND			20	
Endosulfan II [2C]	ND	2.0	0.03	ND			20	
Endosulfan sulfate	ND	2.0	0.08	ND			20	
Endosulfan Sulfate [2C]	ND	2.0	0.08	ND			20	
Endrin	ND	2.0	0.04	ND			20	
Endrin [2C]	ND	2.0	0.04	ND			20	
Endrin aldehyde	ND	2.0	0.31	ND			20	



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S (continued)

##### Duplicate (B8K0014-DUP1) - Continued

Source: 1804036-57

Prepared: 11/1/2018 Analyzed: 11/1/2018

Endrin aldehyde [2C]	ND	2.0	0.31		ND			20	
Endrin ketone	ND	2.0	0.13		ND			20	
Endrin ketone [2C]	ND	2.0	0.13		ND			20	
gamma-BHC	ND	1.0	0.10		ND			20	
gamma-BHC [2C]	ND	1.0	0.10		ND			20	
gamma-Chlordane	ND	1.0	0.07		ND			20	
gamma-Chlordane [2C]	ND	1.0	0.07		ND			20	
Heptachlor	ND	1.0	0.05		ND			20	
Heptachlor [2C]	ND	1.0	0.05		ND			20	
Heptachlor epoxide	ND	1.0	0.09		ND			20	
Heptachlor epoxide [2C]	ND	1.0	0.09		ND			20	
Methoxychlor	ND	5.0	0.18		ND			20	
Methoxychlor [2C]	ND	5.0	0.18		ND			20	

Surrogate: Decachlorobiphenyl	12.57			16.6667		75.4	43 - 84		
Surrogate: Decachlorobiphenyl [	11.34			16.6667		68.0	43 - 84		
Surrogate: Tetrachloro-m-xylene	10.88			16.6667		65.3	54 - 118		
Surrogate: Tetrachloro-m-xylene	11.83			16.6667		71.0	54 - 118		

##### Matrix Spike (B8K0014-MS1)

Source: 1804036-60

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	14.9093	2.0	0.07	16.6667	0.134667	88.6	73 - 110		
4,4'-DDD [2C]	14.4007	2.0	0.07	16.6667	0.124500	85.7	73 - 110		
4,4'-DDE	11.6627	2.0	0.05	16.6667	ND	70.0	71 - 99		M2
4,4'-DDE [2C]	10.7557	2.0	0.05	16.6667	ND	64.5	71 - 99		M2
4,4'-DDT	2.55500	2.0	0.10	16.6667	ND	15.3	51 - 106		M2
4,4'-DDT [2C]	3.94717	2.0	0.10	16.6667	ND	23.7	51 - 106		M2
Aldrin	10.3393	1.0	0.04	16.6667	ND	62.0	67 - 95		M2
Aldrin [2C]	10.2443	1.0	0.04	16.6667	ND	61.5	67 - 95		M2
alpha-BHC	10.0763	1.0	0.11	16.6667	ND	60.5	67 - 94		M2
alpha-BHC [2C]	10.1048	1.0	0.11	16.6667	ND	60.6	67 - 94		M2
alpha-Chlordane	10.8088	1.0	0.12	16.6667	ND	64.9	69 - 99		M2
alpha-Chlordane [2C]	10.1252	1.0	0.12	16.6667	0.121500	60.0	69 - 99		M2
beta-BHC	10.4625	1.0	0.06	16.6667	ND	62.8	67 - 99		M2
beta-BHC [2C]	10.5622	1.0	0.06	16.6667	ND	63.4	67 - 99		M2
delta-BHC	12.6160	1.0	0.03	16.6667	ND	75.7	73 - 103		
delta-BHC [2C]	12.1970	1.0	0.03	16.6667	ND	73.2	73 - 103		
Dieldrin	11.2695	2.0	0.13	16.6667	ND	67.6	65 - 93		
Dieldrin [2C]	9.75783	2.0	0.13	16.6667	ND	58.5	65 - 93		M2
Endosulfan I	9.89167	1.0	0.10	16.6667	ND	59.3	65 - 91		M2
Endosulfan I [2C]	9.65383	1.0	0.10	16.6667	ND	57.9	65 - 91		M2
Endosulfan II	11.4667	2.0	0.03	16.6667	ND	68.8	65 - 102		
Endosulfan II [2C]	10.5560	2.0	0.03	16.6667	ND	63.3	65 - 102		M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B8K0014-MS1) - Continued

Source: 1804036-60

Prepared: 11/1/2018 Analyzed: 11/1/2018

Endosulfan sulfate	11.9930	2.0	0.08	16.6667	ND	72.0	64 - 106		
Endosulfan Sulfate [2C]	10.7772	2.0	0.08	16.6667	ND	64.7	64 - 106		
Endrin	10.8493	2.0	0.04	16.6667	ND	65.1	64 - 111		
Endrin [2C]	10.9987	2.0	0.04	16.6667	ND	66.0	64 - 111		
Endrin aldehyde	12.8488	2.0	0.31	16.6667	ND	77.1	64 - 109		
Endrin aldehyde [2C]	7.51050	2.0	0.31	16.6667	ND	45.1	64 - 109		M2
Endrin ketone	9.97383	2.0	0.13	16.6667	ND	59.8	57 - 101		
Endrin ketone [2C]	10.3603	2.0	0.13	16.6667	ND	62.2	57 - 101		
gamma-BHC	9.56767	1.0	0.10	16.6667	ND	57.4	65 - 96		M2
gamma-BHC [2C]	10.1465	1.0	0.10	16.6667	ND	60.9	65 - 96		M2
gamma-Chlordane	10.6227	1.0	0.07	16.6667	0.088	63.2	65 - 113		M2
gamma-Chlordane [2C]	10.0658	1.0	0.07	16.6667	ND	60.4	65 - 113		M2
Heptachlor	9.37283	1.0	0.05	16.6667	ND	56.2	61 - 96		M2
Heptachlor [2C]	12.4852	1.0	0.05	16.6667	ND	74.9	61 - 96		
Heptachlor epoxide	10.9458	1.0	0.09	16.6667	ND	65.7	64 - 89		
Heptachlor epoxide [2C]	10.3495	1.0	0.09	16.6667	ND	62.1	64 - 89		M2
Methoxychlor	14.5348	5.0	0.18	16.6667	ND	87.2	67 - 109		
Methoxychlor [2C]	4.98300	5.0	0.18	16.6667	ND	29.9	67 - 109		M2, J
Surrogate: Decachlorobiphenyl	6.921			16.6667		41.5	43 - 84		S10
Surrogate: Decachlorobiphenyl [	5.440			16.6667		32.6	43 - 84		S10
Surrogate: Tetrachloro-m-xylene	6.684			16.6667		40.1	54 - 118		S10
Surrogate: Tetrachloro-m-xylene	6.445			16.6667		38.7	54 - 118		S10

##### Matrix Spike Dup (B8K0014-MSD1)

Source: 1804036-60

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	13.9287	2.0	0.07	16.6667	0.134667	82.8	73 - 110	6.80	20	
4,4'-DDD [2C]	12.9893	2.0	0.07	16.6667	0.124500	77.2	73 - 110	10.3	20	
4,4'-DDE	10.9975	2.0	0.05	16.6667	ND	66.0	71 - 99	5.87	20	M2
4,4'-DDE [2C]	10.0180	2.0	0.05	16.6667	ND	60.1	71 - 99	7.10	20	M2
4,4'-DDT	2.62467	2.0	0.10	16.6667	ND	15.7	51 - 106	2.69	20	M2
4,4'-DDT [2C]	3.16300	2.0	0.10	16.6667	ND	19.0	51 - 106	22.1	20	M2, R3
Aldrin	10.2338	1.0	0.04	16.6667	ND	61.4	67 - 95	1.03	20	M2
Aldrin [2C]	9.48000	1.0	0.04	16.6667	ND	56.9	67 - 95	7.75	20	M2
alpha-BHC	9.41183	1.0	0.11	16.6667	ND	56.5	67 - 94	6.82	20	M2
alpha-BHC [2C]	9.30017	1.0	0.11	16.6667	ND	55.8	67 - 94	8.29	20	M2
alpha-Chlordane	10.2037	1.0	0.12	16.6667	ND	61.2	69 - 99	5.76	20	M2
alpha-Chlordane [2C]	9.44867	1.0	0.12	16.6667	0.121500	56.0	69 - 99	6.91	20	M2
beta-BHC	9.78667	1.0	0.06	16.6667	ND	58.7	67 - 99	6.68	20	M2
beta-BHC [2C]	9.73367	1.0	0.06	16.6667	ND	58.4	67 - 99	8.16	20	M2
delta-BHC	11.7647	1.0	0.03	16.6667	ND	70.6	73 - 103	6.98	20	M2
delta-BHC [2C]	11.2465	1.0	0.03	16.6667	ND	67.5	73 - 103	8.11	20	M2
Dieldrin	10.6637	2.0	0.13	16.6667	ND	64.0	65 - 93	5.52	20	M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B8K0014-MSD1) - Continued

Source: 1804036-60

Prepared: 11/1/2018 Analyzed: 11/1/2018

Dieldrin [2C]	9.17683	2.0	0.13	16.6667	ND	55.1	65 - 93	6.14	20	M2
Endosulfan I	9.32050	1.0	0.10	16.6667	ND	55.9	65 - 91	5.95	20	M2
Endosulfan I [2C]	9.02917	1.0	0.10	16.6667	ND	54.2	65 - 91	6.69	20	M2
Endosulfan II	10.7755	2.0	0.03	16.6667	ND	64.7	65 - 102	6.21	20	M2
Endosulfan II [2C]	9.29100	2.0	0.03	16.6667	ND	55.7	65 - 102	12.7	20	M2
Endosulfan sulfate	11.3768	2.0	0.08	16.6667	ND	68.3	64 - 106	5.27	20	
Endosulfan Sulfate [2C]	9.99533	2.0	0.08	16.6667	ND	60.0	64 - 106	7.53	20	M2
Endrin	10.2453	2.0	0.04	16.6667	ND	61.5	64 - 111	5.73	20	M2
Endrin [2C]	10.1765	2.0	0.04	16.6667	ND	61.1	64 - 111	7.77	20	M2
Endrin aldehyde	12.0927	2.0	0.31	16.6667	ND	72.6	64 - 109	6.06	20	
Endrin aldehyde [2C]	6.77233	2.0	0.31	16.6667	ND	40.6	64 - 109	10.3	20	M2
Endrin ketone	9.52867	2.0	0.13	16.6667	ND	57.2	57 - 101	4.57	20	
Endrin ketone [2C]	9.78783	2.0	0.13	16.6667	ND	58.7	57 - 101	5.68	20	
gamma-BHC	8.96000	1.0	0.10	16.6667	ND	53.8	65 - 96	6.56	20	M2
gamma-BHC [2C]	9.35650	1.0	0.10	16.6667	ND	56.1	65 - 96	8.10	20	M2
gamma-Chlordane	10.0515	1.0	0.07	16.6667	0.088	59.8	65 - 113	5.53	20	M2
gamma-Chlordane [2C]	9.41000	1.0	0.07	16.6667	ND	56.5	65 - 113	6.73	20	M2
Heptachlor	8.85667	1.0	0.05	16.6667	ND	53.1	61 - 96	5.66	20	M2
Heptachlor [2C]	11.6270	1.0	0.05	16.6667	ND	69.8	61 - 96	7.12	20	
Heptachlor epoxide	10.3620	1.0	0.09	16.6667	ND	62.2	64 - 89	5.48	20	M2
Heptachlor epoxide [2C]	9.71150	1.0	0.09	16.6667	ND	58.3	64 - 89	6.36	20	M2
Methoxychlor	14.3120	5.0	0.18	16.6667	ND	85.9	67 - 109	1.54	20	
Methoxychlor [2C]	5.15833	5.0	0.18	16.6667	ND	30.9	67 - 109	3.46	20	M2
Surrogate: Decachlorobiphenyl	5.170			16.6667		31.0	43 - 84			S10
Surrogate: Decachlorobiphenyl [	5.013			16.6667		30.1	43 - 84			S10
Surrogate: Tetrachloro-m-xylene	6.284			16.6667		37.7	54 - 118			S10
Surrogate: Tetrachloro-m-xylene	5.994			16.6667		36.0	54 - 118			S10



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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0028 - GCSEMI\_PCB/PEST\_W

##### Blank (B8K0028-BLK1)

Prepared: 11/1/2018 Analyzed: 11/1/2018

4,4'-DDD	ND	0.05	0.006
4,4'-DDD [2C]	ND	0.05	0.006
4,4'-DDE	ND	0.05	0.005
4,4'-DDE [2C]	ND	0.05	0.005
4,4'-DDT	ND	0.05	0.01
4,4'-DDT [2C]	ND	0.05	0.01
Aldrin	ND	0.02	0.002
Aldrin [2C]	ND	0.02	0.002
alpha-BHC	ND	0.02	0.002
alpha-BHC [2C]	ND	0.02	0.002
alpha-Chlordane	ND	0.02	0.003
alpha-Chlordane [2C]	ND	0.02	0.003
beta-BHC	ND	0.02	0.002
beta-BHC [2C]	ND	0.02	0.002
Chlordane	ND	0.25	0.03
Chlordane [2C]	ND	0.25	0.03
delta-BHC	ND	0.02	0.002
delta-BHC [2C]	ND	0.02	0.002
Dieldrin	ND	0.05	0.002
Dieldrin [2C]	ND	0.05	0.002
Endosulfan I	ND	0.02	0.005
Endosulfan I [2C]	ND	0.02	0.005
Endosulfan II	ND	0.05	0.009
Endosulfan II [2C]	ND	0.05	0.009
Endosulfan sulfate	ND	0.05	0.01
Endosulfan Sulfate [2C]	ND	0.05	0.01
Endrin	ND	0.05	0.005
Endrin [2C]	ND	0.05	0.005
Endrin aldehyde	ND	0.05	0.003
Endrin aldehyde [2C]	ND	0.05	0.003
Endrin ketone	ND	0.05	0.003
Endrin ketone [2C]	ND	0.05	0.003
gamma-BHC	ND	0.02	0.002
gamma-BHC [2C]	ND	0.02	0.002
gamma-Chlordane	ND	0.02	0.002
gamma-Chlordane [2C]	ND	0.02	0.002
Heptachlor	ND	0.02	0.002
Heptachlor [2C]	ND	0.02	0.002
Heptachlor epoxide	ND	0.02	0.002
Heptachlor epoxide [2C]	ND	0.02	0.002
Methoxychlor	ND	0.25	0.008





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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0028 - GCSEMI\_PCB/PEST\_W (continued)

##### Blank (B8K0028-BLK1) - Continued

Prepared: 11/1/2018 Analyzed: 11/1/2018

Methoxychlor [2C]	ND	0.25	0.008
Toxaphene	ND	2.5	0.23
Toxaphene [2C]	ND	2.5	0.23

<i>Surrogate: Decachlorobiphenyl</i>	<i>0.2466</i>		<i>0.500000</i>	<i>49.3</i>	<i>8 - 128</i>
<i>Surrogate: Decachlorobiphenyl [</i>	<i>0.2441</i>		<i>0.500000</i>	<i>48.8</i>	<i>8 - 128</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.3449</i>		<i>0.500000</i>	<i>69.0</i>	<i>32 - 126</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.3434</i>		<i>0.500000</i>	<i>68.7</i>	<i>32 - 126</i>

##### LCS (B8K0028-BS1)

Prepared: 11/1/2018 Analyzed: 11/2/2018

4,4'-DDD	0.379200	0.05	0.006	0.500000	75.8	56 - 126
4,4'-DDD [2C]	0.405045	0.05	0.006	0.500000	81.0	56 - 126
4,4'-DDE	0.408240	0.05	0.005	0.500000	81.6	53 - 127
4,4'-DDE [2C]	0.366535	0.05	0.005	0.500000	73.3	53 - 127
4,4'-DDT	0.344815	0.05	0.01	0.500000	69.0	27 - 134
4,4'-DDT [2C]	0.402390	0.05	0.01	0.500000	80.5	27 - 134
Aldrin	0.387250	0.02	0.002	0.500000	77.4	53 - 123
Aldrin [2C]	0.361420	0.02	0.002	0.500000	72.3	53 - 123
alpha-BHC	0.369530	0.02	0.002	0.500000	73.9	58 - 120
alpha-BHC [2C]	0.374550	0.02	0.002	0.500000	74.9	58 - 120
alpha-Chlordane	0.396235	0.02	0.003	0.500000	79.2	55 - 123
alpha-Chlordane [2C]	0.357070	0.02	0.003	0.500000	71.4	55 - 123
beta-BHC	0.365480	0.02	0.002	0.500000	73.1	53 - 116
beta-BHC [2C]	0.373945	0.02	0.002	0.500000	74.8	53 - 116
delta-BHC	0.384510	0.02	0.002	0.500000	76.9	27 - 136
delta-BHC [2C]	0.426360	0.02	0.002	0.500000	85.3	27 - 136
Dieldrin	0.372235	0.05	0.002	0.500000	74.4	55 - 114
Dieldrin [2C]	0.362160	0.05	0.002	0.500000	72.4	55 - 114
Endosulfan I	0.362830	0.02	0.005	0.500000	72.6	52 - 117
Endosulfan I [2C]	0.341905	0.02	0.005	0.500000	68.4	52 - 117
Endosulfan II	0.383600	0.05	0.009	0.500000	76.7	53 - 128
Endosulfan II [2C]	0.399730	0.05	0.009	0.500000	79.9	53 - 128
Endosulfan sulfate	0.393445	0.05	0.01	0.500000	78.7	49 - 122
Endosulfan Sulfate [2C]	0.416720	0.05	0.01	0.500000	83.3	49 - 122
Endrin	0.397815	0.05	0.005	0.500000	79.6	59 - 123
Endrin [2C]	0.420335	0.05	0.005	0.500000	84.1	59 - 123
Endrin aldehyde	0.397955	0.05	0.003	0.500000	79.6	49 - 140
Endrin aldehyde [2C]	0.416710	0.05	0.003	0.500000	83.3	49 - 140
Endrin ketone	0.373215	0.05	0.003	0.500000	74.6	47 - 121
Endrin ketone [2C]	0.418925	0.05	0.003	0.500000	83.8	47 - 121
gamma-BHC	0.357170	0.02	0.002	0.500000	71.4	57 - 116
gamma-BHC [2C]	0.373935	0.02	0.002	0.500000	74.8	57 - 116



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0028 - GCSEMI\_PCB/PEST\_W (continued)

##### LCS (B8K0028-BS1) - Continued

Prepared: 11/1/2018 Analyzed: 11/2/2018

gamma-Chlordane	0.385415	0.02	0.002	0.500000		77.1	53 - 120		
gamma-Chlordane [2C]	0.356295	0.02	0.002	0.500000		71.3	53 - 120		
Heptachlor	0.379110	0.02	0.002	0.500000		75.8	55 - 121		
Heptachlor [2C]	0.401925	0.02	0.002	0.500000		80.4	55 - 121		
Heptachlor epoxide	0.373855	0.02	0.002	0.500000		74.8	54 - 113		
Heptachlor epoxide [2C]	0.362745	0.02	0.002	0.500000		72.5	54 - 113		
Methoxychlor	0.443430	0.25	0.008	0.500000		88.7	47 - 135		
Methoxychlor [2C]	0.470865	0.25	0.008	0.500000		94.2	47 - 135		
Surrogate: Decachlorobiphenyl	0.3939			0.500000		78.8	8 - 128		
Surrogate: Decachlorobiphenyl [	0.3103			0.500000		62.1	8 - 128		
Surrogate: Tetrachloro-m-xylene	0.3537			0.500000		70.7	32 - 126		
Surrogate: Tetrachloro-m-xylene	0.3493			0.500000		69.9	32 - 126		

##### LCS Dup (B8K0028-BSD1)

Prepared: 11/1/2018 Analyzed: 11/2/2018

4,4'-DDD	0.388890	0.05	0.006	0.500000		77.8	56 - 126	2.52	20
4,4'-DDD [2C]	0.402480	0.05	0.006	0.500000		80.5	56 - 126	0.635	20
4,4'-DDE	0.418375	0.05	0.005	0.500000		83.7	53 - 127	2.45	20
4,4'-DDE [2C]	0.365050	0.05	0.005	0.500000		73.0	53 - 127	0.406	20
4,4'-DDT	0.354820	0.05	0.01	0.500000		71.0	27 - 134	2.86	20
4,4'-DDT [2C]	0.398195	0.05	0.01	0.500000		79.6	27 - 134	1.05	20
Aldrin	0.398060	0.02	0.002	0.500000		79.6	53 - 123	2.75	20
Aldrin [2C]	0.363855	0.02	0.002	0.500000		72.8	53 - 123	0.671	20
alpha-BHC	0.377015	0.02	0.002	0.500000		75.4	58 - 120	2.01	20
alpha-BHC [2C]	0.370050	0.02	0.002	0.500000		74.0	58 - 120	1.21	20
alpha-Chlordane	0.405410	0.02	0.003	0.500000		81.1	55 - 123	2.29	20
alpha-Chlordane [2C]	0.356800	0.02	0.003	0.500000		71.4	55 - 123	0.0756	20
beta-BHC	0.371120	0.02	0.002	0.500000		74.2	53 - 116	1.53	20
beta-BHC [2C]	0.370415	0.02	0.002	0.500000		74.1	53 - 116	0.948	20
delta-BHC	0.394235	0.02	0.002	0.500000		78.8	27 - 136	2.50	20
delta-BHC [2C]	0.424475	0.02	0.002	0.500000		84.9	27 - 136	0.443	20
Dieldrin	0.382085	0.05	0.002	0.500000		76.4	55 - 114	2.61	20
Dieldrin [2C]	0.361305	0.05	0.002	0.500000		72.3	55 - 114	0.236	20
Endosulfan I	0.375090	0.02	0.005	0.500000		75.0	52 - 117	3.32	20
Endosulfan I [2C]	0.342745	0.02	0.005	0.500000		68.5	52 - 117	0.245	20
Endosulfan II	0.397475	0.05	0.009	0.500000		79.5	53 - 128	3.55	20
Endosulfan II [2C]	0.400750	0.05	0.009	0.500000		80.2	53 - 128	0.255	20
Endosulfan sulfate	0.389895	0.05	0.01	0.500000		78.0	49 - 122	0.906	20
Endosulfan Sulfate [2C]	0.415930	0.05	0.01	0.500000		83.2	49 - 122	0.190	20
Endrin	0.406560	0.05	0.005	0.500000		81.3	59 - 123	2.17	20
Endrin [2C]	0.419340	0.05	0.005	0.500000		83.9	59 - 123	0.237	20
Endrin aldehyde	0.403840	0.05	0.003	0.500000		80.8	49 - 140	1.47	20



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0028 - GCSEMI\_PCB/PEST\_W (continued)

##### LCS Dup (B8K0028-BSD1) - Continued

Prepared: 11/1/2018 Analyzed: 11/2/2018

Endrin aldehyde [2C]	0.416495	0.05	0.003	0.500000		83.3	49 - 140	0.0516	20	
Endrin ketone	0.376780	0.05	0.003	0.500000		75.4	47 - 121	0.951	20	
Endrin ketone [2C]	0.416535	0.05	0.003	0.500000		83.3	47 - 121	0.572	20	
gamma-BHC	0.363865	0.02	0.002	0.500000		72.8	57 - 116	1.86	20	
gamma-BHC [2C]	0.370700	0.02	0.002	0.500000		74.1	57 - 116	0.869	20	
gamma-Chlordane	0.394520	0.02	0.002	0.500000		78.9	53 - 120	2.33	20	
gamma-Chlordane [2C]	0.355810	0.02	0.002	0.500000		71.2	53 - 120	0.136	20	
Heptachlor	0.390660	0.02	0.002	0.500000		78.1	55 - 121	3.00	20	
Heptachlor [2C]	0.406325	0.02	0.002	0.500000		81.3	55 - 121	1.09	20	
Heptachlor epoxide	0.386320	0.02	0.002	0.500000		77.3	54 - 113	3.28	20	
Heptachlor epoxide [2C]	0.362865	0.02	0.002	0.500000		72.6	54 - 113	0.0331	20	
Methoxychlor	0.420310	0.25	0.008	0.500000		84.1	47 - 135	5.35	20	
Methoxychlor [2C]	0.460675	0.25	0.008	0.500000		92.1	47 - 135	2.19	20	
Surrogate: Decachlorobiphenyl	0.4287			0.500000		85.7	8 - 128			
Surrogate: Decachlorobiphenyl [	0.3196			0.500000		63.9	8 - 128			
Surrogate: Tetrachloro-m-xylene	0.3607			0.500000		72.1	32 - 126			
Surrogate: Tetrachloro-m-xylene	0.3447			0.500000		68.9	32 - 126			



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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S

##### Blank (B8K0267-BLK1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.05
4,4'-DDE [2C]	ND	2.0	0.05
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.04
Aldrin [2C]	ND	1.0	0.04
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.03
delta-BHC [2C]	ND	1.0	0.03
Dieldrin	ND	2.0	0.13
Dieldrin [2C]	ND	2.0	0.13
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.03
Endosulfan II [2C]	ND	2.0	0.03
Endosulfan sulfate	ND	2.0	0.08
Endosulfan Sulfate [2C]	ND	2.0	0.08
Endrin	ND	2.0	0.04
Endrin [2C]	ND	2.0	0.04
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.07
gamma-Chlordane [2C]	ND	1.0	0.07
Heptachlor	ND	1.0	0.05
Heptachlor [2C]	ND	1.0	0.05
Heptachlor epoxide	ND	1.0	0.09
Heptachlor epoxide [2C]	ND	1.0	0.09
Methoxychlor	ND	5.0	0.18



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B8K0267-BLK1) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

Methoxychlor [2C]	ND	5.0	0.18						
Toxaphene	ND	50	4.7						
Toxaphene [2C]	ND	50	4.7						

<i>Surrogate: Decachlorobiphenyl</i>	<i>10.08</i>			<i>16.6667</i>		<i>60.5</i>	<i>43 - 84</i>		
<i>Surrogate: Decachlorobiphenyl [</i>	<i>6.913</i>			<i>16.6667</i>		<i>41.5</i>	<i>43 - 84</i>		S10
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>10.10</i>			<i>16.6667</i>		<i>60.6</i>	<i>54 - 118</i>		
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>9.827</i>			<i>16.6667</i>		<i>59.0</i>	<i>54 - 118</i>		

##### LCS (B8K0267-BS1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	13.7220	2.0	0.07	16.6667		82.3	73 - 110		
4,4'-DDD [2C]	12.5518	2.0	0.07	16.6667		75.3	73 - 110		
4,4'-DDE	13.0270	2.0	0.05	16.6667		78.2	71 - 99		
4,4'-DDE [2C]	12.6520	2.0	0.05	16.6667		75.9	71 - 99		
4,4'-DDT	11.0742	2.0	0.10	16.6667		66.4	51 - 106		
4,4'-DDT [2C]	14.1153	2.0	0.10	16.6667		84.7	51 - 106		
Aldrin	13.5508	1.0	0.04	16.6667		81.3	67 - 95		
Aldrin [2C]	12.3465	1.0	0.04	16.6667		74.1	67 - 95		
alpha-BHC	13.1848	1.0	0.11	16.6667		79.1	67 - 94		
alpha-BHC [2C]	13.4277	1.0	0.11	16.6667		80.6	67 - 94		
alpha-Chlordane	13.9960	1.0	0.12	16.6667		84.0	69 - 99		
alpha-Chlordane [2C]	12.0670	1.0	0.12	16.6667		72.4	69 - 99		
beta-BHC	13.0412	1.0	0.06	16.6667		78.2	67 - 99		
beta-BHC [2C]	13.2955	1.0	0.06	16.6667		79.8	67 - 99		
delta-BHC	15.0027	1.0	0.03	16.6667		90.0	73 - 103		
delta-BHC [2C]	15.0283	1.0	0.03	16.6667		90.2	73 - 103		
Dieldrin	12.8203	2.0	0.13	16.6667		76.9	65 - 93		
Dieldrin [2C]	12.0270	2.0	0.13	16.6667		72.2	65 - 93		
Endosulfan I	12.8695	1.0	0.10	16.6667		77.2	65 - 91		
Endosulfan I [2C]	11.4158	1.0	0.10	16.6667		68.5	65 - 91		
Endosulfan II	13.6202	2.0	0.03	16.6667		81.7	65 - 102		
Endosulfan II [2C]	13.3605	2.0	0.03	16.6667		80.2	65 - 102		
Endosulfan sulfate	12.9597	2.0	0.08	16.6667		77.8	64 - 106		
Endosulfan Sulfate [2C]	13.7685	2.0	0.08	16.6667		82.6	64 - 106		
Endrin	14.2063	2.0	0.04	16.6667		85.2	64 - 111		
Endrin [2C]	14.5677	2.0	0.04	16.6667		87.4	64 - 111		
Endrin aldehyde	13.9193	2.0	0.31	16.6667		83.5	64 - 109		
Endrin aldehyde [2C]	10.8750	2.0	0.31	16.6667		65.2	64 - 109		
Endrin ketone	12.5095	2.0	0.13	16.6667		75.1	57 - 101		
Endrin ketone [2C]	14.5628	2.0	0.13	16.6667		87.4	57 - 101		
gamma-BHC	12.7965	1.0	0.10	16.6667		76.8	65 - 96		
gamma-BHC [2C]	13.2672	1.0	0.10	16.6667		79.6	65 - 96		



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B8K0267-BS1) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

gamma-Chlordane	13.7468	1.0	0.07	16.6667		82.5	65 - 113		
gamma-Chlordane [2C]	12.1368	1.0	0.07	16.6667		72.8	65 - 113		
Heptachlor	14.0737	1.0	0.05	16.6667		84.4	61 - 96		
Heptachlor [2C]	15.4300	1.0	0.05	16.6667		92.6	61 - 96		
Heptachlor epoxide	13.0587	1.0	0.09	16.6667		78.4	64 - 89		
Heptachlor epoxide [2C]	12.1913	1.0	0.09	16.6667		73.1	64 - 89		
Methoxychlor	16.9900	5.0	0.18	16.6667		102	67 - 109		
Methoxychlor [2C]	15.9062	5.0	0.18	16.6667		95.4	67 - 109		
Surrogate: Decachlorobiphenyl	11.51			16.6667		69.0	43 - 84		
Surrogate: Decachlorobiphenyl [	7.995			16.6667		48.0	43 - 84		
Surrogate: Tetrachloro-m-xylene	13.33			16.6667		80.0	54 - 118		
Surrogate: Tetrachloro-m-xylene	13.72			16.6667		82.3	54 - 118		

##### Duplicate (B8K0267-DUP1)

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/8/2018

4,4'-DDD	ND	2.0	0.07		ND		20
4,4'-DDD [2C]	ND	2.0	0.07		ND		20
4,4'-DDE	ND	2.0	0.05		ND		20
4,4'-DDE [2C]	ND	2.0	0.05		ND		20
4,4'-DDT	ND	2.0	0.10		ND		20
4,4'-DDT [2C]	ND	2.0	0.10		ND		20
Aldrin	ND	1.0	0.04		ND		20
Aldrin [2C]	ND	1.0	0.04		ND		20
alpha-BHC	ND	1.0	0.11		ND		20
alpha-BHC [2C]	ND	1.0	0.11		ND		20
alpha-Chlordane	ND	1.0	0.12		ND		20
alpha-Chlordane [2C]	ND	1.0	0.12		ND		20
beta-BHC	ND	1.0	0.06		ND		20
beta-BHC [2C]	ND	1.0	0.06		ND		20
delta-BHC	ND	1.0	0.03		ND		20
delta-BHC [2C]	ND	1.0	0.03		ND		20
Dieldrin	ND	2.0	0.13		ND		20
Dieldrin [2C]	ND	2.0	0.13		ND		20
Endosulfan I	ND	1.0	0.10		ND		20
Endosulfan I [2C]	ND	1.0	0.10		ND		20
Endosulfan II	ND	2.0	0.03		ND		20
Endosulfan II [2C]	ND	2.0	0.03		ND		20
Endosulfan sulfate	ND	2.0	0.08		ND		20
Endosulfan Sulfate [2C]	ND	2.0	0.08		ND		20
Endrin	ND	2.0	0.04		ND		20
Endrin [2C]	ND	2.0	0.04		ND		20
Endrin aldehyde	ND	2.0	0.31		ND		20



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S (continued)

##### Duplicate (B8K0267-DUP1) - Continued

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/8/2018

Endrin aldehyde [2C]	ND	2.0	0.31		ND			20	
Endrin ketone	ND	2.0	0.13		ND			20	
Endrin ketone [2C]	ND	2.0	0.13		ND			20	
gamma-BHC	ND	1.0	0.10		ND			20	
gamma-BHC [2C]	ND	1.0	0.10		ND			20	
gamma-Chlordane	ND	1.0	0.07		ND			20	
gamma-Chlordane [2C]	ND	1.0	0.07		ND			20	
Heptachlor	ND	1.0	0.05		ND			20	
Heptachlor [2C]	ND	1.0	0.05		ND			20	
Heptachlor epoxide	ND	1.0	0.09		ND			20	
Heptachlor epoxide [2C]	ND	1.0	0.09		ND			20	
Methoxychlor	ND	5.0	0.18		ND			20	
Methoxychlor [2C]	ND	5.0	0.18		ND			20	
Surrogate: Decachlorobiphenyl	5.922			16.6667		35.5	43 - 84		S10
Surrogate: Decachlorobiphenyl [	4.233			16.6667		25.4	43 - 84		S10
Surrogate: Tetrachloro-m-xylene	5.196			16.6667		31.2	54 - 118		S10
Surrogate: Tetrachloro-m-xylene	5.227			16.6667		31.4	54 - 118		S10

##### Matrix Spike (B8K0267-MS1)

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	8.72733	2.0	0.07	16.6667	ND	52.4	73 - 110		M2
4,4'-DDD [2C]	7.81667	2.0	0.07	16.6667	ND	46.9	73 - 110		M2
4,4'-DDE	8.94250	2.0	0.05	16.6667	ND	53.7	71 - 99		M2
4,4'-DDE [2C]	7.32783	2.0	0.05	16.6667	ND	44.0	71 - 99		M2
4,4'-DDT	6.38683	2.0	0.10	16.6667	ND	38.3	51 - 106		M2
4,4'-DDT [2C]	8.45583	2.0	0.10	16.6667	ND	50.7	51 - 106		M2
Aldrin	8.17433	1.0	0.04	16.6667	ND	49.0	67 - 95		M2
Aldrin [2C]	7.08783	1.0	0.04	16.6667	ND	42.5	67 - 95		M2
alpha-BHC	7.81467	1.0	0.11	16.6667	ND	46.9	67 - 94		M2
alpha-BHC [2C]	7.32033	1.0	0.11	16.6667	ND	43.9	67 - 94		M2
alpha-Chlordane	8.60483	1.0	0.12	16.6667	ND	51.6	69 - 99		M2
alpha-Chlordane [2C]	7.28083	1.0	0.12	16.6667	ND	43.7	69 - 99		M2
beta-BHC	8.22200	1.0	0.06	16.6667	ND	49.3	67 - 99		M2
beta-BHC [2C]	7.58450	1.0	0.06	16.6667	ND	45.5	67 - 99		M2
delta-BHC	9.21833	1.0	0.03	16.6667	ND	55.3	73 - 103		M2
delta-BHC [2C]	8.65950	1.0	0.03	16.6667	ND	52.0	73 - 103		M2
Dieldrin	8.56500	2.0	0.13	16.6667	ND	51.4	65 - 93		M2
Dieldrin [2C]	7.34450	2.0	0.13	16.6667	ND	44.1	65 - 93		M2
Endosulfan I	7.88433	1.0	0.10	16.6667	ND	47.3	65 - 91		M2
Endosulfan I [2C]	7.02517	1.0	0.10	16.6667	ND	42.2	65 - 91		M2
Endosulfan II	8.68383	2.0	0.03	16.6667	ND	52.1	65 - 102		M2
Endosulfan II [2C]	8.12517	2.0	0.03	16.6667	ND	48.8	65 - 102		M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B8K0267-MS1) - Continued

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/7/2018

Endosulfan sulfate	8.09883	2.0	0.08	16.6667	ND	48.6	64 - 106		M2
Endosulfan Sulfate [2C]	7.99267	2.0	0.08	16.6667	ND	48.0	64 - 106		M2
Endrin	9.00950	2.0	0.04	16.6667	ND	54.1	64 - 111		M2
Endrin [2C]	8.73517	2.0	0.04	16.6667	ND	52.4	64 - 111		M2
Endrin aldehyde	8.72417	2.0	0.31	16.6667	ND	52.3	64 - 109		M2
Endrin aldehyde [2C]	6.44867	2.0	0.31	16.6667	ND	38.7	64 - 109		M2
Endrin ketone	7.49717	2.0	0.13	16.6667	ND	45.0	57 - 101		M2
Endrin ketone [2C]	7.92833	2.0	0.13	16.6667	ND	47.6	57 - 101		M2
gamma-BHC	7.91117	1.0	0.10	16.6667	ND	47.5	65 - 96		M2
gamma-BHC [2C]	7.55667	1.0	0.10	16.6667	ND	45.3	65 - 96		M2
gamma-Chlordane	8.33667	1.0	0.07	16.6667	ND	50.0	65 - 113		M2
gamma-Chlordane [2C]	7.18567	1.0	0.07	16.6667	ND	43.1	65 - 113		M2
Heptachlor	8.76583	1.0	0.05	16.6667	ND	52.6	61 - 96		M2
Heptachlor [2C]	9.52583	1.0	0.05	16.6667	ND	57.2	61 - 96		M2
Heptachlor epoxide	8.04350	1.0	0.09	16.6667	ND	48.3	64 - 89		M2
Heptachlor epoxide [2C]	7.32400	1.0	0.09	16.6667	ND	43.9	64 - 89		M2
Methoxychlor	9.50933	5.0	0.18	16.6667	ND	57.1	67 - 109		M2
Methoxychlor [2C]	9.24900	5.0	0.18	16.6667	ND	55.5	67 - 109		M2
Surrogate: Decachlorobiphenyl	7.635			16.6667		45.8	43 - 84		
Surrogate: Decachlorobiphenyl [	5.022			16.6667		30.1	43 - 84		S10
Surrogate: Tetrachloro-m-xylene	6.940			16.6667		41.6	54 - 118		S10
Surrogate: Tetrachloro-m-xylene	6.477			16.6667		38.9	54 - 118		S10

##### Matrix Spike Dup (B8K0267-MSD1)

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	8.64067	2.0	0.07	16.6667	ND	51.8	73 - 110	0.998	20	M2
4,4'-DDD [2C]	7.96567	2.0	0.07	16.6667	ND	47.8	73 - 110	1.89	20	M2
4,4'-DDE	8.93733	2.0	0.05	16.6667	ND	53.6	71 - 99	0.0578	20	M2
4,4'-DDE [2C]	7.32033	2.0	0.05	16.6667	ND	43.9	71 - 99	0.102	20	M2
4,4'-DDT	6.37933	2.0	0.10	16.6667	ND	38.3	51 - 106	0.118	20	M2
4,4'-DDT [2C]	8.59050	2.0	0.10	16.6667	ND	51.5	51 - 106	1.58	20	
Aldrin	8.14967	1.0	0.04	16.6667	ND	48.9	67 - 95	0.302	20	M2
Aldrin [2C]	7.23733	1.0	0.04	16.6667	ND	43.4	67 - 95	2.09	20	M2
alpha-BHC	7.81283	1.0	0.11	16.6667	ND	46.9	67 - 94	0.0235	20	M2
alpha-BHC [2C]	7.65933	1.0	0.11	16.6667	ND	46.0	67 - 94	4.53	20	M2
alpha-Chlordane	8.54083	1.0	0.12	16.6667	ND	51.2	69 - 99	0.747	20	M2
alpha-Chlordane [2C]	7.28867	1.0	0.12	16.6667	ND	43.7	69 - 99	0.108	20	M2
beta-BHC	8.17733	1.0	0.06	16.6667	ND	49.1	67 - 99	0.545	20	M2
beta-BHC [2C]	7.99417	1.0	0.06	16.6667	ND	48.0	67 - 99	5.26	20	M2
delta-BHC	9.20967	1.0	0.03	16.6667	ND	55.3	73 - 103	0.0941	20	M2
delta-BHC [2C]	8.95683	1.0	0.03	16.6667	ND	53.7	73 - 103	3.38	20	M2
Dieldrin	8.54717	2.0	0.13	16.6667	ND	51.3	65 - 93	0.208	20	M2





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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0267 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B8K0267-MSD1) - Continued

Source: 1804036-02

Prepared: 11/7/2018 Analyzed: 11/7/2018

Dieldrin [2C]	7.40733	2.0	0.13	16.6667	ND	44.4	65 - 93	0.852	20	M2
Endosulfan I	7.89000	1.0	0.10	16.6667	ND	47.3	65 - 91	0.0718	20	M2
Endosulfan I [2C]	6.91200	1.0	0.10	16.6667	ND	41.5	65 - 91	1.62	20	M2
Endosulfan II	8.65750	2.0	0.03	16.6667	ND	51.9	65 - 102	0.304	20	M2
Endosulfan II [2C]	8.26267	2.0	0.03	16.6667	ND	49.6	65 - 102	1.68	20	M2
Endosulfan sulfate	8.08733	2.0	0.08	16.6667	ND	48.5	64 - 106	0.142	20	M2
Endosulfan Sulfate [2C]	8.18900	2.0	0.08	16.6667	ND	49.1	64 - 106	2.43	20	M2
Endrin	8.99100	2.0	0.04	16.6667	ND	53.9	64 - 111	0.206	20	M2
Endrin [2C]	8.89517	2.0	0.04	16.6667	ND	53.4	64 - 111	1.82	20	M2
Endrin aldehyde	8.69300	2.0	0.31	16.6667	ND	52.2	64 - 109	0.358	20	M2
Endrin aldehyde [2C]	6.56417	2.0	0.31	16.6667	ND	39.4	64 - 109	1.78	20	M2
Endrin ketone	7.47467	2.0	0.13	16.6667	ND	44.8	57 - 101	0.301	20	M2
Endrin ketone [2C]	8.03017	2.0	0.13	16.6667	ND	48.2	57 - 101	1.28	20	M2
gamma-BHC	7.90667	1.0	0.10	16.6667	ND	47.4	65 - 96	0.0569	20	M2
gamma-BHC [2C]	7.86050	1.0	0.10	16.6667	ND	47.2	65 - 96	3.94	20	M2
gamma-Chlordane	8.25967	1.0	0.07	16.6667	ND	49.6	65 - 113	0.928	20	M2
gamma-Chlordane [2C]	7.19233	1.0	0.07	16.6667	ND	43.2	65 - 113	0.0927	20	M2
Heptachlor	8.76917	1.0	0.05	16.6667	ND	52.6	61 - 96	0.0380	20	M2
Heptachlor [2C]	10.1040	1.0	0.05	16.6667	ND	60.6	61 - 96	5.89	20	M2
Heptachlor epoxide	7.92700	1.0	0.09	16.6667	ND	47.6	64 - 89	1.46	20	M2
Heptachlor epoxide [2C]	7.40967	1.0	0.09	16.6667	ND	44.5	64 - 89	1.16	20	M2
Methoxychlor	9.51650	5.0	0.18	16.6667	ND	57.1	67 - 109	0.0753	20	M2
Methoxychlor [2C]	9.92483	5.0	0.18	16.6667	ND	59.5	67 - 109	7.05	20	M2
Surrogate: Decachlorobiphenyl	6.883			16.6667		41.3	43 - 84			S10
Surrogate: Decachlorobiphenyl [	5.404			16.6667		32.4	43 - 84			S10
Surrogate: Tetrachloro-m-xylene	7.448			16.6667		44.7	54 - 118			S10
Surrogate: Tetrachloro-m-xylene	7.204			16.6667		43.2	54 - 118			S10



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

### Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0014 - GCSEMI\_PCB/PEST\_S

##### Blank (B8K0014-BLK2)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	ND	16	4.6
Aroclor 1221	ND	16	4.6
Aroclor 1232	ND	16	4.6
Aroclor 1242	ND	16	4.6
Aroclor 1248	ND	16	4.6
Aroclor 1254	ND	16	4.6
Aroclor 1260	ND	16	4.6
Aroclor 1262	ND	16	4.6
Aroclor 1268	ND	16	4.6

Surrogate: Decachlorobiphenyl	9.502		16.6667	57.0	43 - 84
Surrogate: Tetrachloro-m-xylene	11.43		16.6667	68.6	54 - 118

##### LCS (B8K0014-BS2)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	120.522	16	4.6	166.667	72.3	70 - 92
Aroclor 1260	135.970	16	4.6	166.667	81.6	62 - 103

Surrogate: Decachlorobiphenyl	9.636		16.6667	57.8	43 - 84
Surrogate: Tetrachloro-m-xylene	11.59		16.6667	69.5	54 - 118

##### Duplicate (B8K0014-DUP2)

Source: 1804036-82

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	ND	16	4.6	ND		20
Aroclor 1260	ND	16	4.6	ND		20

Surrogate: Decachlorobiphenyl	8.840		16.6667	53.0	43 - 84
Surrogate: Tetrachloro-m-xylene	12.93		16.6667	77.6	54 - 118

##### Matrix Spike (B8K0014-MS2)

Source: 1804036-63

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	151.477	16	4.6	166.667	ND	90.9	70 - 92		
Aroclor 1260	185.228	16	4.6	166.667	ND	111	62 - 103		M2
Surrogate: Decachlorobiphenyl	15.81		16.6667	94.9		43 - 84			S10
Surrogate: Tetrachloro-m-xylene	17.46		16.6667	105		54 - 118			

##### Matrix Spike Dup (B8K0014-MSD2)

Source: 1804036-63

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	149.859	16	4.6	166.667	ND	89.9	70 - 92	1.07	20
Aroclor 1260	181.232	16	4.6	166.667	ND	109	62 - 103	2.18	20
Surrogate: Decachlorobiphenyl	16.09		16.6667	96.6		43 - 84			S10
Surrogate: Tetrachloro-m-xylene	16.94		16.6667	102		54 - 118			



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/09/2018

### Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0028 - GCSEMI\_PCB/PEST\_W

##### Blank (B8K0028-BLK2)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	ND	0.50	0.04
Aroclor 1221	ND	1.0	0.04
Aroclor 1232	ND	0.50	0.04
Aroclor 1242	ND	0.50	0.04
Aroclor 1248	ND	0.50	0.04
Aroclor 1254	ND	0.50	0.04
Aroclor 1260	ND	0.50	0.04
Aroclor 1262	ND	0.50	0.04
Aroclor 1268	ND	0.50	0.04

Surrogate: Decachlorobiphenyl	0.3350		0.500000	67.0	8 - 128
Surrogate: Tetrachloro-m-xylene	0.4748		0.500000	95.0	32 - 126

##### LCS (B8K0028-BS2)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	4.01489	0.50	0.04	5.00000	80.3	72 - 107
Aroclor 1260	4.70490	0.50	0.04	5.00000	94.1	65 - 124

Surrogate: Decachlorobiphenyl	0.3939		0.500000	78.8	8 - 128
Surrogate: Tetrachloro-m-xylene	0.4774		0.500000	95.5	32 - 126

##### LCS Dup (B8K0028-BS2)

Prepared: 11/1/2018 Analyzed: 11/1/2018

Aroclor 1016	4.05726	0.50	0.04	5.00000	81.1	72 - 107	1.05	20
Aroclor 1260	4.67590	0.50	0.04	5.00000	93.5	65 - 124	0.618	20

Surrogate: Decachlorobiphenyl	0.3987		0.500000	79.7	8 - 128
Surrogate: Tetrachloro-m-xylene	0.4732		0.500000	94.6	32 - 126



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/09/2018

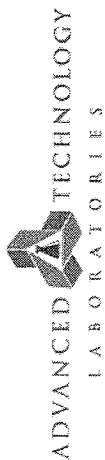
### Notes and Definitions

S4	Surrogate was diluted out.
S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
R2	RPD value outside acceptance criteria due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

#### Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.





# CHAIN OF CUSTODY RECORD

Page 2 of 11

3275 Walnut Ave., Signal Hill, CA 90755  
Tel: (562) 989-4045 • Fax: (562) 989-4040

Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt	
Y	N	Y	N
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	<input type="checkbox"/> 1. CHILLED	<input type="checkbox"/> 5. # OF SAMPLES MATCH COC
<input type="checkbox"/> FedEx	<input checked="" type="checkbox"/> OnTrac	<input type="checkbox"/> 2. HEADSPACE (VOA)	<input type="checkbox"/> 6. PRESERVED
<input type="checkbox"/> GSO	<input type="checkbox"/> Other:	<input type="checkbox"/> 3. CONTAINER IMPACT	<input type="checkbox"/> 7. COOLER TEMP, deg C
<input type="checkbox"/> Other:		<input type="checkbox"/> 4. SEALED	<input type="checkbox"/> 8. Y.O.

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421		Fax:	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		Attn: Accounts Payable		Email: accpayable@leightongroup.com		EDD		QA/QC			
Company: Leighton Consulting		Address: 17781 Cowan		Company: Leighton Group		Address: 17781 Cowan		State: CA		Zip: 92614			
City: Irvine		State: CA		City: Irvine		State: CA		Zip: 92614					

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J. Bobiwash					
ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	Remarks
1	1804036-11	PER4-0.5	10/27/18	805	
2	-12	PER4-1.5		808	
3	-13	PER4-3.0		810	
4	-14	PER5-0.5		818	
5	-15	PER5-1.5		820	
6	-16	PER5-3.0		824	
7	-17	PER6-0.5		827	
8	-18	PER6-1.5		829	
9	-19	PER6-3.0		832	
10					

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.		6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.	
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.		7. Electronic records maintained for five (5) years from report date.	
3. The following turnaround time conditions apply: TAT = 0 : 300% Surcharge SAME BUSINESS DAY (COB 5:00 PM) TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)		8. Hard copy reports will be disposed of after 45 calendar days from report date.	
4. Weekend, holiday, after-hours work ... ask for quote.		9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20/sample/week if extended storage is requested. - Hard copy and report: \$17.50 per hard copy report requested; \$50.00 per report/EDD; \$17.50 per hard copy report requested; \$50.00 per report/EDD.	
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab ... ask for quote.		10. Rush TCU/STLC samples: add 2 days to analysis TAT for extraction procedure. 11. Unanalyzed samples will incur a disposal fee of \$7 per sample. 12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	

Relinquished by: (Signature and Printed Name)		Date: 10/29/18		Time: 10:03	
Relinquished by: (Signature and Printed Name)		Date: 10/29/18		Time: 10:00	
Relinquished by: (Signature and Printed Name)		Date: 10/29/18		Time: 10:00	
Relinquished by: (Signature and Printed Name)		Date: 10/29/18		Time: 10:00	

# CHAIN OF CUSTODY RECORD

Page 3 of 11

For Laboratory Use Only  
ATLCC-Ver 20180321

Method of Transport		Sample Conditions Upon Receipt	
Client	Condition	Y	N
<input type="checkbox"/> ATL	<input type="checkbox"/> CHILLED	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> FedEx	<input type="checkbox"/> 5. # OF SAMPLES MATCH COC	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> GSO	<input type="checkbox"/> 2. HEADSPACE (NDA)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other:	<input type="checkbox"/> 6. PRESERVED	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 7. COOLER TEMP. deg. C	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 3. CONTAINER INTACT	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 4. SEALED	<input type="checkbox"/>	<input type="checkbox"/>

Instruction: Complete all shaded areas.

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421		Fax:	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND REPORT TO:		SEND INVOICE TO:		State: CA		Zip: 92614		Fax:	
Company: Leighton Consulting		Accounts Payable		Email: acctpayable@leightongroup.com		EDD		QA/QC					
Address: 17781 Cowan		Leighton Group		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614			

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:		Sample Description		Requested Analysis		Sample Matrix		Turnaround Time (TAT)		Container		Remarks										
ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	8081 (Organochlorine Pesticides)	8082 (PCBs)	8015 (GRO)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Lead 6010B	Arsenic 6020	Mercury 7471A	TPH-DRO, ORO (C13-C40) 8015	Soil	Select Solid Matrix	Select Water Matrix	Select Wastewater Matrix	Enter Custom Matrix	Quantity	Material: 1=Glass, 2=Plastic, 3=Metal	5=Rubber, 7=Canister	Typ: 1=Tube, 2=Vial, 3=Canister, 4=Pin	Preservative: 1=HCL, 2=HNO3, 3=H2SO4, 4=H2O, 5=Zn(Ac), 6=NaOH, 7=Na2S2O3
1	1804036-20	PER7-0.5	10/27/18	837	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	1	5	4	4
2	-21	PER7-1.5	10/27/18	840	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
3	-22	PER7-3.0	10/27/18	843	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
4	-23	PER8-0.5	10/27/18	845	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
5	-24	PER8-1.5	10/27/18	846	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
6	-25	PER8-3.0	10/27/18	847	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
7	-26	PER9-0.5	10/27/18	853	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
8	-27	PER9-1.5	10/27/18	855	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
9	-28	PER9-3.0	10/27/18	859	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1
10																										

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.  
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.  
3. The following turnaround time conditions apply:  
TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM  
TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)  
TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)  
TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)  
TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)  
TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)  
4. Weekend, holiday, after hours work --- ask for quote.  
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.  
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.  
7. Electronic records maintained for five (5) years from report date.  
8. Hard copy reports will be disposed of after 45 calendar days from report date.  
9. Storage and Report Fees:  
Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.  
Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.  
Hard copy and generated reports/EDDs: \$17.50 per hard copy report requested; \$50.00 per report if generated/reformatted report; \$35 per processed EDD.  
10. Rush TAT/STIC samples: add 2 days to analysis TAT for extraction procedure.  
11. Unanalyzed samples will incur a disposal fee of \$7 per sample.  
12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.

Relinquished by: (Signature and Printed Name)	Date: 10/27/18	Time: 10:00
Relinquished by: (Signature and Printed Name)	Date: 10/27/18	Time: 10:00
Relinquished by: (Signature and Printed Name)	Date: 10/27/18	Time: 10:00

As the authorized agent of the company above, hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Printed Name: Jennifer Babiwash  
Signature: *Jennifer Babiwash*



Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt	
Client	ATL	Condition	Y N
FedEx	OnTrac	1. CHILLED	Y N
GSO		2. HEADSPACE (N/A)	Y N
Other:		3. CONTAINER INTACT	Y N
		4. SEALED	Y N
		5. # OF SAMPLES MATCH COC	Y N
		6. PRESERVED	Y N
		7. COOLER TEMP. deg. C	2. 4. 3. 4
		8. SEAL, 402, 102	

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421		Fax:	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND INVOICE TO:		Attn: Accounts Payable		Email: accpayable@leightongroup.com		EDD		QA/QC	
Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		EDD		QA/QC	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND INVOICE TO:		Attn: Accounts Payable		Email: accpayable@leightongroup.com		EDD		QA/QC	
Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		EDD		QA/QC	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND INVOICE TO:		Attn: Accounts Payable		Email: accpayable@leightongroup.com		EDD		QA/QC	

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J. Bobrow					
ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	Sample Description
1	1804036-29	PER10-0.5	10/27/18	901	
2	-30	PER10-1.5		903	
3	-31	PER10-3.0		906	
4	-32	PER11-0.5		926	
5	-33	PER11-1.5		928	
6	-34	PER11-3.0		929	
7	-35	PER12-0.5		0935	
8	-36	PER12-1.5		0937	
9	-37	PER12-3.0		0938	
10	-38	DUP-2		0936	

Requested Analysis		Sample Matrix		Container	
TPH-DRO, ORO (C13-C40) 8015		Enter Custom Matrix		Material: 1-Glass, 2-Plastic, 3-Metal	
Mercury 7471A		Select Non-aqueous Matrix		Type: 1-Bottle, 2-Vial, 3-Canister, 4-Pint, 5-Gallon, 6-Drum, 7-Canister, 8-Metal	
Arsenic 6020		Select Wastewater Matrix		Quantity	
Lead 6010B		Select Water Matrix		3	
Select Analysis		Select Solid Matrix		1	
Select Analysis		Soil		5	
Select Analysis				1	
Select Analysis				4	
8015 (GRO)					
8082 (PCBS)					
8081 (Organochlorine Pesticides)					

Relinquished by: (Signature and Printed Name)		Date: 10/29/18	Time: 10:40
Relinquished by: (Signature and Printed Name)		Date: 10/29/18	Time: 10:40
Relinquished by: (Signature and Printed Name)		Date: 10/29/18	Time: 10:40



Instruction: Complete all shaded areas.

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND REPORT TO:		SEND INVOICE TO:		Attn: Accounts Payable		E-mail: acctpayable@leightongroup.com	
Company: Leighton Consulting								Company: Leighton Group			
Address: 17781 Cowan								Address: 17781 Cowan			
City: Irvine		State: CA		Zip: 92614		City: Irvine		State: CA		Zip: 92614	
QA/QC		<input checked="" type="checkbox"/> Routine		<input type="checkbox"/> Excel		<input type="checkbox"/> EDF		<input type="checkbox"/> Legal		<input type="checkbox"/> RWQCB	
		<input type="checkbox"/> Caltrans		<input type="checkbox"/> Equis		<input type="checkbox"/> Level IV					
		<input type="checkbox"/> Level IV									

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J Brown					
ITEM	Laboratory ID (For Lab Use Only)	Sample Description		Date	Time
		Sample ID / Location			
1	1804036-39	PER13-0.5		10/23/18	1011
2	-40	PER13-1.5			1013
3	-41	PER13-3.0			1014
4	-42	PER14-0.5			1017
5	-43	PER14-1.5			1019
6	-44	PER14-3.0			1020
7	-45	PER15-0.5			1024
8	-46	PER15-1.5			1027
9	-47	PER15-3.0			1030
10					

<b>TERMS</b>	
1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM. 2. Samples submitted After 3:00 PM are considered received the following business day at 8:00 AM. 3. The following turnaround time conditions apply: TAT = 1: 100% Surcharge SAME BUSINESS DAY if received by 9:00 AM TAT = 2: 300% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 3: 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3: 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4: 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5: NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM) 4. Weekend, holiday, after-hours work days ... ask for quote. 5. Subcontract TAT is 10-15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab ... ask for quote. 6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples. 7. Electronic records maintained for five (5) years from date of sample. 8. Hard copy reports will be disposed of after 45 calendar days from date. 9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested. - Hard copy and report and reports/EODs: \$17.50 per hard copy report requested; \$50.00 per reprocessed/reformatted report; \$35 per processed EOD. 10. Rush TAT/SLIC samples will add 2 days to analysis TAT for extraction procedure. 11. Unanalyzed sample will be stored for 30 days. 12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	
As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.	
Relinquished by: (Signature and Printed Name) Date: 08/29/13 Time: 1:23 PM	Received by: (Signature and Printed Name) Date: 08/29/13 Time: 1:47 PM
Relinquished by: (Signature and Printed Name) Date: 08/29/13 Time: 1:23 PM	Received by: (Signature and Printed Name) Date: 08/29/13 Time: 1:47 PM
Relinquished by: (Signature and Printed Name) Date: 08/29/13 Time: 1:23 PM	Received by: (Signature and Printed Name) Date: 08/29/13 Time: 1:47 PM
Signature: _____ Printed Name: _____	



# CHAIN OF CUSTODY RECORD

Page 6 of 11

3275 Walnut Ave., Signal Hill, CA 90755  
Tel: (562) 989-4045 • Fax: (562) 989-4040

Instruction: Complete all shaded areas.

For Laboratory Use Only		ATLCO-Ver:20180321	
Method of Transport		Sample Conditions Upon Receipt	
<input type="checkbox"/> Client	<input type="checkbox"/> ATL	<input type="checkbox"/> Condition	<input type="checkbox"/> Y <input type="checkbox"/> N
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	<input type="checkbox"/> 1. CHILLED	<input type="checkbox"/> 5. # OF SAMPLES MATCH COC
<input type="checkbox"/> GSO	<input type="checkbox"/> Other:	<input type="checkbox"/> 2. HEADSPACE (VIA)	<input type="checkbox"/> 6. PRESERVED
<input type="checkbox"/>		<input type="checkbox"/> 3. CONTAINER INTACT	<input type="checkbox"/> 7. COOLER TEMP. deg.C
<input type="checkbox"/>		<input type="checkbox"/> 4. SEALED	<input type="checkbox"/> 8. 7.4-3.4

Company: Leighton Consulting		Address: 17781 Cowan		Tel: 949-250-1421	
City: Irvine		State: CA		Zip: 92614	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		Fax:	
Company: Leighton Consulting		Accounts Payable		SEND INVOICE TO:	
Address: 17781 Cowan		Leighton Group		Email: accpayable@leightongroup.com	
City: Irvine		State: CA		Zip: 92614	

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640 008		PO #:			
Sampler: J. Bobbitt					
Laboratory ID (For Lab Use Only)		Sample Description		Requested Analysis	
ITEM	Sample ID / Location	Date	Time	TPH-DRO, ORO (C13-C40) 8015	
1	1804036-48	10/27/18	1051	Mercury 7471A	
2	-44		1053	Arsenic 6020	
3	-50		1055	Lead 6010B	
4	-51		1057	Select Analysis	
5	-52		1100	Select Analysis	
6	-53		1101	Select Analysis	
7	-54		1104	8015 (GRO)	
8	-55		1105	8082 (PCBs)	
9	✓ -56	✓	1107	8081 (Organochlorine Pesticides)	
10					

6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.		7. Electronic records maintained for five (5) years from report date.		8. Hard copy reports will be disposed of after 45 calendar days from report date.	
9. Storage and Report Fees:		Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.		\$20 sample/week if extended storage is requested.	
Hard copy reports: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.		Hard copy reports: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.		Hard copy reports: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.	

Relinquished by: (Signature and Printed Name)		Date: 10/27/18		Time: 10:50	
Relinquished by: (Signature and Printed Name)		Date: 10/27/18		Time: 10:50	
Relinquished by: (Signature and Printed Name)		Date: 10/27/18		Time: 10:50	

3275 Walnut Ave., Signal Hill, CA 90755  
Tel: (562) 989-4045 • Fax: (562) 989-4040

Tel: (562) 989-4045 • Fax: (562) 989-4040

Instruction: Complete all shaded areas.







Method of Transport		For Laboratory Use Only						ATLCC Ver: 20180321	
		Simple Conditions Upon Receipt							
		Condition		Y	N	Condition		Y	N
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	1. CHILLED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. # OF SAMPLES MATCH COC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	2. HEADSPACE (VPA)		<input type="checkbox"/>	<input type="checkbox"/>	6. PRESERVED		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> GSO		3. CONTAINER INTACT		<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. COOLING TEMP deg C/F		3.4	3.4
<input type="checkbox"/> Other: _____		4. SEALED		<input type="checkbox"/>	<input checked="" type="checkbox"/>			3.4	3.4

Company: Leighton Consulting		Address: 17781 Cowan		Tel: 949-250-1421	
City: Irvine		State: CA		Zip: 92614	
Fax:					
SEND REPORT TO:		SEND INVOICE TO:		EED	
Attn: Ross Surrency	Email: rsurrency@leightongroup.com	Attn: Accounts Payable		<input type="checkbox"/> Excel <input type="checkbox"/> EDF <input type="checkbox"/> Equis <input type="checkbox"/> _____	
Company: Leighton Consulting		Company: Leighton Group		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV <input type="checkbox"/> _____	
Address: 17781 Cowan		Address: 17781 Cowan			
City: Irvine	State: CA	Zip: 92614	State: CA Zip: 92614		

Project Name: LAUSD - Colfax ES			Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:				
Sampler: J. Bobrowski						
ITEM	Laboratory ID (For Lab Use Only)	Sample Description		Date	Time	
		Sample ID / Location				
1	1804036-57	PER19-0.5		8/27/18	11:00	
2	-58	PER19-1.5			11:11	
3	-59	PER19-3.0			11:12	
4	-60	PER20-0.5			11:15	
5	-61	PER20-1.5			11:17	
6	-62	PER20-3.0			11:19	
7	-63	PER21-0.5			11:23	
8	-64	PER21-1.5			11:24	
9	-65	PER21-3.0			11:25	
10	-66	DUP-3			11:35	

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.	to the subcontract lab -- ask for quote.		regenerated/reformatted report: \$35 per processed EDD.	
2. Samples submitted After 3:00 PM are considered received the following business day at 8:00 AM.			10. Rush TCLP/STLC samples: add 2 days to analysis \$7 per extraction procedure.	
3. The following turnaround time conditions apply:			11. Unlabeled samples will incur a disposal fee of \$2 per sample.	
TAT = 0 : 300% Surcharge SAME BUSINESS DAY (COB 5:00 PM)			12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	
TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)				
TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)				
TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)				
TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)				
TAT = 5 : NO SURCHARGE 5TH BUSINESS DAY (COB 5:00 PM)				
4. Weekend, holiday, after-hours work --- ask for quote.				
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.				
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.				
7. Electronic records maintained for five (5) years from report date.				
8. Hard copy reports will be disposed of after 45 calendar days from report date.				
9. Storage and Report Fees:				
- Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.				
- Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.				
- Hard copy and regenerated reports/EDDs: \$17.50 per hard copy report requested; \$50.00 per sample.				

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	10/29/18	1:30		10/29/18	1:30
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	10/29/18	1:30		10/29/18	1:30
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	10/29/18	1:30		10/29/18	1:30

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Printed Name: \_\_\_\_\_ Signature: \_\_\_\_\_

# CHAIN OF CUSTODY RECORD

Page 8 of 11

Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt	
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	Condition	Y N
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	1. CHILLED	<input checked="" type="checkbox"/>
<input type="checkbox"/> GSO		2. HEADSPACE (VOA)	<input type="checkbox"/>
<input type="checkbox"/> Other:		3. CONTAINER INTACT	<input checked="" type="checkbox"/>
		4. SEALED	<input checked="" type="checkbox"/>

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421		Fax:	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		Attn: Accounts Payable		Email: acctpayable@leightongroup.com		SEND INVOICE TO:		SEND REPORT TO:		QA/QC	
Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		EDD		<input checked="" type="radio"/> Routine <input type="radio"/> Caltrans <input type="radio"/> Legal <input type="radio"/> RWQCB <input type="radio"/> Level IV	

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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ITEM	Laboratory ID (for Lab Use Only)	Sample Description			Date	Time	Requested Analysis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Sample ID / Location					8081 (Organochlorine Pesticides)	8082 (PCBs)	8015 (GRO)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Lead 6010B	Arsenic 6020	Mercury 7471A	TPH-DRO, ORO (C13-C40) 8015																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1	1804036-67	PER22-0.5			10/23/18	1133																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.		6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.		10. Rush TCU/STC samples: add 2 days to analysis TAT for extraction procedure.	
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.		7. Electronic records maintained for five (5) years from report date.		11. Unanalyzed samples will incur a disposal fee of \$7 per sample.	
3. The following turnaround time conditions apply: TAT = 0 : 300% Surcharge SAME BUSINESS DAY (COB 5:00 PM) TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)		8. Hard copy reports will be disposed of after 45 calendar days from report date.		12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	
4. Weekend, holiday, after-hours work ... ask for quote.		9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.			
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab ... ask for quote.					

Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1133
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1134
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1137
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1141
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1142
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1144
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1148
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1149
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1151

Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1133
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1134
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1137
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1141
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1142
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1144
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1148
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1149
Relinquished by: (Signature and Printed Name)	Date: 10/24/18	Time: 1151

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.	
Printed Name: <u>J. Bobiwash</u>	Signature: <u>[Signature]</u>

3275 Walnut Ave., Signal Hill, CA 90755  
Tel: (562) 989-4045 • Fax: (562) 989-4040

Tel: (562) 989-4045 • Fax: (562) 989-4040

**Instruction:** Complete all shaded areas.

Method of Transport		For Laboratory Use Only				ATLCOG Ver 20180321			
		Sample Conditions Upon Receipt							
		Condition	Y	N	Condition	Y	N		
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	1. CHILLED	<input checked="" type="checkbox"/>		5. # OF SAMPLES MATCH COC	<input checked="" type="checkbox"/>			
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	2. HEADSPACE (VOA)	<input type="checkbox"/>		6. PRESERVED	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="checkbox"/> GSO		3. CONTAINER INTACT	<input checked="" type="checkbox"/>		7. COOLER TEMP, deg C	2.4 / 3.4			
<input type="checkbox"/> Other:		4. SEALED	<input checked="" type="checkbox"/>		2.8 / 4.0 / 4.2				

Company: Leighton Consulting		Address: 17781 Cowan		Tel: 949-250-1421	
		City: Irvine	State: CA	Zip: 92614	Fax:
SEND REPORT TO:		SEND INVOICE TO:			
Attn: Ross Surrency	Email: rsurrency@leightongroup.com	Attn: Accounts Payable		Email: acctpayable@leightongroup.com	
Company: Leighton Consulting		Company: Leighton Group			
Address: 17781 Cowan		Address: 17781 Cowan			
City: Irvine	State: CA	Zip: 92614	City: Irvine	State: CA	Zip: 92614
CUSTOMER		QA/QC <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV <input type="checkbox"/> _____			
		EDD <input type="radio"/> Excel <input type="radio"/> EDF <input type="radio"/> Equis <input type="radio"/> _____			

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J. Behlendorf					
ITEM	Laboratory ID (For Lab Use Only)	Sample Description		Date	Time
		Sample ID / Location			
1	1804036-76	PER25-0.5		10/27/18	1234
2	-77	PER25-1.5			1236
3	-78	PER25-3.0			1238
4	-79	PER26-0.5			1241
5	-80	PER26-1.5			1242
6	-81	PER26-3.0			1243
7	-82	PER27-0.5			1246
8	-83	PER27-1.5			1247
9	-84	PER27-3.0			1248
10					

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.	
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.	
3. The following turnaround time conditions apply:	
TAT = 0: 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM	
TAT = 1: 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)	
TAT = 2: 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)	
TAT = 3: 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)	
TAT = 4: 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)	
TAT = 5: NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)	
4. Weekend, holiday, after-hour work --- ask for quote.	
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective	
1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.	
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.	
3. The following turnaround time conditions apply:	
TAT = 0: 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM	
TAT = 1: 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)	
TAT = 2: 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)	
TAT = 3: 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)	
TAT = 4: 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)	
TAT = 5: NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)	
4. Weekend, holiday, after-hour work --- ask for quote.	
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective	

CUSTODY	Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Printed Name: \_\_\_\_\_ Signature: \_\_\_\_\_



# CHAIN OF CUSTODY RECORD

Page 10 of 11

Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt	
Client	Y	Condition	N
Exedy	<input checked="" type="checkbox"/>	5. # OF SAMPLES MATCH COC	<input checked="" type="checkbox"/>
GSO	<input checked="" type="checkbox"/>	6. PRESERVED	<input checked="" type="checkbox"/>
Other	<input checked="" type="checkbox"/>	7. COOLER TEMP. deg C	<u>2.4, 3.4</u>
		8. SEALED	<input checked="" type="checkbox"/>

Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		Tel: 949-250-1421		Fax:	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND REPORT TO:		SEND INVOICE TO:		Email: accpayable@leightongroup.com		EQUIS		QA/QC	
Company: Leighton Consulting		Address: 17781 Cowan		City: Irvine		State: CA		Zip: 92614		EQUIS		QA/QC	
Attn: Ross Surrency		Email: rsurrency@leightongroup.com		SEND REPORT TO:		SEND INVOICE TO:		Email: accpayable@leightongroup.com		EQUIS		QA/QC	

Project Name: LAUSD - Colfax ES		Quote #: D181041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J Bobiway					
ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	Sample Description
1	1804036-85	PER28-0.5	10/24/13	1252	
2	-86	PER28-1.5		1253	
3	-87	PER28-3.0		1254	
4	-88	PER29-0.5		1259	
5	-89	PER29-1.5		1259	
6	-90	PER29-3.0		1300	
7					
8					
9					
10					

Requested Analysis		Sample Matrix		Container	
TPH-DRO, ORO (C13-C40) 8015		Soil		Material: 1=Glass, 2=Plastic, 3=Metal	
Mercury 7471A		Select Solid Matrix		Type: 1=Tube, 2=Vial, 3=Canister	
Arsenic 6020		Select Non-aqueous Matrix		5=Jar, 6=Beaker, 7=Canister	
Lead 6010B		Select Water Matrix		Turnaround Time (TAT)	
Select Analysis				Quantity	
Select Analysis				Remarks	
Select Analysis					
Select Analysis					
Select Analysis					
8015 (GRO)					
8082 (PCBs)					
8081 (Organochlorine Pesticides)					

Relinquished by: (Signature and Printed Name)		Date: 10/24/13	Time: 12:58
Relinquished by: (Signature and Printed Name)		Date: 10/24/13	Time: 12:58
Relinquished by: (Signature and Printed Name)		Date: 10/24/13	Time: 12:58



## Dominic Mata

---

**From:** Ross Surrency <[rsurrency@leightongroup.com](mailto:rsurrency@leightongroup.com)>  
**Sent:** Friday, November 02, 2018 10:43 AM  
**To:** Dominic Mata  
**Cc:** Robert Lovdahl; Carmen Aguila; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Two-day.

Ross

---

**From:** Dominic Mata [<mailto:dominic@atlglobal.com>]  
**Sent:** Friday, November 02, 2018 10:41 AM  
**To:** Ross Surrency  
**Cc:** Robert Lovdahl; Carmen Aguila; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Hi Ross,

What TAT would you like for the below arsenic analysis?

Thanks,  
Dominic

---

**From:** Ross Surrency [<mailto:rsurrency@leightongroup.com>]  
**Sent:** Friday, November 02, 2018 8:00 AM  
**To:** Dominic Mata  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Dominic,

Please run the following samples for arsenic:

PER12-1.5  
PER14-1.5

Thanks,

Ross Surrency, PG  
Associate Geologist  
**Leighton Consulting, Inc**  
17781 Cowan, Irvine, CA 92614  
(949) 681-4264 – Direct  
(949) 880-4439 – Cell

Geotechnical | Geoenvironmental | Materials Testing  
SOLUTIONS YOU CAN BUILD ON

---

**From:** Dominic Mata [<mailto:dominic@atlglobal.com>]  
**Sent:** Thursday, November 01, 2018 6:00 PM



## Dominic Mata

---

**From:** Ross Surrency <rsurrency@leightongroup.com>  
**Sent:** Friday, November 02, 2018 11:10 AM  
**To:** Dominic Mata  
**Cc:** Robert Lovdahl; customer.relations@atlglobal.com  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Dominic,

Please analyze the following sample for TPH-DRO/ORO on a 2-day TAT:

PER22-1.5.

Thanks,

Ross Surrency, PG  
Associate Geologist  
Leighton Consulting, Inc  
17781 Cowan, Irvine, CA 92614  
(949) 681-4264 – Direct  
(949) 880-4439 – Cell

Geotechnical | Geoenvironmental | Materials Testing  
SOLUTIONS YOU CAN BUILD ON

---

**From:** Dominic Mata [<mailto:dominic@atlglobal.com>]  
**Sent:** Thursday, November 01, 2018 6:00 PM  
**To:** Ross Surrency  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Good afternoon Ross,

Please find partial results for the above project attached. Final report is pending 8081 & 8082 analyses that will be completed tomorrow (11/2). If I can further assist, please let me know.

Thanks,



Dominic Mata | Project Coordinator  
ADVANCED TECHNOLOGY LABORATORIES  
3275 Walnut Avenue, Signal Hill CA 90755  
O: 562.989.4045 ext. 238 | <http://www.atlglobal.com>

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## Dominic Mata

---

**From:** Ross Surrency <[rsurrency@leightongroup.com](mailto:rsurrency@leightongroup.com)>  
**Sent:** Friday, November 02, 2018 1:26 PM  
**To:** Dominic Mata  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Dominic,

Please run STLC for lead on the following samples on a standard TAT:

PER15-0.5  
PER24-0.5

Thanks,

Ross Surrency, PG  
Associate Geologist  
Leighton Consulting, Inc  
17781 Cowan, Irvine, CA 92614  
(949) 681-4264 – Direct  
(949) 880-4439 – Cell

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---

**From:** Dominic Mata [<mailto:dominic@atlglobal.com>]  
**Sent:** Thursday, November 01, 2018 6:00 PM  
**To:** Ross Surrency  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Good afternoon Ross,

Please find partial results for the above project attached. Final report is pending 8081 & 8082 analyses that will be completed tomorrow (11/2). If I can further assist, please let me know.

Thanks,



Dominic Mata | Project Coordinator  
ADVANCED TECHNOLOGY LABORATORIES  
3275 Walnut Avenue, Signal Hill CA 90755  
O: 562.989.4045 ext. 238 | <http://www.atlglobal.com>

*Laboratory Excellence Defined*

## Dominic Mata

---

**From:** Ross Surrency <[rsurrency@leightongroup.com](mailto:rsurrency@leightongroup.com)>  
**Sent:** Monday, November 05, 2018 9:13 AM  
**To:** Dominic Mata  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** RE: Partial Results 2 - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Dominic,

Please analyze the following sample for OCPs (8081) on a 3-day TAT.

PER1-1.5.

Thanks,

Ross Surrency, PG  
Associate Geologist  
Leighton Consulting, Inc  
17781 Cowan, Irvine, CA 92614  
(949) 681-4264 – Direct  
(949) 880-4439 – Cell

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---

**From:** Dominic Mata [<mailto:dominic@atlglobal.com>]  
**Sent:** Friday, November 02, 2018 2:38 PM  
**To:** Ross Surrency  
**Cc:** Robert Lovdahl; [customer.relations@atlglobal.com](mailto:customer.relations@atlglobal.com)  
**Subject:** Partial Results 2 - LAUSD-Colfax ES, 11640.008 (ATL# 1804036)

Hello Ross,

Please find an updated daft report for all analyses that were due yesterday (11/1) for the above project attached. Final report is pending additional analyses requested today due Tuesday (11/6). If I can further assist, please let me know.

Thanks,



Dominic Mata | Project Coordinator  
ADVANCED TECHNOLOGY LABORATORIES  
3275 Walnut Avenue, Signal Hill CA 90755  
O: 562.989.4045 ext. 238 | <http://www.atlglobal.com>

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November 12, 2018

Ross Surrency  
Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614  
Tel: (949) 250-1421  
Fax: (949) 757-7230

ELAP No.: 1838  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Re: ATL Work Order Number : 1804142  
Client Reference : LAUSD- Colfax ES, 11640.008

Enclosed are the results for sample(s) received on November 03, 2018 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PER1-SW-0.5	1804142-01	Soil	11/03/18 7:12	11/03/18 10:46
PER1-SW-1.5	1804142-02	Soil	11/03/18 7:14	11/03/18 10:46
PER1-SE-0.5	1804142-04	Soil	11/03/18 7:21	11/03/18 10:46
PER1-SE-1.5	1804142-05	Soil	11/03/18 7:22	11/03/18 10:46
PER22-NW-0.5	1804142-07	Soil	11/03/18 8:19	11/03/18 10:46
PER22-NW-1.5	1804142-08	Soil	11/03/18 8:20	11/03/18 10:46
PER22-NE-0.5	1804142-10	Soil	11/03/18 8:25	11/03/18 10:46
PER22-NE-1.5	1804142-11	Soil	11/03/18 8:27	11/03/18 10:46
PER12-NE-0.5	1804142-13	Soil	11/03/18 7:47	11/03/18 10:46
PER12-NE-1.5	1804142-14	Soil	11/03/18 7:48	11/03/18 10:46
PER12-SE-0.5	1804142-16	Soil	11/03/18 7:42	11/03/18 10:46
PER12-SE-1.5	1804142-17	Soil	11/03/18 7:43	11/03/18 10:46
PER14-NE-0.5	1804142-19	Soil	11/03/18 7:57	11/03/18 10:46
PER14-NE-1.5	1804142-20	Soil	11/03/18 7:58	11/03/18 10:46
PER14-SE-0.5	1804142-22	Soil	11/03/18 8:03	11/03/18 10:46
PER14-SE-1.5	1804142-23	Soil	11/03/18 8:04	11/03/18 10:46
EB-2	1804142-25	Water	11/03/18 8:33	11/03/18 10:46
DRUM COMPOSITE	1804142-26	Water	11/03/18 8:55	11/03/18 10:46





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### DETECTION SUMMARY

**Client Sample ID PER1-SW-0.5**

**Lab ID: 1804142-01**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane [2C]	10	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:23	
Chlordane [2C]	94	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:23	
Dieldrin [2C]	39	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:23	
gamma-Chlordane	7.1	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:23	
Heptachlor epoxide [2C]	5.8	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:23	

**Client Sample ID PER1-SW-1.5**

**Lab ID: 1804142-02**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane [2C]	0.70	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:33	J
Chlordane	7.1	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:33	J
Dieldrin [2C]	2.7	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:33	
gamma-Chlordane	0.43	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:33	J
Heptachlor epoxide [2C]	0.64	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:33	J

**Client Sample ID PER1-SE-0.5**

**Lab ID: 1804142-04**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane [2C]	23	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:44	
Chlordane [2C]	210	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:44	
Dieldrin	36	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:44	
gamma-Chlordane	17	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:44	
Heptachlor epoxide [2C]	6.4	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:44	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### DETECTION SUMMARY

**Client Sample ID PER22-NW-0.5**

**Lab ID: 1804142-07**

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	6.3	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:18	
ORO	7.1	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:18	

**Client Sample ID PER22-NW-1.5**

**Lab ID: 1804142-08**

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 19:09	
ORO	18	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 19:09	

**Client Sample ID PER22-NE-0.5**

**Lab ID: 1804142-10**

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.0	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:35	
ORO	9.6	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:35	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### DETECTION SUMMARY

**Client Sample ID PER22-NE-1.5**

**Lab ID: 1804142-11**

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	4.8	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:52	
ORO	5.2	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:52	

**Client Sample ID PER12-NE-0.5**

**Lab ID: 1804142-13**

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.2	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:20	D1

**Client Sample ID PER12-NE-1.5**

**Lab ID: 1804142-14**

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.4	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:55	D1

**Client Sample ID PER12-SE-0.5**

**Lab ID: 1804142-16**

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	8.3	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:29	D1





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### DETECTION SUMMARY

**Client Sample ID PER12-SE-1.5**

**Lab ID: 1804142-17**

**Total Metals by ICP-MS EPA 6020**

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.1	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:31	D1

**Client Sample ID PER14-NE-0.5**

**Lab ID: 1804142-19**

**Total Metals by ICP-MS EPA 6020**

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.8	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:33	D1

**Client Sample ID PER14-NE-1.5**

**Lab ID: 1804142-20**

**Total Metals by ICP-MS EPA 6020**

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.8	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:57	D1

**Client Sample ID PER14-SE-0.5**

**Lab ID: 1804142-22**

**Total Metals by ICP-MS EPA 6020**

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.5	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:59	D1



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### DETECTION SUMMARY

**Client Sample ID PER14-SE-1.5**

**Lab ID: 1804142-23**

#### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	<b>0.98</b>	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 16:01	D1, J

**Client Sample ID DRUM COMPOSITE**

**Lab ID: 1804142-26**

#### Title 22 Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Barium	<b>0.27</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Cadmium	<b>0.0054</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Chromium	<b>0.078</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Cobalt	<b>0.020</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Copper	<b>0.063</b>	0.0090	1	B8K0162	11/06/2018	11/06/18 14:38	
Lead	<b>0.060</b>	0.0050	1	B8K0162	11/06/2018	11/06/18 14:38	
Nickel	<b>0.064</b>	0.0050	1	B8K0162	11/06/2018	11/06/18 14:38	
Selenium	<b>0.017</b>	0.010	1	B8K0162	11/06/2018	11/06/18 14:38	
Vanadium	<b>0.049</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Zinc	<b>0.48</b>	0.025	1	B8K0162	11/06/2018	11/06/18 14:38	

#### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	<b>2.6</b>	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:53	
ORO	<b>0.55</b>	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:53	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER1-SW-0.5**

**Lab ID: 1804142-01**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:23	
4,4'-DDE	ND	2.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:23	
4,4'-DDT	ND	2.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:23	
Aldrin	ND	1.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:23	
alpha-BHC	ND	1.0	0.11	1	B8K0214	11/06/2018	11/07/18 10:23	
<b>alpha-Chlordane [2C]</b>	<b>10</b>	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:23	
beta-BHC	ND	1.0	0.06	1	B8K0214	11/06/2018	11/07/18 10:23	
<b>Chlordane [2C]</b>	<b>94</b>	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:23	
delta-BHC	ND	1.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:23	
<b>Dieldrin [2C]</b>	<b>39</b>	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:23	
Endosulfan I	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:23	
Endosulfan II	ND	2.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:23	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0214	11/06/2018	11/07/18 10:23	
Endrin	ND	2.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:23	
Endrin aldehyde	ND	2.0	0.31	1	B8K0214	11/06/2018	11/07/18 10:23	
Endrin ketone	ND	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:23	
gamma-BHC	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:23	
<b>gamma-Chlordane</b>	<b>7.1</b>	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:23	
Heptachlor	ND	1.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:23	
<b>Heptachlor epoxide [2C]</b>	<b>5.8</b>	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:23	
Methoxychlor	ND	5.0	0.18	1	B8K0214	11/06/2018	11/07/18 10:23	
Toxaphene	ND	50	4.7	1	B8K0214	11/06/2018	11/07/18 10:23	
<i>Surrogate: Decachlorobiphenyl</i>	<i>61.0 %</i>	<i>43 - 84</i>			B8K0214	11/06/2018	<i>11/07/18 10:23</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>59.4 %</i>	<i>54 - 118</i>			B8K0214	11/06/2018	<i>11/07/18 10:23</i>	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER1-SW-1.5**

**Lab ID: 1804142-02**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:33	
4,4'-DDE	ND	2.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:33	
4,4'-DDT	ND	2.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:33	
Aldrin	ND	1.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:33	
alpha-BHC	ND	1.0	0.11	1	B8K0214	11/06/2018	11/07/18 10:33	
<b>alpha-Chlordane [2C]</b>	<b>0.70</b>	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:33	J
beta-BHC	ND	1.0	0.06	1	B8K0214	11/06/2018	11/07/18 10:33	
<b>Chlordane</b>	<b>7.1</b>	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:33	J
delta-BHC	ND	1.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:33	
<b>Dieldrin [2C]</b>	<b>2.7</b>	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:33	
Endosulfan I	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:33	
Endosulfan II	ND	2.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:33	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0214	11/06/2018	11/07/18 10:33	
Endrin	ND	2.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:33	
Endrin aldehyde	ND	2.0	0.31	1	B8K0214	11/06/2018	11/07/18 10:33	
Endrin ketone	ND	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:33	
gamma-BHC	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:33	
<b>gamma-Chlordane</b>	<b>0.43</b>	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:33	J
Heptachlor	ND	1.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:33	
<b>Heptachlor epoxide [2C]</b>	<b>0.64</b>	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:33	J
Methoxychlor	ND	5.0	0.18	1	B8K0214	11/06/2018	11/07/18 10:33	
Toxaphene	ND	50	4.7	1	B8K0214	11/06/2018	11/07/18 10:33	
<i>Surrogate: Decachlorobiphenyl</i>	<i>55.6 %</i>	<i>43 - 84</i>			B8K0214	11/06/2018	<i>11/07/18 10:33</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>53.2 %</i>	<i>54 - 118</i>			B8K0214	11/06/2018	<i>11/07/18 10:33</i>	S10



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER1-SE-0.5**

**Lab ID: 1804142-04**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:44	
4,4'-DDE	ND	2.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:44	
4,4'-DDT	ND	2.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:44	
Aldrin	ND	1.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:44	
alpha-BHC	ND	1.0	0.11	1	B8K0214	11/06/2018	11/07/18 10:44	
<b>alpha-Chlordane [2C]</b>	<b>23</b>	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:44	
beta-BHC	ND	1.0	0.06	1	B8K0214	11/06/2018	11/07/18 10:44	
<b>Chlordane [2C]</b>	<b>210</b>	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:44	
delta-BHC	ND	1.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:44	
<b>Dieldrin</b>	<b>36</b>	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:44	
Endosulfan I	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:44	
Endosulfan II	ND	2.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:44	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0214	11/06/2018	11/07/18 10:44	
Endrin	ND	2.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:44	
Endrin aldehyde	ND	2.0	0.31	1	B8K0214	11/06/2018	11/07/18 10:44	
Endrin ketone	ND	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:44	
gamma-BHC	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:44	
<b>gamma-Chlordane</b>	<b>17</b>	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:44	
Heptachlor	ND	1.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:44	
<b>Heptachlor epoxide [2C]</b>	<b>6.4</b>	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:44	
Methoxychlor	ND	5.0	0.18	1	B8K0214	11/06/2018	11/07/18 10:44	
Toxaphene	ND	50	4.7	1	B8K0214	11/06/2018	11/07/18 10:44	
<i>Surrogate: Decachlorobiphenyl</i>	<i>55.2 %</i>	<i>43 - 84</i>			B8K0214	11/06/2018	<i>11/07/18 10:44</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>61.3 %</i>	<i>54 - 118</i>			B8K0214	11/06/2018	<i>11/07/18 10:44</i>	



## Certificate of Analysis

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17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER1-SE-1.5**

**Lab ID: 1804142-05**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:54	
4,4'-DDE	ND	2.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:54	
4,4'-DDT	ND	2.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:54	
Aldrin	ND	1.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:54	
alpha-BHC	ND	1.0	0.11	1	B8K0214	11/06/2018	11/07/18 10:54	
alpha-Chlordane	ND	1.0	0.12	1	B8K0214	11/06/2018	11/07/18 10:54	
beta-BHC	ND	1.0	0.06	1	B8K0214	11/06/2018	11/07/18 10:54	
Chlordane	ND	8.5	1.1	1	B8K0214	11/06/2018	11/07/18 10:54	
delta-BHC	ND	1.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:54	
Dieldrin	ND	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:54	
Endosulfan I	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:54	
Endosulfan II	ND	2.0	0.03	1	B8K0214	11/06/2018	11/07/18 10:54	
Endosulfan sulfate	ND	2.0	0.08	1	B8K0214	11/06/2018	11/07/18 10:54	
Endrin	ND	2.0	0.04	1	B8K0214	11/06/2018	11/07/18 10:54	
Endrin aldehyde	ND	2.0	0.31	1	B8K0214	11/06/2018	11/07/18 10:54	
Endrin ketone	ND	2.0	0.13	1	B8K0214	11/06/2018	11/07/18 10:54	
gamma-BHC	ND	1.0	0.10	1	B8K0214	11/06/2018	11/07/18 10:54	
gamma-Chlordane	ND	1.0	0.07	1	B8K0214	11/06/2018	11/07/18 10:54	
Heptachlor	ND	1.0	0.05	1	B8K0214	11/06/2018	11/07/18 10:54	
Heptachlor epoxide	ND	1.0	0.09	1	B8K0214	11/06/2018	11/07/18 10:54	
Methoxychlor	ND	5.0	0.18	1	B8K0214	11/06/2018	11/07/18 10:54	
Toxaphene	ND	50	4.7	1	B8K0214	11/06/2018	11/07/18 10:54	
<i>Surrogate: Decachlorobiphenyl</i>	55.7 %		43 - 84		B8K0214	11/06/2018	11/07/18 10:54	
<i>Surrogate: Tetrachloro-m-xylene</i>	48.4 %		54 - 118		B8K0214	11/06/2018	11/07/18 10:54	S10



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER22-NW-0.5**

**Lab ID: 1804142-07**

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>6.3</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:18	
<b>ORO</b>	<b>7.1</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:18	
<i>Surrogate: p-Terphenyl</i>	<i>72.5 %</i>		<i>34 - 158</i>		B8K0252	11/07/2018	<i>11/07/18 18:18</i>	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER22-NW-1.5**

**Lab ID: 1804142-08**

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>13</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 19:09	
<b>ORO</b>	<b>18</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 19:09	
<i>Surrogate: p-Terphenyl</i>	<i>90.7 %</i>		<i>34 - 158</i>		B8K0252	11/07/2018	<i>11/07/18 19:09</i>	





## Certificate of Analysis

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17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER22-NE-0.5**

**Lab ID: 1804142-10**

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>9.0</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:35	
<b>ORO</b>	<b>9.6</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:35	
<i>Surrogate: p-Terphenyl</i>	<i>61.1 %</i>		<i>34 - 158</i>		B8K0252	11/07/2018	<i>11/07/18 18:35</i>	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER22-NE-1.5**

**Lab ID: 1804142-11**

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>4.8</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:52	
<b>ORO</b>	<b>5.2</b>	1.0	1.0	1	B8K0252	11/07/2018	11/07/18 18:52	
<i>Surrogate: p-Terphenyl</i>	<i>64.8 %</i>		<i>34 - 158</i>		B8K0252	11/07/2018	<i>11/07/18 18:52</i>	



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER12-NE-0.5**

**Lab ID: 1804142-13**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	6.2	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:20	D1



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER12-NE-1.5**

**Lab ID: 1804142-14**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.4	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:55	D1



## Certificate of Analysis

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17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER12-SE-0.5**

**Lab ID: 1804142-16**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	8.3	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:29	D1



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER12-SE-1.5**

**Lab ID: 1804142-17**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.1	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:31	D1



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER14-NE-0.5**

**Lab ID: 1804142-19**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.8	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:33	D1



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID PER14-NE-1.5**

**Lab ID: 1804142-20**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	1.8	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:57	D1





## Certificate of Analysis

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17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER14-SE-0.5**

**Lab ID: 1804142-22**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	2.5	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 15:59	D1



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Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

**Client Sample ID PER14-SE-1.5**

**Lab ID: 1804142-23**

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	<b>0.98</b>	1.0	0.04	20	B8K0153	11/05/2018	11/07/18 16:01	D1, J



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Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

**Client Sample ID EB-2**

**Lab ID: 1804142-25**

### Total Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	0.0047	1	B8K0184	11/06/2018	11/06/18 15:04	

### Total Metals by ICP-MS EPA 6020

**Analyst: PT**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	0.39	1	B8K0155	11/05/2018	11/08/18 11:07	

### Mercury by AA (Cold Vapor) EPA 7470A

**Analyst: KEK**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20		1	B8K0164	11/06/2018	11/06/18 12:40	

### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.20	0.05	1	B8K0118	11/05/2018	11/05/18 12:30	
Surrogate: 4-Bromofluorobenzene	91.1 %		70 - 130		B8K0118	11/05/2018	11/05/18 12:30	

### Diesel Range Organics by EPA 8015B

**Analyst: CR**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:36	
ORO	ND	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:36	
Surrogate: p-Terphenyl	137 %		32 - 169		B8K0283	11/08/2018	11/08/18 12:36	

### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	0.05	0.006	1	B8K0268	11/07/2018	11/07/18 16:48	
4,4'-DDE	ND	0.05	0.005	1	B8K0268	11/07/2018	11/07/18 16:48	
4,4'-DDT	ND	0.05	0.01	1	B8K0268	11/07/2018	11/07/18 16:48	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

Client Sample ID EB-2

Lab ID: 1804142-25

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aldrin	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
alpha-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
alpha-Chlordane	ND	0.02	0.003	1	B8K0268	11/07/2018	11/07/18 16:48	
beta-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Chlordane	ND	0.25	0.03	1	B8K0268	11/07/2018	11/07/18 16:48	
delta-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Dieldrin	ND	0.05	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Endosulfan I	ND	0.02	0.005	1	B8K0268	11/07/2018	11/07/18 16:48	
Endosulfan II	ND	0.05	0.009	1	B8K0268	11/07/2018	11/07/18 16:48	
Endosulfan sulfate	ND	0.05	0.01	1	B8K0268	11/07/2018	11/07/18 16:48	
Endrin	ND	0.05	0.005	1	B8K0268	11/07/2018	11/07/18 16:48	
Endrin aldehyde	ND	0.05	0.003	1	B8K0268	11/07/2018	11/07/18 16:48	
Endrin ketone	ND	0.05	0.003	1	B8K0268	11/07/2018	11/07/18 16:48	
gamma-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
gamma-Chlordane	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Heptachlor	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Heptachlor epoxide	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:48	
Methoxychlor	ND	0.25	0.008	1	B8K0268	11/07/2018	11/07/18 16:48	
Toxaphene	ND	2.5	0.23	1	B8K0268	11/07/2018	11/07/18 16:48	
Surrogate: Decachlorobiphenyl	53.0 %	8 - 128			B8K0268	11/07/2018	11/07/18 16:48	
Surrogate: Tetrachloro-m-xylene	50.6 %	32 - 126			B8K0268	11/07/2018	11/07/18 16:48	

### Polychlorinated Biphenyls by EPA 8082

Analyst: CO/

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1221	ND	1.0	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1232	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1242	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1248	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1254	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1260	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1262	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Aroclor 1268	ND	0.50	1	B8K0268	11/07/2018	11/07/18 15:57	
Surrogate: Decachlorobiphenyl	58.7 %	8 - 128		B8K0268	11/07/2018	11/07/18 15:57	
Surrogate: Tetrachloro-m-xylene	86.3 %	32 - 126		B8K0268	11/07/2018	11/07/18 15:57	



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Project Number : LAUSD- Colfax ES, 11640.008  
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### Client Sample ID DRUM COMPOSITE

Lab ID: 1804142-26

#### Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.010	1	B8K0162	11/06/2018	11/06/18 14:38	
Arsenic	ND	0.010	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Barium</b>	<b>0.27</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Beryllium	ND	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Cadmium</b>	<b>0.0054</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Chromium</b>	<b>0.078</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Cobalt</b>	<b>0.020</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Copper</b>	<b>0.063</b>	0.0090	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Lead</b>	<b>0.060</b>	0.0050	1	B8K0162	11/06/2018	11/06/18 14:38	
Molybdenum	ND	0.0050	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Nickel</b>	<b>0.064</b>	0.0050	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Selenium</b>	<b>0.017</b>	0.010	1	B8K0162	11/06/2018	11/06/18 14:38	
Silver	ND	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
Thallium	ND	0.015	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Vanadium</b>	<b>0.049</b>	0.0030	1	B8K0162	11/06/2018	11/06/18 14:38	
<b>Zinc</b>	<b>0.48</b>	0.025	1	B8K0162	11/06/2018	11/06/18 14:38	

#### Mercury by AA (Cold Vapor) EPA 7470A

Analyst: KEK

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	1	B8K0164	11/06/2018	11/06/18 12:41	

#### Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>2.6</b>	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:53	
<b>ORO</b>	<b>0.55</b>	0.05	0.05	1	B8K0283	11/08/2018	11/08/18 12:53	
Surrogate: <i>p</i> -Terphenyl	25.0 %		32 - 169		B8K0283	11/08/2018	11/08/18 12:53	S13



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### Client Sample ID DRUM COMPOSITE

**Lab ID: 1804142-26**

#### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	0.05	0.006	1	B8K0268	11/07/2018	11/07/18 16:59	
4,4'-DDE	ND	0.05	0.005	1	B8K0268	11/07/2018	11/07/18 16:59	
4,4'-DDT	ND	0.05	0.01	1	B8K0268	11/07/2018	11/07/18 16:59	
Aldrin	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
alpha-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
alpha-Chlordane	ND	0.02	0.003	1	B8K0268	11/07/2018	11/07/18 16:59	
beta-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Chlordane	ND	0.25	0.03	1	B8K0268	11/07/2018	11/07/18 16:59	
delta-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Dieldrin	ND	0.05	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Endosulfan I	ND	0.02	0.005	1	B8K0268	11/07/2018	11/07/18 16:59	
Endosulfan II	ND	0.05	0.009	1	B8K0268	11/07/2018	11/07/18 16:59	
Endosulfan sulfate	ND	0.05	0.01	1	B8K0268	11/07/2018	11/07/18 16:59	
Endrin	ND	0.05	0.005	1	B8K0268	11/07/2018	11/07/18 16:59	
Endrin aldehyde	ND	0.05	0.003	1	B8K0268	11/07/2018	11/07/18 16:59	
Endrin ketone	ND	0.05	0.003	1	B8K0268	11/07/2018	11/07/18 16:59	
gamma-BHC	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
gamma-Chlordane	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Heptachlor	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Heptachlor epoxide	ND	0.02	0.002	1	B8K0268	11/07/2018	11/07/18 16:59	
Methoxychlor	ND	0.25	0.008	1	B8K0268	11/07/2018	11/07/18 16:59	
Toxaphene	ND	2.5	0.23	1	B8K0268	11/07/2018	11/07/18 16:59	
Surrogate: Decachlorobiphenyl	6.37 %		8 - 128		B8K0268	11/07/2018	11/07/18 16:59	S10
Surrogate: Tetrachloro-m-xylene	37.1 %		32 - 126		B8K0268	11/07/2018	11/07/18 16:59	



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### Client Sample ID DRUM COMPOSITE

Lab ID: 1804142-26

#### Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1,1-Trichloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1,2,2-Tetrachloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1,2-Trichloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1-Dichloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1-Dichloroethene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,1-Dichloropropene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2,3-Trichloropropane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2,3-Trichlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2,4-Trichlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2,4-Trimethylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2-Dibromo-3-chloropropane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2-Dibromoethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2-Dichlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2-Dichloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,2-Dichloropropane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,3,5-Trimethylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,3-Dichlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,3-Dichloropropane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
1,4-Dichlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
2,2-Dichloropropane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
2-Chlorotoluene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
4-Chlorotoluene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
4-Isopropyltoluene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Benzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Bromobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Bromochloromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Bromodichloromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Bromoform	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Bromomethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Carbon disulfide	ND	50	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Carbon tetrachloride	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Chlorobenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Chloroethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Chloroform	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Chloromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
cis-1,2-Dichloroethene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7



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### Client Sample ID DRUM COMPOSITE

**Lab ID: 1804142-26**

#### Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Di-isopropyl ether	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Dibromochloromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Dibromomethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Dichlorodifluoromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Ethyl Acetate	ND	500	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Ethyl Ether	ND	500	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Ethyl tert-butyl ether	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Ethylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Freon-113	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Hexachlorobutadiene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Isopropylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
m,p-Xylene	ND	50	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Methylene chloride	ND	50	50	B8K0325	11/09/2018	11/09/18 19:15	D7
MTBE	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
n-Butylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
n-Propylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Naphthalene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
o-Xylene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
sec-Butylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Styrene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
tert-Amyl methyl ether	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
tert-Butanol	ND	500	50	B8K0325	11/09/2018	11/09/18 19:15	D7
tert-Butylbenzene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Tetrachloroethene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Toluene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
trans-1,2-Dichloroethene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
trans-1,3-Dichloropropene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Trichloroethene	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Trichlorofluoromethane	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Vinyl acetate	ND	500	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Vinyl chloride	ND	25	50	B8K0325	11/09/2018	11/09/18 19:15	D7
Gasoline Range Organics	ND	2500	50	B8K0328	11/09/2018	11/09/18 19:15	D7

Surrogate: 1,2-Dichloroethane-d4	85.3 %	57 - 152	B8K0328	11/09/2018	11/09/18 19:15
Surrogate: 1,2-Dichloroethane-d4	88.9 %	57 - 152	B8K0325	11/09/2018	11/09/18 19:15
Surrogate: 4-Bromofluorobenzene	93.6 %	62 - 134	B8K0328	11/09/2018	11/09/18 19:15
Surrogate: 4-Bromofluorobenzene	96.1 %	62 - 134	B8K0325	11/09/2018	11/09/18 19:15





## Certificate of Analysis

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17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 11/12/2018

### Client Sample ID DRUM COMPOSITE

**Lab ID: 1804142-26**

#### Volatile Organic Compounds by EPA 8260B

**Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	80.0 %	56 - 167		B8K0325	11/09/2018	11/09/18 19:15	
<i>Surrogate: Dibromofluoromethane</i>	78.7 %	56 - 167		B8K0328	11/09/2018	11/09/18 19:15	
<i>Surrogate: Toluene-d8</i>	97.7 %	33 - 170		B8K0325	11/09/2018	11/09/18 19:15	
<i>Surrogate: Toluene-d8</i>	93.5 %	33 - 170		B8K0328	11/09/2018	11/09/18 19:15	



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Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### QUALITY CONTROL SECTION

#### Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
<b>Batch B8K0184 - EPA 3010A_W</b>										
<b>Blank (B8K0184-BLK1)</b>					Prepared: 11/6/2018 Analyzed: 11/6/2018					
Lead	ND	0.0050	0.0047							
<b>LCS (B8K0184-BS1)</b>					Prepared: 11/6/2018 Analyzed: 11/6/2018					
Lead	1.03283	0.0050	0.0047	1.00000		103	80 - 120			
<b>Duplicate (B8K0184-DUP1)</b>					Source: 1804142-25 Prepared: 11/6/2018 Analyzed: 11/6/2018					
Lead	ND	0.0050	0.0047		ND			NR	20	
<b>Matrix Spike (B8K0184-MS1)</b>					Source: 1804142-25 Prepared: 11/6/2018 Analyzed: 11/6/2018					
Lead	2.17177	0.0050	0.0047	2.50000	ND	86.9	59 - 123			
<b>Matrix Spike Dup (B8K0184-MSD1)</b>					Source: 1804142-25 Prepared: 11/6/2018 Analyzed: 11/6/2018					
Lead	2.17222	0.0050	0.0047	2.50000	ND	86.9	59 - 123	0.0204	20	



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### Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0162 - EPA 3010A\_W

##### Blank (B8K0162-BLK1)

Prepared: 11/6/2018 Analyzed: 11/6/2018

Antimony	ND	0.010	0.0088
Arsenic	ND	0.010	0.0078
Barium	ND	0.0030	0.0026
Beryllium	ND	0.0030	0.0016
Cadmium	ND	0.0030	0.0024
Chromium	ND	0.0030	0.0020
Cobalt	ND	0.0030	0.0016
Copper	ND	0.0090	0.0038
Lead	ND	0.0050	0.0047
Molybdenum	ND	0.0050	0.0030
Nickel	ND	0.0050	0.0046
Selenium	ND	0.010	0.0093
Silver	ND	0.0030	0.0024
Thallium	ND	0.015	0.0085
Vanadium	ND	0.0030	0.0022
Zinc	ND	0.025	0.0057

##### LCS (B8K0162-BS1)

Prepared: 11/6/2018 Analyzed: 11/6/2018

Antimony	1.05976	0.010	0.0088	1.00000	106	80 - 120
Arsenic	0.977915	0.010	0.0078	1.00000	97.8	80 - 120
Barium	0.992850	0.0030	0.0026	1.00000	99.3	80 - 120
Beryllium	0.923972	0.0030	0.0016	1.00000	92.4	80 - 120
Cadmium	0.918343	0.0030	0.0024	1.00000	91.8	80 - 120
Chromium	1.04333	0.0030	0.0020	1.00000	104	80 - 120
Cobalt	0.965722	0.0030	0.0016	1.00000	96.6	80 - 120
Copper	0.932056	0.0090	0.0038	1.00000	93.2	80 - 120
Lead	0.969196	0.0050	0.0047	1.00000	96.9	80 - 120
Molybdenum	0.961850	0.0050	0.0030	1.00000	96.2	80 - 120
Nickel	1.01068	0.0050	0.0046	1.00000	101	80 - 120
Selenium	0.969677	0.010	0.0093	1.00000	97.0	80 - 120
Silver	0.970450	0.0030	0.0024	1.00000	97.0	80 - 120
Thallium	0.972826	0.015	0.0085	1.00000	97.3	80 - 120
Vanadium	0.968074	0.0030	0.0022	1.00000	96.8	80 - 120
Zinc	0.927121	0.025	0.0057	1.00000	92.7	80 - 120

##### Duplicate (B8K0162-DUP1)

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Antimony	ND	0.010	0.0088	ND	NR	20
Arsenic	ND	0.010	0.0078	ND	NR	20
Barium	0.269150	0.0030	0.0026	0.267859	0.481	20
Beryllium	ND	0.0030	0.0016	ND	NR	20
Cadmium	0.005049	0.0030	0.0024	0.005414	6.98	20
Chromium	0.076102	0.0030	0.0020	0.078103	2.59	20



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### Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0162 - EPA 3010A\_W (continued)

Duplicate (B8K0162-DUP1) - Continued				Source: 1804142-26		Prepared: 11/6/2018 Analyzed: 11/6/2018			
Cobalt	0.020021	0.0030	0.0016		0.019992		0.147	20	
Copper	0.064500	0.0090	0.0038		0.063301		1.88	20	
Lead	0.062398	0.0050	0.0047		0.060249		3.50	20	
Molybdenum	ND	0.0050	0.0030		ND		NR	20	
Nickel	0.061087	0.0050	0.0046		0.063740		4.25	20	
Selenium	0.012754	0.010	0.0093		0.016808		27.4	20	R
Silver	ND	0.0030	0.0024		ND		NR	20	
Thallium	0.011038	0.015	0.0085		ND		NR	20	
Vanadium	0.050246	0.0030	0.0022		0.048991		2.53	20	
Zinc	0.492986	0.025	0.0057		0.479620		2.75	20	

Matrix Spike (B8K0162-MS1)				Source: 1804142-26		Prepared: 11/6/2018 Analyzed: 11/6/2018			
Antimony	2.59525	0.010	0.0088	2.50000	ND	104	66 - 127		
Arsenic	2.72600	0.010	0.0078	2.50000	ND	109	63 - 131		
Barium	2.70015	0.0030	0.0026	2.50000	0.267859	97.3	62 - 129		
Beryllium	2.32743	0.0030	0.0016	2.50000	ND	93.1	66 - 126		
Cadmium	2.41348	0.0030	0.0024	2.50000	0.005414	96.3	59 - 124		
Chromium	2.39624	0.0030	0.0020	2.50000	0.078103	92.7	63 - 127		
Cobalt	2.40642	0.0030	0.0016	2.50000	0.019992	95.5	62 - 125		
Copper	2.74224	0.0090	0.0038	2.50000	0.063301	107	59 - 139		
Lead	2.48162	0.0050	0.0047	2.50000	0.060249	96.9	59 - 123		
Molybdenum	2.48538	0.0050	0.0030	2.50000	ND	99.4	30 - 169		
Nickel	2.45128	0.0050	0.0046	2.50000	0.063740	95.5	60 - 125		
Selenium	2.61360	0.010	0.0093	2.50000	0.016808	104	55 - 136		
Silver	2.76588	0.0030	0.0024	2.50000	ND	111	58 - 139		
Thallium	2.20979	0.015	0.0085	2.50000	ND	88.4	68 - 11		M1
Vanadium	2.39027	0.0030	0.0022	2.50000	0.048991	93.7	63 - 131		
Zinc	2.96144	0.025	0.0057	2.50000	0.479620	99.3	50 - 131		

Matrix Spike Dup (B8K0162-MSD1)				Source: 1804142-26		Prepared: 11/6/2018 Analyzed: 11/6/2018			
Antimony	2.64728	0.010	0.0088	2.50000	ND	106	66 - 127	1.98	20
Arsenic	2.77224	0.010	0.0078	2.50000	ND	111	63 - 131	1.68	20
Barium	2.74744	0.0030	0.0026	2.50000	0.267859	99.2	62 - 129	1.74	20
Beryllium	2.36136	0.0030	0.0016	2.50000	ND	94.5	66 - 126	1.45	20
Cadmium	2.45353	0.0030	0.0024	2.50000	0.005414	97.9	59 - 124	1.65	20
Chromium	2.54553	0.0030	0.0020	2.50000	0.078103	98.7	63 - 127	6.04	20
Cobalt	2.43872	0.0030	0.0016	2.50000	0.019992	96.7	62 - 125	1.33	20
Copper	2.74144	0.0090	0.0038	2.50000	0.063301	107	59 - 139	0.0290	20
Lead	2.50367	0.0050	0.0047	2.50000	0.060249	97.7	59 - 123	0.885	20
Molybdenum	2.49620	0.0050	0.0030	2.50000	ND	99.8	30 - 169	0.435	20
Nickel	2.53936	0.0050	0.0046	2.50000	0.063740	99.0	60 - 125	3.53	20
Selenium	2.72640	0.010	0.0093	2.50000	0.016808	108	55 - 136	4.22	20



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### Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0162 - EPA 3010A\_W (continued)

##### Matrix Spike Dup (B8K0162-MSD1) - Continued

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Silver	2.82929	0.0030	0.0024	2.50000	ND	113	58 - 139	2.27	20	
Thallium	2.28639	0.015	0.0085	2.50000	ND	91.5	68 - 11	3.41	20	M1
Vanadium	2.47016	0.0030	0.0022	2.50000	0.048991	96.8	63 - 131	3.29	20	
Zinc	2.99019	0.025	0.0057	2.50000	0.479620	100	50 - 131	0.966	20	



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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0153 - EPA 3050B MS\_S

##### Blank (B8K0153-BLK1)

Prepared: 11/5/2018 Analyzed: 11/7/2018

Arsenic	ND	0.25	0.01
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##### LCS (B8K0153-BS1)

Prepared: 11/5/2018 Analyzed: 11/7/2018

Arsenic	4.04096	0.25	0.01	5.00000	80.8	70 - 130
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##### Matrix Spike (B8K0153-MS1)

Source: 1804142-13

Prepared: 11/5/2018 Analyzed: 11/7/2018

Arsenic	10.2347	1.0	0.04	5.00000	6.18715	81.0	75 - 125
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##### Matrix Spike Dup (B8K0153-MSD1)

Source: 1804142-13

Prepared: 11/5/2018 Analyzed: 11/7/2018

Arsenic	10.9131	1.0	0.04	5.00000	6.18715	94.5	75 - 125	6.42	20
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0153 - EPA 3050B MS\_S

##### Post Spike (B8K0153-PS1)

Source: 1804142-13

Prepared: 11/5/2018 Analyzed: 11/7/2018

Arsenic	11.7549		10.0000	3.09357	86.6	75 - 125			
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### Total Metals by ICP-MS EPA 6020 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0155 - EPA 3010A MS\_W

##### Blank (B8K0155-BLK1)

Prepared: 11/5/2018 Analyzed: 11/8/2018

Arsenic ND 1.0 0.39

##### LCS (B8K0155-BS1)

Prepared: 11/5/2018 Analyzed: 11/8/2018

Arsenic 9.72817 1.0 0.39 10.0000 97.3 85 - 115

##### Matrix Spike (B8K0155-MS1)

Source: 1804142-25

Prepared: 11/5/2018 Analyzed: 11/8/2018

Arsenic 9.39188 1.0 0.39 10.0000 ND 93.9 75 - 125

##### Matrix Spike Dup (B8K0155-MSD1)

Source: 1804142-25

Prepared: 11/5/2018 Analyzed: 11/8/2018

Arsenic 9.02431 1.0 0.39 10.0000 ND 90.2 75 - 125 3.99 20

##### Post Spike (B8K0155-PS1)

Source: 1804142-25

Prepared: 11/5/2018 Analyzed: 11/8/2018

Arsenic 4.77802 5.00000 0.107490 93.4 75 - 125





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### Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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#### Batch B8K0164 - EPA 245.1/7470\_W

##### Blank (B8K0164-BLK1)

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury ND 0.20 0.03

##### LCS (B8K0164-BS1)

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury 10.1460 0.20 0.03 10.0000

101 80 - 120

##### Duplicate (B8K0164-DUP1)

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury 0.046408 0.20 0.03

ND

NR

20

##### Matrix Spike (B8K0164-MS1)

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury 9.32395 0.20 0.03 10.0000

ND

93.2

70 - 130

##### Matrix Spike Dup (B8K0164-MSD1)

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury 9.25191 0.20 0.03 10.0000

ND

92.5

70 - 130

0.776

20

##### Post Spike (B8K0164-PS1)

Source: 1804142-26

Prepared: 11/6/2018 Analyzed: 11/6/2018

Mercury 4.70325 5.00000

0.019472

93.7

85 - 115



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### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0118 - GCVOA\_W

##### Blank (B8K0118-BLK1)

Prepared: 11/5/2018 Analyzed: 11/5/2018

Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	0.09840			0.100000		98.4	70 - 130			

##### LCS (B8K0118-BS1)

Prepared: 11/5/2018 Analyzed: 11/5/2018

Gasoline Range Organics	0.914000	0.20	0.05	1.00000		91.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	0.1021			0.100000		102	70 - 130			

##### LCS Dup (B8K0118-BSD1)

Prepared: 11/5/2018 Analyzed: 11/5/2018

Gasoline Range Organics	0.897000	0.20	0.05	1.00000		89.7	70 - 130	1.88	20	
Surrogate: 4-Bromofluorobenzene	0.09330			0.100000		93.3	70 - 130			



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### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0252 - GCSEMI\_DRO\_LL\_S

##### Blank (B8K0252-BLK1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

DRO	ND	1.0	1.0
ORO	ND	1.0	1.0

<i>Surrogate: p-Terphenyl</i>	2.865		2.66667	107	34 - 158
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##### LCS (B8K0252-BS1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

DRO	31.6170	1.0	1.0	33.3333	94.9	47 - 152
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<i>Surrogate: p-Terphenyl</i>	2.542		2.66667	95.3	34 - 158
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##### Matrix Spike (B8K0252-MS1)

Source: 1804142-10

Prepared: 11/7/2018 Analyzed: 11/7/2018

DRO	30.2057	1.0	1.0	33.3333	9.02267	63.5	34 - 130
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<i>Surrogate: p-Terphenyl</i>	2.349		2.66667	88.1	34 - 158
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##### Matrix Spike Dup (B8K0252-MSD1)

Source: 1804142-10

Prepared: 11/7/2018 Analyzed: 11/7/2018

DRO	30.4077	1.0	1.0	33.3333	9.02267	64.2	34 - 130	0.667	20
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<i>Surrogate: p-Terphenyl</i>	2.071		2.66667	77.6	34 - 158
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### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0283 - GCSEMI\_DRO\_W

##### Blank (B8K0283-BLK1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

DRO	ND	0.05	0.05
ORO	ND	0.05	0.05

Surrogate: <i>p</i> -Terphenyl	0.1046		8.00000E-2	131	32 - 169
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##### LCS (B8K0283-BS1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

DRO	1.01514	0.05	0.05	1.00000	102	45 - 161
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Surrogate: <i>p</i> -Terphenyl	0.09261		8.00000E-2	116	32 - 169
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##### LCS Dup (B8K0283-BSD1)

Prepared: 11/8/2018 Analyzed: 11/8/2018

DRO	1.05160	0.05	0.05	1.00000	105	45 - 161	3.53	20
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Surrogate: <i>p</i> -Terphenyl	0.08563		8.00000E-2	107	32 - 169
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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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#### Batch B8K0214 - GCSEMI\_PCB/PEST\_S

##### Blank (B8K0214-BLK1)

Prepared: 11/6/2018 Analyzed: 11/7/2018

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.05
4,4'-DDE [2C]	ND	2.0	0.05
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.04
Aldrin [2C]	ND	1.0	0.04
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.03
delta-BHC [2C]	ND	1.0	0.03
Dieldrin	ND	2.0	0.13
Dieldrin [2C]	ND	2.0	0.13
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.03
Endosulfan II [2C]	ND	2.0	0.03
Endosulfan sulfate	ND	2.0	0.08
Endosulfan Sulfate [2C]	ND	2.0	0.08
Endrin	ND	2.0	0.04
Endrin [2C]	ND	2.0	0.04
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.07
gamma-Chlordane [2C]	ND	1.0	0.07
Heptachlor	ND	1.0	0.05
Heptachlor [2C]	ND	1.0	0.05
Heptachlor epoxide	ND	1.0	0.09
Heptachlor epoxide [2C]	ND	1.0	0.09
Methoxychlor	ND	5.0	0.18



## Certificate of Analysis

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Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0214 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B8K0214-BLK1) - Continued

Prepared: 11/6/2018 Analyzed: 11/7/2018

Methoxychlor [2C]	ND	5.0	0.18
Toxaphene	ND	50	4.7
Toxaphene [2C]	ND	50	4.7

Surrogate: Decachlorobiphenyl	10.91	16.6667	65.5	43 - 84
Surrogate: Decachlorobiphenyl [	7.648	16.6667	45.9	43 - 84
Surrogate: Tetrachloro-m-xylene	12.41	16.6667	74.5	54 - 118
Surrogate: Tetrachloro-m-xylene	12.12	16.6667	72.7	54 - 118

##### LCS (B8K0214-BS1)

Prepared: 11/6/2018 Analyzed: 11/7/2018

4,4'-DDD	13.2078	2.0	0.07	16.6667	79.2	73 - 110
4,4'-DDD [2C]	12.5178	2.0	0.07	16.6667	75.1	73 - 110
4,4'-DDE	12.2787	2.0	0.05	16.6667	73.7	71 - 99
4,4'-DDE [2C]	12.2933	2.0	0.05	16.6667	73.8	71 - 99
4,4'-DDT	10.0513	2.0	0.10	16.6667	60.3	51 - 106
4,4'-DDT [2C]	13.1837	2.0	0.10	16.6667	79.1	51 - 106
Aldrin	11.8378	1.0	0.04	16.6667	71.0	67 - 95
Aldrin [2C]	11.8147	1.0	0.04	16.6667	70.9	67 - 95
alpha-BHC	12.2463	1.0	0.11	16.6667	73.5	67 - 94
alpha-BHC [2C]	12.0812	1.0	0.11	16.6667	72.5	67 - 94
alpha-Chlordane	12.9498	1.0	0.12	16.6667	77.7	69 - 99
alpha-Chlordane [2C]	11.5217	1.0	0.12	16.6667	69.1	69 - 99
beta-BHC	12.1667	1.0	0.06	16.6667	73.0	67 - 99
beta-BHC [2C]	12.2102	1.0	0.06	16.6667	73.3	67 - 99
delta-BHC	12.7725	1.0	0.03	16.6667	76.6	73 - 103
delta-BHC [2C]	13.7638	1.0	0.03	16.6667	82.6	73 - 103
Dieldrin	12.1648	2.0	0.13	16.6667	73.0	65 - 93
Dieldrin [2C]	11.7352	2.0	0.13	16.6667	70.4	65 - 93
Endosulfan I	11.8760	1.0	0.10	16.6667	71.3	65 - 91
Endosulfan I [2C]	10.8453	1.0	0.10	16.6667	65.1	65 - 91
Endosulfan II	12.6025	2.0	0.03	16.6667	75.6	65 - 102
Endosulfan II [2C]	12.6262	2.0	0.03	16.6667	75.8	65 - 102
Endosulfan sulfate	11.7903	2.0	0.08	16.6667	70.7	64 - 106
Endosulfan Sulfate [2C]	13.0043	2.0	0.08	16.6667	78.0	64 - 106
Endrin	13.1177	2.0	0.04	16.6667	78.7	64 - 111
Endrin [2C]	13.6922	2.0	0.04	16.6667	82.2	64 - 111
Endrin aldehyde	11.6285	2.0	0.31	16.6667	69.8	64 - 109
Endrin aldehyde [2C]	9.99083	2.0	0.31	16.6667	59.9	64 - 109
Endrin ketone	10.9135	2.0	0.13	16.6667	65.5	57 - 101
Endrin ketone [2C]	12.8603	2.0	0.13	16.6667	77.2	57 - 101
gamma-BHC	11.6458	1.0	0.10	16.6667	69.9	65 - 96
gamma-BHC [2C]	12.2977	1.0	0.10	16.6667	73.8	65 - 96

L4



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0214 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B8K0214-BS1) - Continued

Prepared: 11/6/2018 Analyzed: 11/7/2018

gamma-Chlordane	12.7037	1.0	0.07	16.6667		76.2	65 - 113		
gamma-Chlordane [2C]	10.8377	1.0	0.07	16.6667		65.0	65 - 113		
Heptachlor	11.8960	1.0	0.05	16.6667		71.4	61 - 96		
Heptachlor [2C]	12.8760	1.0	0.05	16.6667		77.3	61 - 96		
Heptachlor epoxide	11.5233	1.0	0.09	16.6667		69.1	64 - 89		
Heptachlor epoxide [2C]	11.4838	1.0	0.09	16.6667		68.9	64 - 89		
Methoxychlor	15.9818	5.0	0.18	16.6667		95.9	67 - 109		
Methoxychlor [2C]	14.8397	5.0	0.18	16.6667		89.0	67 - 109		
Surrogate: Decachlorobiphenyl	10.90			16.6667		65.4	43 - 84		
Surrogate: Decachlorobiphenyl [	7.761			16.6667		46.6	43 - 84		
Surrogate: Tetrachloro-m-xylene	11.68			16.6667		70.1	54 - 118		
Surrogate: Tetrachloro-m-xylene	10.80			16.6667		64.8	54 - 118		

##### Matrix Spike (B8K0214-MS1)

Source: 1804142-01

Prepared: 11/6/2018 Analyzed: 11/7/2018

4,4'-DDD	11.4027	2.0	0.07	16.6667	ND	68.4	73 - 110		M2
4,4'-DDD [2C]	11.5903	2.0	0.07	16.6667	ND	69.5	73 - 110		M2
4,4'-DDE	11.6920	2.0	0.05	16.6667	ND	70.2	71 - 99		M2
4,4'-DDE [2C]	10.3313	2.0	0.05	16.6667	ND	62.0	71 - 99		M2
4,4'-DDT	9.90100	2.0	0.10	16.6667	ND	59.4	51 - 106		
4,4'-DDT [2C]	11.8065	2.0	0.10	16.6667	ND	70.8	51 - 106		
Aldrin	10.8832	1.0	0.04	16.6667	ND	65.3	67 - 95		M2
Aldrin [2C]	9.57517	1.0	0.04	16.6667	ND	57.5	67 - 95		M2
alpha-BHC	10.2487	1.0	0.11	16.6667	ND	61.5	67 - 94		M2
alpha-BHC [2C]	10.1420	1.0	0.11	16.6667	ND	60.9	67 - 94		M2
alpha-Chlordane	23.5563	1.0	0.12	16.6667	16.5548	42.0	69 - 99		M2
alpha-Chlordane [2C]	27.7352	1.0	0.12	16.6667	10.4910	103	69 - 99		M2
beta-BHC	10.6245	1.0	0.06	16.6667	ND	63.7	67 - 99		M2
beta-BHC [2C]	10.1767	1.0	0.06	16.6667	ND	61.1	67 - 99		M2
delta-BHC	10.9955	1.0	0.03	16.6667	ND	66.0	73 - 103		M2
delta-BHC [2C]	11.5483	1.0	0.03	16.6667	ND	69.3	73 - 103		M2
Dieldrin	39.8647	2.0	0.13	16.6667	37.2520	15.7	65 - 93		M2
Dieldrin [2C]	41.0448	2.0	0.13	16.6667	39.1455	11.4	65 - 93		M2
Endosulfan I	10.7538	1.0	0.10	16.6667	ND	64.5	65 - 91		M2
Endosulfan I [2C]	10.0263	1.0	0.10	16.6667	ND	60.2	65 - 91		M2
Endosulfan II	14.6685	2.0	0.03	16.6667	ND	88.0	65 - 102		
Endosulfan II [2C]	11.0807	2.0	0.03	16.6667	ND	66.5	65 - 102		
Endosulfan sulfate	11.2052	2.0	0.08	16.6667	ND	67.2	64 - 106		
Endosulfan Sulfate [2C]	11.5332	2.0	0.08	16.6667	ND	69.2	64 - 106		
Endrin	12.3597	2.0	0.04	16.6667	ND	74.2	64 - 111		
Endrin [2C]	13.2627	2.0	0.04	16.6667	ND	79.6	64 - 111		
Endrin aldehyde	14.8087	2.0	0.31	16.6667	ND	88.9	64 - 109		



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0214 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B8K0214-MS1) - Continued

Source: 1804142-01

Prepared: 11/6/2018 Analyzed: 11/7/2018

Endrin aldehyde [2C]	8.47417	2.0	0.31	16.6667	ND	50.8	64 - 109			M2
Endrin ketone	9.56000	2.0	0.13	16.6667	ND	57.4	57 - 101			
Endrin ketone [2C]	12.1002	2.0	0.13	16.6667	ND	72.6	57 - 101			
gamma-BHC	10.3288	1.0	0.10	16.6667	ND	62.0	65 - 96			M2
gamma-BHC [2C]	10.3108	1.0	0.10	16.6667	ND	61.9	65 - 96			M2
gamma-Chlordane	15.7758	1.0	0.07	16.6667	7.07933	52.2	65 - 113			M2
gamma-Chlordane [2C]	12.6165	1.0	0.07	16.6667	4.82000	46.8	65 - 113			M2
Heptachlor	10.1548	1.0	0.05	16.6667	ND	60.9	61 - 96			M2
Heptachlor [2C]	9.72400	1.0	0.05	16.6667	ND	58.3	61 - 96			M2
Heptachlor epoxide	14.9172	1.0	0.09	16.6667	5.00383	59.5	64 - 89			M2
Heptachlor epoxide [2C]	14.7588	1.0	0.09	16.6667	5.80183	53.7	64 - 89			M2
Methoxychlor	16.5910	5.0	0.18	16.6667	ND	99.5	67 - 109			
Methoxychlor [2C]	17.3082	5.0	0.18	16.6667	ND	104	67 - 109			
Surrogate: Decachlorobiphenyl	10.32			16.6667		61.9	43 - 84			
Surrogate: Decachlorobiphenyl [	8.196			16.6667		49.2	43 - 84			
Surrogate: Tetrachloro-m-xylene	9.634			16.6667		57.8	54 - 118			
Surrogate: Tetrachloro-m-xylene	8.468			16.6667		50.8	54 - 118			S10

##### Matrix Spike Dup (B8K0214-MSD1)

Source: 1804142-01

Prepared: 11/6/2018 Analyzed: 11/7/2018

4,4'-DDD	10.5057	2.0	0.07	16.6667	ND	63.0	73 - 110	8.19	20	M2
4,4'-DDD [2C]	10.8287	2.0	0.07	16.6667	ND	65.0	73 - 110	6.79	20	M2
4,4'-DDE	11.0265	2.0	0.05	16.6667	ND	66.2	71 - 99	5.86	20	M2
4,4'-DDE [2C]	9.90933	2.0	0.05	16.6667	ND	59.5	71 - 99	4.17	20	M2
4,4'-DDT	8.73050	2.0	0.10	16.6667	ND	52.4	51 - 106	12.6	20	
4,4'-DDT [2C]	11.0002	2.0	0.10	16.6667	ND	66.0	51 - 106	7.07	20	
Aldrin	10.5060	1.0	0.04	16.6667	ND	63.0	67 - 95	3.53	20	M2
Aldrin [2C]	9.34800	1.0	0.04	16.6667	ND	56.1	67 - 95	2.40	20	M2
alpha-BHC	9.94167	1.0	0.11	16.6667	ND	59.6	67 - 94	3.04	20	M2
alpha-BHC [2C]	10.1798	1.0	0.11	16.6667	ND	61.1	67 - 94	0.372	20	M2
alpha-Chlordane	22.3310	1.0	0.12	16.6667	16.5548	34.7	69 - 99	5.34	20	M2
alpha-Chlordane [2C]	26.6152	1.0	0.12	16.6667	10.4910	96.7	69 - 99	4.12	20	
beta-BHC	10.2235	1.0	0.06	16.6667	ND	61.3	67 - 99	3.85	20	M2
beta-BHC [2C]	10.3275	1.0	0.06	16.6667	ND	62.0	67 - 99	1.47	20	M2
delta-BHC	10.3783	1.0	0.03	16.6667	ND	62.3	73 - 103	5.78	20	M2
delta-BHC [2C]	11.2855	1.0	0.03	16.6667	ND	67.7	73 - 103	2.30	20	M2
Dieldrin	38.1355	2.0	0.13	16.6667	37.2520	5.30	65 - 93	4.43	20	M2
Dieldrin [2C]	39.2858	2.0	0.13	16.6667	39.1455	0.842	65 - 93	4.38	20	M2
Endosulfan I	10.2143	1.0	0.10	16.6667	ND	61.3	65 - 91	5.15	20	M2
Endosulfan I [2C]	9.83050	1.0	0.10	16.6667	ND	59.0	65 - 91	1.97	20	M2
Endosulfan II	11.3945	2.0	0.03	16.6667	ND	68.4	65 - 102	25.1	20	R3
Endosulfan II [2C]	10.4925	2.0	0.03	16.6667	ND	63.0	65 - 102	5.45	20	M2





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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0214 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B8K0214-MSD1) - Continued

Source: 1804142-01

Prepared: 11/6/2018 Analyzed: 11/7/2018

Endosulfan sulfate	11.4203	2.0	0.08	16.6667	ND	68.5	64 - 106	1.90	20	
Endosulfan Sulfate [2C]	10.7503	2.0	0.08	16.6667	ND	64.5	64 - 106	7.03	20	
Endrin	11.8027	2.0	0.04	16.6667	ND	70.8	64 - 111	4.61	20	
Endrin [2C]	12.4517	2.0	0.04	16.6667	ND	74.7	64 - 111	6.31	20	
Endrin aldehyde	11.2545	2.0	0.31	16.6667	ND	67.5	64 - 109	27.3	20	R3
Endrin aldehyde [2C]	8.09367	2.0	0.31	16.6667	ND	48.6	64 - 109	4.59	20	M2
Endrin ketone	9.88133	2.0	0.13	16.6667	ND	59.3	57 - 101	3.31	20	
Endrin ketone [2C]	11.4990	2.0	0.13	16.6667	ND	69.0	57 - 101	5.09	20	
gamma-BHC	9.93250	1.0	0.10	16.6667	ND	59.6	65 - 96	3.91	20	M2
gamma-BHC [2C]	10.2817	1.0	0.10	16.6667	ND	61.7	65 - 96	0.283	20	M2
gamma-Chlordane	14.9330	1.0	0.07	16.6667	7.07933	47.1	65 - 113	5.49	20	M2
gamma-Chlordane [2C]	12.3748	1.0	0.07	16.6667	4.82000	45.3	65 - 113	1.93	20	M2
Heptachlor	9.69083	1.0	0.05	16.6667	ND	58.1	61 - 96	4.68	20	M2
Heptachlor [2C]	9.98550	1.0	0.05	16.6667	ND	59.9	61 - 96	2.65	20	M2
Heptachlor epoxide	14.1743	1.0	0.09	16.6667	5.00383	55.0	64 - 89	5.11	20	M2
Heptachlor epoxide [2C]	14.3840	1.0	0.09	16.6667	5.80183	51.5	64 - 89	2.57	20	M2
Methoxychlor	17.5865	5.0	0.18	16.6667	ND	106	67 - 109	5.83	20	
Methoxychlor [2C]	16.2073	5.0	0.18	16.6667	ND	97.2	67 - 109	6.57	20	
Surrogate: Decachlorobiphenyl	9.806			16.6667		58.8	43 - 84			
Surrogate: Decachlorobiphenyl [	7.689			16.6667		46.1	43 - 84			
Surrogate: Tetrachloro-m-xylene	9.349			16.6667		56.1	54 - 118			
Surrogate: Tetrachloro-m-xylene	8.743			16.6667		52.5	54 - 118			S10



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### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W

##### Blank (B8K0268-BLK2)

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	ND	0.05	0.006
4,4'-DDD [2C]	ND	0.05	0.006
4,4'-DDE	ND	0.05	0.005
4,4'-DDE [2C]	ND	0.05	0.005
4,4'-DDT	ND	0.05	0.01
4,4'-DDT [2C]	ND	0.05	0.01
Aldrin	ND	0.02	0.002
Aldrin [2C]	ND	0.02	0.002
alpha-BHC	ND	0.02	0.002
alpha-BHC [2C]	ND	0.02	0.002
alpha-Chlordane	ND	0.02	0.003
alpha-Chlordane [2C]	ND	0.02	0.003
beta-BHC	ND	0.02	0.002
beta-BHC [2C]	ND	0.02	0.002
Chlordane	ND	0.25	0.03
Chlordane [2C]	ND	0.25	0.03
delta-BHC	ND	0.02	0.002
delta-BHC [2C]	ND	0.02	0.002
Dieldrin	ND	0.05	0.002
Dieldrin [2C]	ND	0.05	0.002
Endosulfan I	ND	0.02	0.005
Endosulfan I [2C]	ND	0.02	0.005
Endosulfan II	ND	0.05	0.009
Endosulfan II [2C]	ND	0.05	0.009
Endosulfan sulfate	ND	0.05	0.01
Endosulfan Sulfate [2C]	ND	0.05	0.01
Endrin	ND	0.05	0.005
Endrin [2C]	ND	0.05	0.005
Endrin aldehyde	ND	0.05	0.003
Endrin aldehyde [2C]	ND	0.05	0.003
Endrin ketone	ND	0.05	0.003
Endrin ketone [2C]	ND	0.05	0.003
gamma-BHC	ND	0.02	0.002
gamma-BHC [2C]	ND	0.02	0.002
gamma-Chlordane	ND	0.02	0.002
gamma-Chlordane [2C]	ND	0.02	0.002
Heptachlor	ND	0.02	0.002
Heptachlor [2C]	ND	0.02	0.002
Heptachlor epoxide	ND	0.02	0.002
Heptachlor epoxide [2C]	ND	0.02	0.002
Methoxychlor	ND	0.25	0.008



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W (continued)

##### Blank (B8K0268-BLK2) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

Methoxychlor [2C]	ND	0.25	0.008
Toxaphene	ND	2.5	0.23
Toxaphene [2C]	ND	2.5	0.23

Surrogate: Decachlorobiphenyl	0.3216		0.500000	64.3	8 - 128
Surrogate: Decachlorobiphenyl [	0.2783		0.500000	55.7	8 - 128
Surrogate: Tetrachloro-m-xylene	0.3344		0.500000	66.9	32 - 126
Surrogate: Tetrachloro-m-xylene	0.3240		0.500000	64.8	32 - 126

##### LCS (B8K0268-BS2)

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	0.367200	0.05	0.006	0.500000	73.4	56 - 126
4,4'-DDD [2C]	0.377050	0.05	0.006	0.500000	75.4	56 - 126
4,4'-DDE	0.399190	0.05	0.005	0.500000	79.8	53 - 127
4,4'-DDE [2C]	0.340125	0.05	0.005	0.500000	68.0	53 - 127
4,4'-DDT	0.352255	0.05	0.01	0.500000	70.5	27 - 134
4,4'-DDT [2C]	0.371490	0.05	0.01	0.500000	74.3	27 - 134
Aldrin	0.389155	0.02	0.002	0.500000	77.8	53 - 123
Aldrin [2C]	0.346750	0.02	0.002	0.500000	69.4	53 - 123
alpha-BHC	0.377190	0.02	0.002	0.500000	75.4	58 - 120
alpha-BHC [2C]	0.356465	0.02	0.002	0.500000	71.3	58 - 120
alpha-Chlordane	0.389870	0.02	0.003	0.500000	78.0	55 - 123
alpha-Chlordane [2C]	0.341975	0.02	0.003	0.500000	68.4	55 - 123
beta-BHC	0.363460	0.02	0.002	0.500000	72.7	53 - 116
beta-BHC [2C]	0.356845	0.02	0.002	0.500000	71.4	53 - 116
delta-BHC	0.381600	0.02	0.002	0.500000	76.3	27 - 136
delta-BHC [2C]	0.401340	0.02	0.002	0.500000	80.3	27 - 136
Dieldrin	0.365985	0.05	0.002	0.500000	73.2	55 - 114
Dieldrin [2C]	0.339920	0.05	0.002	0.500000	68.0	55 - 114
Endosulfan I	0.368815	0.02	0.005	0.500000	73.8	52 - 117
Endosulfan I [2C]	0.341110	0.02	0.005	0.500000	68.2	52 - 117
Endosulfan II	0.379510	0.05	0.009	0.500000	75.9	53 - 128
Endosulfan II [2C]	0.377770	0.05	0.009	0.500000	75.6	53 - 128
Endosulfan sulfate	0.367225	0.05	0.01	0.500000	73.4	49 - 122
Endosulfan Sulfate [2C]	0.378405	0.05	0.01	0.500000	75.7	49 - 122
Endrin	0.391890	0.05	0.005	0.500000	78.4	59 - 123
Endrin [2C]	0.397255	0.05	0.005	0.500000	79.5	59 - 123
Endrin aldehyde	0.380195	0.05	0.003	0.500000	76.0	49 - 140
Endrin aldehyde [2C]	0.381480	0.05	0.003	0.500000	76.3	49 - 140
Endrin ketone	0.338170	0.05	0.003	0.500000	67.6	47 - 121
Endrin ketone [2C]	0.379065	0.05	0.003	0.500000	75.8	47 - 121
gamma-BHC	0.361345	0.02	0.002	0.500000	72.3	57 - 116
gamma-BHC [2C]	0.357430	0.02	0.002	0.500000	71.5	57 - 116



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W (continued)

##### LCS (B8K0268-BS2) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

gamma-Chlordane	0.380955	0.02	0.002	0.500000		76.2	53 - 120		
gamma-Chlordane [2C]	0.343115	0.02	0.002	0.500000		68.6	53 - 120		
Heptachlor	0.378140	0.02	0.002	0.500000		75.6	55 - 121		
Heptachlor [2C]	0.392690	0.02	0.002	0.500000		78.5	55 - 121		
Heptachlor epoxide	0.376315	0.02	0.002	0.500000		75.3	54 - 113		
Heptachlor epoxide [2C]	0.348940	0.02	0.002	0.500000		69.8	54 - 113		
Methoxychlor	0.418290	0.25	0.008	0.500000		83.7	47 - 135		
Methoxychlor [2C]	0.423645	0.25	0.008	0.500000		84.7	47 - 135		
Surrogate: Decachlorobiphenyl	0.3138			0.500000		62.8	8 - 128		
Surrogate: Decachlorobiphenyl [	0.2922			0.500000		58.4	8 - 128		
Surrogate: Tetrachloro-m-xylene	0.3480			0.500000		69.6	32 - 126		
Surrogate: Tetrachloro-m-xylene	0.3367			0.500000		67.3	32 - 126		

##### LCS Dup (B8K0268-BSD2)

Prepared: 11/7/2018 Analyzed: 11/7/2018

4,4'-DDD	0.373630	0.05	0.006	0.500000		74.7	56 - 126	1.74	20
4,4'-DDD [2C]	0.385205	0.05	0.006	0.500000		77.0	56 - 126	2.14	20
4,4'-DDE	0.406060	0.05	0.005	0.500000		81.2	53 - 127	1.71	20
4,4'-DDE [2C]	0.347825	0.05	0.005	0.500000		69.6	53 - 127	2.24	20
4,4'-DDT	0.357760	0.05	0.01	0.500000		71.6	27 - 134	1.55	20
4,4'-DDT [2C]	0.378405	0.05	0.01	0.500000		75.7	27 - 134	1.84	20
Aldrin	0.396575	0.02	0.002	0.500000		79.3	53 - 123	1.89	20
Aldrin [2C]	0.355510	0.02	0.002	0.500000		71.1	53 - 123	2.49	20
alpha-BHC	0.385070	0.02	0.002	0.500000		77.0	58 - 120	2.07	20
alpha-BHC [2C]	0.365810	0.02	0.002	0.500000		73.2	58 - 120	2.59	20
alpha-Chlordane	0.397340	0.02	0.003	0.500000		79.5	55 - 123	1.90	20
alpha-Chlordane [2C]	0.350715	0.02	0.003	0.500000		70.1	55 - 123	2.52	20
beta-BHC	0.370245	0.02	0.002	0.500000		74.0	53 - 116	1.85	20
beta-BHC [2C]	0.364840	0.02	0.002	0.500000		73.0	53 - 116	2.22	20
delta-BHC	0.391250	0.02	0.002	0.500000		78.2	27 - 136	2.50	20
delta-BHC [2C]	0.411050	0.02	0.002	0.500000		82.2	27 - 136	2.39	20
Dieldrin	0.371490	0.05	0.002	0.500000		74.3	55 - 114	1.49	20
Dieldrin [2C]	0.347390	0.05	0.002	0.500000		69.5	55 - 114	2.17	20
Endosulfan I	0.373115	0.02	0.005	0.500000		74.6	52 - 117	1.16	20
Endosulfan I [2C]	0.347670	0.02	0.005	0.500000		69.5	52 - 117	1.90	20
Endosulfan II	0.385340	0.05	0.009	0.500000		77.1	53 - 128	1.52	20
Endosulfan II [2C]	0.385420	0.05	0.009	0.500000		77.1	53 - 128	2.00	20
Endosulfan sulfate	0.373205	0.05	0.01	0.500000		74.6	49 - 122	1.62	20
Endosulfan Sulfate [2C]	0.386930	0.05	0.01	0.500000		77.4	49 - 122	2.23	20
Endrin	0.395400	0.05	0.005	0.500000		79.1	59 - 123	0.892	20
Endrin [2C]	0.403710	0.05	0.005	0.500000		80.7	59 - 123	1.61	20
Endrin aldehyde	0.386735	0.05	0.003	0.500000		77.3	49 - 140	1.71	20



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W (continued)

##### LCS Dup (B8K0268-BSD2) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

Endrin aldehyde [2C]	0.389340	0.05	0.003	0.500000		77.9	49 - 140	2.04	20
Endrin ketone	0.344300	0.05	0.003	0.500000		68.9	47 - 121	1.80	20
Endrin ketone [2C]	0.384035	0.05	0.003	0.500000		76.8	47 - 121	1.30	20
gamma-BHC	0.369115	0.02	0.002	0.500000		73.8	57 - 116	2.13	20
gamma-BHC [2C]	0.366720	0.02	0.002	0.500000		73.3	57 - 116	2.57	20
gamma-Chlordane	0.388010	0.02	0.002	0.500000		77.6	53 - 120	1.83	20
gamma-Chlordane [2C]	0.351295	0.02	0.002	0.500000		70.3	53 - 120	2.36	20
Heptachlor	0.396315	0.02	0.002	0.500000		79.3	55 - 121	4.69	20
Heptachlor [2C]	0.399700	0.02	0.002	0.500000		79.9	55 - 121	1.77	20
Heptachlor epoxide	0.381660	0.02	0.002	0.500000		76.3	54 - 113	1.41	20
Heptachlor epoxide [2C]	0.356475	0.02	0.002	0.500000		71.3	54 - 113	2.14	20
Methoxychlor	0.422555	0.25	0.008	0.500000		84.5	47 - 135	1.01	20
Methoxychlor [2C]	0.429630	0.25	0.008	0.500000		85.9	47 - 135	1.40	20
Surrogate: Decachlorobiphenyl	0.3184			0.500000		63.7	8 - 128		
Surrogate: Decachlorobiphenyl [	0.2935			0.500000		58.7	8 - 128		
Surrogate: Tetrachloro-m-xylene	0.3537			0.500000		70.7	32 - 126		
Surrogate: Tetrachloro-m-xylene	0.3414			0.500000		68.3	32 - 126		



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### Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W

##### Blank (B8K0268-BLK1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

Aroclor 1016	ND	0.50	0.04
Aroclor 1221	ND	1.0	0.04
Aroclor 1232	ND	0.50	0.04
Aroclor 1242	ND	0.50	0.04
Aroclor 1248	ND	0.50	0.04
Aroclor 1254	ND	0.50	0.04
Aroclor 1260	ND	0.50	0.04
Aroclor 1262	ND	0.50	0.04
Aroclor 1268	ND	0.50	0.04

Surrogate: Decachlorobiphenyl	0.3948		0.500000	79.0	8 - 128
Surrogate: Tetrachloro-m-xylene	0.5081		0.500000	102	32 - 126

##### Blank (B8K0268-BLK2)

Prepared: 11/7/2018 Analyzed: 11/8/2018

Aroclor 1016	ND	0.50	0.04
Aroclor 1221	ND	1.0	0.04
Aroclor 1232	ND	0.50	0.04
Aroclor 1242	ND	0.50	0.04
Aroclor 1248	ND	0.50	0.04
Aroclor 1254	ND	0.50	0.04
Aroclor 1260	ND	0.50	0.04
Aroclor 1262	ND	0.50	0.04
Aroclor 1268	ND	0.50	0.04

Surrogate: Decachlorobiphenyl	0.000		0.500000	NR	8 - 128	S10
Surrogate: Tetrachloro-m-xylene	0.000		0.500000	NR	32 - 126	S10

##### LCS (B8K0268-BS1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

Aroclor 1016	4.23324	0.50	0.04	5.00000	84.7	72 - 107
Aroclor 1260	4.56826	0.50	0.04	5.00000	91.4	65 - 124

Surrogate: Decachlorobiphenyl	0.3884		0.500000	77.7	8 - 128
Surrogate: Tetrachloro-m-xylene	0.4928		0.500000	98.6	32 - 126

##### LCS (B8K0268-BS2)

Prepared: 11/7/2018 Analyzed: 11/8/2018

Aroclor 1016	ND	0.50	0.04		NR	72 - 107
Aroclor 1260	ND	0.50	0.04		NR	65 - 124

Surrogate: Decachlorobiphenyl	0.000		0.500000	NR	8 - 128	S10
Surrogate: Tetrachloro-m-xylene	0.000		0.500000	NR	32 - 126	S10

##### LCS Dup (B8K0268-BSD1)

Prepared: 11/7/2018 Analyzed: 11/7/2018

Aroclor 1016	4.21780	0.50	0.04	5.00000	84.4	72 - 107	0.365	20
Aroclor 1260	4.55078	0.50	0.04	5.00000	91.0	65 - 124	0.383	20

Surrogate: Decachlorobiphenyl	0.3912		0.500000	78.2	8 - 128
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### Polychlorinated Biphenyls by EPA 8082 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0268 - GCSEMI\_PCB/PEST\_W (continued)

##### LCS Dup (B8K0268-BSD1) - Continued

Prepared: 11/7/2018 Analyzed: 11/7/2018

Surrogate: Tetrachloro-m-xylene 0.4927 0.500000 98.5 32 - 126

##### LCS Dup (B8K0268-BSD2)

Prepared: 11/7/2018 Analyzed: 11/8/2018

Aroclor 1016	ND	0.50	0.04		NR	72 - 107		20	
Aroclor 1260	ND	0.50	0.04		NR	65 - 124		20	
Surrogate: Decachlorobiphenyl	0.000		0.500000		NR	8 - 128			S10
Surrogate: Tetrachloro-m-xylene	0.000		0.500000		NR	32 - 126			S10



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### Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W

##### Blank (B8K0325-BLK1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

1,1,1,2-Tetrachloroethane	ND	0.50	0.11
1,1,1-Trichloroethane	ND	0.50	0.18
1,1,2,2-Tetrachloroethane	ND	0.50	0.17
1,1,2-Trichloroethane	ND	0.50	0.12
1,1-Dichloroethane	ND	0.50	0.16
1,1-Dichloroethene	ND	0.50	0.09
1,1-Dichloropropene	ND	0.50	0.21
1,2,3-Trichloropropane	ND	0.50	0.16
1,2,3-Trichlorobenzene	ND	0.50	0.12
1,2,4-Trichlorobenzene	ND	0.50	0.12
1,2,4-Trimethylbenzene	ND	0.50	0.08
1,2-Dibromo-3-chloropropane	ND	0.50	0.24
1,2-Dibromoethane	ND	0.50	0.11
1,2-Dichlorobenzene	ND	0.50	0.09
1,2-Dichloroethane	ND	0.50	0.19
1,2-Dichloropropane	ND	0.50	0.36
1,3,5-Trimethylbenzene	ND	0.50	0.05
1,3-Dichlorobenzene	ND	0.50	0.10
1,3-Dichloropropane	ND	0.50	0.07
1,4-Dichlorobenzene	ND	0.50	0.07
2,2-Dichloropropane	ND	0.50	0.16
2-Chlorotoluene	ND	0.50	0.08
4-Chlorotoluene	ND	0.50	0.08
4-Isopropyltoluene	ND	0.50	0.06
Benzene	ND	0.50	0.03
Bromobenzene	ND	0.50	0.09
Bromochloromethane	ND	0.50	0.24
Bromodichloromethane	ND	0.50	0.14
Bromoform	ND	0.50	0.13
Bromomethane	ND	0.50	0.42
Carbon disulfide	ND	1.0	0.12
Carbon tetrachloride	ND	0.50	0.19
Chlorobenzene	ND	0.50	0.07
Chloroethane	ND	0.50	0.40
Chloroform	ND	0.50	0.17
Chloromethane	ND	0.50	0.08
cis-1,2-Dichloroethene	ND	0.50	0.13
cis-1,3-Dichloropropene	ND	0.50	0.05
Di-isopropyl ether	ND	0.50	0.12
Dibromochloromethane	ND	0.50	0.14
Dibromomethane	ND	0.50	0.10





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### Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W (continued)

##### Blank (B8K0325-BLK1) - Continued

Prepared: 11/9/2018 Analyzed: 11/9/2018

Dichlorodifluoromethane	ND	0.50	0.10
Ethyl Acetate	ND	10	1.8
Ethyl Ether	ND	10	1.3
Ethyl tert-butyl ether	ND	0.50	0.11
Ethylbenzene	ND	0.50	0.07
Freon-113	ND	0.50	0.17
Hexachlorobutadiene	ND	0.50	0.14
Isopropylbenzene	ND	0.50	0.05
m,p-Xylene	ND	1.0	0.08
Methylene chloride	ND	1.0	0.46
MTBE	ND	0.50	0.12
n-Butylbenzene	ND	0.50	0.05
n-Propylbenzene	ND	0.50	0.07
Naphthalene	ND	0.50	0.15
o-Xylene	ND	0.50	0.05
sec-Butylbenzene	ND	0.50	0.04
Styrene	ND	0.50	0.06
tert-Amyl methyl ether	ND	0.50	0.11
tert-Butanol	ND	10	2.9
tert-Butylbenzene	ND	0.50	0.06
Tetrachloroethene	ND	0.50	0.07
Toluene	ND	0.50	0.07
trans-1,2-Dichloroethene	ND	0.50	0.11
trans-1,3-Dichloropropene	ND	0.50	0.04
Trichloroethene	ND	0.50	0.05
Trichlorofluoromethane	ND	0.50	0.14
Vinyl acetate	ND	10	1.3
Vinyl chloride	ND	0.50	0.05

Surrogate: 1,2-Dichloroethane-d4	22.30		25.0000	89.2	57 - 152
Surrogate: 4-Bromofluorobenzene	24.21		25.0000	96.8	62 - 134
Surrogate: Dibromofluoromethane	21.18		25.0000	84.7	56 - 167
Surrogate: Toluene-d8	24.66		25.0000	98.6	33 - 170

##### LCS (B8K0325-BS1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

1,1,1,2-Tetrachloroethane	18.1600	0.50	0.11	20.0000	90.8	80 - 137
1,1,1-Trichloroethane	17.6200	0.50	0.18	20.0000	88.1	75 - 148
1,1,2,2-Tetrachloroethane	17.1200	0.50	0.17	20.0000	85.6	64 - 118
1,1,2-Trichloroethane	16.8300	0.50	0.12	20.0000	84.2	77 - 113
1,1-Dichloroethane	17.0100	0.50	0.16	20.0000	85.0	72 - 131
1,1-Dichloroethene	16.7800	0.50	0.09	20.0000	83.9	75 - 132
1,1-Dichloropropene	17.7800	0.50	0.21	20.0000	88.9	84 - 141



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### Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W (continued)

##### LCS (B8K0325-BS1) - Continued

Prepared: 11/9/2018 Analyzed: 11/9/2018

1,2,3-Trichloropropane	16.4600	0.50	0.16	20.0000		82.3	65 - 111		
1,2,3-Trichlorobenzene	17.3200	0.50	0.12	20.0000		86.6	79 - 117		
1,2,4-Trichlorobenzene	17.8600	0.50	0.12	20.0000		89.3	78 - 121		
1,2,4-Trimethylbenzene	19.7500	0.50	0.08	20.0000		98.8	83 - 125		
1,2-Dibromo-3-chloropropane	14.3500	0.50	0.24	20.0000		71.8	54 - 116		
1,2-Dibromoethane	17.1500	0.50	0.11	20.0000		85.8	79 - 118		
1,2-Dichlorobenzene	19.4600	0.50	0.09	20.0000		97.3	82 - 115		
1,2-Dichloroethane	17.0000	0.50	0.19	20.0000		85.0	76 - 115		
1,2-Dichloropropane	18.3700	0.50	0.36	20.0000		91.8	74 - 113		
1,3,5-Trimethylbenzene	19.9800	0.50	0.05	20.0000		99.9	83 - 126		
1,3-Dichlorobenzene	20.1200	0.50	0.10	20.0000		101	84 - 118		
1,3-Dichloropropane	17.5100	0.50	0.07	20.0000		87.6	72 - 116		
1,4-Dichlorobenzene	19.0900	0.50	0.07	20.0000		95.4	83 - 112		
2,2-Dichloropropane	19.2100	0.50	0.16	20.0000		96.0	72 - 150		
2-Chlorotoluene	21.0000	0.50	0.08	20.0000		105	82 - 120		
4-Chlorotoluene	21.2500	0.50	0.08	20.0000		106	81 - 121		
4-Isopropyltoluene	19.9300	0.50	0.06	20.0000		99.6	86 - 124		
Benzene	36.6100	0.50	0.03	40.0000		91.5	81 - 118		
Bromobenzene	19.7600	0.50	0.09	20.0000		98.8	82 - 117		
Bromochloromethane	16.2200	0.50	0.24	20.0000		81.1	70 - 136		
Bromodichloromethane	19.2700	0.50	0.14	20.0000		96.4	80 - 122		
Bromoform	15.6900	0.50	0.13	20.0000		78.4	53 - 145		
Bromomethane	19.8300	0.50	0.42	20.0000		99.2	30 - 204		
Carbon disulfide	17.6400	1.0	0.12	20.0000		88.2	85 - 131		
Carbon tetrachloride	18.8600	0.50	0.19	20.0000		94.3	77 - 157		
Chlorobenzene	18.7200	0.50	0.07	20.0000		93.6	86 - 113		
Chloroethane	18.2300	0.50	0.40	20.0000		91.2	70 - 160		
Chloroform	16.9400	0.50	0.17	20.0000		84.7	66 - 136		
Chloromethane	17.6700	0.50	0.08	20.0000		88.4	52 - 138		
cis-1,2-Dichloroethene	16.9000	0.50	0.13	20.0000		84.5	71 - 128		
cis-1,3-Dichloropropene	16.6900	0.50	0.05	20.0000		83.4	71 - 123		
Di-isopropyl ether	16.1200	0.50	0.12	20.0000		80.6	64 - 123		
Dibromochloromethane	16.9300	0.50	0.14	20.0000		84.6	78 - 140		
Dibromomethane	17.2500	0.50	0.10	20.0000		86.2	78 - 109		
Dichlorodifluoromethane	18.8100	0.50	0.10	20.0000		94.0	64 - 144		
Ethyl Acetate	140.600	10	1.8	200.000		70.3	55 - 123		
Ethyl Ether	146.520	10	1.3	200.000		73.3	74 - 122		L4
Ethyl tert-butyl ether	15.3400	0.50	0.11	20.0000		76.7	72 - 120		
Ethylbenzene	40.3600	0.50	0.07	40.0000		101	90 - 116		
Freon-113	17.9200	0.50	0.17	20.0000		89.6	76 - 143		
Hexachlorobutadiene	21.4500	0.50	0.14	20.0000		107	81 - 129		
Isopropylbenzene	20.0700	0.50	0.05	20.0000		100	83 - 129		



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 11/12/2018

### Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W (continued)

##### LCS (B8K0325-BS1) - Continued

Prepared: 11/9/2018 Analyzed: 11/9/2018

m,p-Xylene	42.9600	1.0	0.08	40.0000		107	88 - 124		
Methylene chloride	18.3300	1.0	0.46	20.0000		91.6	76 - 137		
MTBE	14.4000	0.50	0.12	20.0000		72.0	67 - 121		
n-Butylbenzene	19.7100	0.50	0.05	20.0000		98.6	83 - 129		
n-Propylbenzene	21.9900	0.50	0.07	20.0000		110	85 - 124		
Naphthalene	15.2700	0.50	0.15	20.0000		76.4	67 - 113		
o-Xylene	39.1300	0.50	0.05	40.0000		97.8	82 - 129		
sec-Butylbenzene	20.0400	0.50	0.04	20.0000		100	86 - 127		
Styrene	18.5000	0.50	0.06	20.0000		92.5	83 - 122		
tert-Amyl methyl ether	15.1600	0.50	0.11	20.0000		75.8	61 - 114		
tert-Butanol	59.9600	10	2.9	100.000		60.0	45 - 121		
tert-Butylbenzene	19.7000	0.50	0.06	20.0000		98.5	84 - 130		
Tetrachloroethene	19.9800	0.50	0.07	20.0000		99.9	87 - 123		
Toluene	38.7800	0.50	0.07	40.0000		97.0	84 - 115		
trans-1,2-Dichloroethene	16.9400	0.50	0.11	20.0000		84.7	60 - 148		
trans-1,3-Dichloropropene	15.7600	0.50	0.04	20.0000		78.8	77 - 118		
Trichloroethene	18.7900	0.50	0.05	20.0000		94.0	79 - 129		
Trichlorofluoromethane	17.0300	0.50	0.14	20.0000		85.2	68 - 162		
Vinyl acetate	176.610	10	1.3	200.000		88.3	65 - 134		
Vinyl chloride	17.1400	0.50	0.05	20.0000		85.7	73 - 128		
Surrogate: 1,2-Dichloroethane-d4	20.99			25.0000		84.0	57 - 152		
Surrogate: 4-Bromofluorobenzene	25.27			25.0000		101	62 - 134		
Surrogate: Dibromofluoromethane	21.53			25.0000		86.1	56 - 167		
Surrogate: Toluene-d8	25.10			25.0000		100	33 - 170		

##### LCS Dup (B8K0325-BSD1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

1,1,1,2-Tetrachloroethane	19.3100	0.50	0.11	20.0000		96.6	80 - 137	6.14	20
1,1,1-Trichloroethane	18.6000	0.50	0.18	20.0000		93.0	75 - 148	5.41	20
1,1,2,2-Tetrachloroethane	20.3600	0.50	0.17	20.0000		102	64 - 118	17.3	20
1,1,2-Trichloroethane	19.5300	0.50	0.12	20.0000		97.6	77 - 113	14.9	20
1,1-Dichloroethane	17.7700	0.50	0.16	20.0000		88.8	72 - 131	4.37	20
1,1-Dichloroethene	17.5400	0.50	0.09	20.0000		87.7	75 - 132	4.43	20
1,1-Dichloropropene	18.4000	0.50	0.21	20.0000		92.0	84 - 141	3.43	20
1,2,3-Trichloropropane	19.2600	0.50	0.16	20.0000		96.3	65 - 111	15.7	20
1,2,3-Trichlorobenzene	19.3300	0.50	0.12	20.0000		96.6	79 - 117	11.0	20
1,2,4-Trichlorobenzene	19.2000	0.50	0.12	20.0000		96.0	78 - 121	7.23	20
1,2,4-Trimethylbenzene	19.9900	0.50	0.08	20.0000		100	83 - 125	1.21	20
1,2-Dibromo-3-chloropropane	17.7100	0.50	0.24	20.0000		88.6	54 - 116	21.0	20
1,2-Dibromoethane	20.6300	0.50	0.11	20.0000		103	79 - 118	18.4	20
1,2-Dichlorobenzene	20.4200	0.50	0.09	20.0000		102	82 - 115	4.81	20
1,2-Dichloroethane	18.5100	0.50	0.19	20.0000		92.6	76 - 115	8.50	20



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### Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W (continued)

#### LCS Dup (B8K0325-BSD1) - Continued

Prepared: 11/9/2018 Analyzed: 11/9/2018

1,2-Dichloropropane	19.7200	0.50	0.36	20.0000		98.6	74 - 113	7.09	20
1,3,5-Trimethylbenzene	20.0300	0.50	0.05	20.0000		100	83 - 126	0.250	20
1,3-Dichlorobenzene	20.6200	0.50	0.10	20.0000		103	84 - 118	2.45	20
1,3-Dichloropropane	19.9800	0.50	0.07	20.0000		99.9	72 - 116	13.2	20
1,4-Dichlorobenzene	19.7400	0.50	0.07	20.0000		98.7	83 - 112	3.35	20
2,2-Dichloropropane	19.7100	0.50	0.16	20.0000		98.6	72 - 150	2.57	20
2-Chlorotoluene	21.2500	0.50	0.08	20.0000		106	82 - 120	1.18	20
4-Chlorotoluene	21.4600	0.50	0.08	20.0000		107	81 - 121	0.983	20
4-Isopropyltoluene	20.0000	0.50	0.06	20.0000		100	86 - 124	0.351	20
Benzene	38.0800	0.50	0.03	40.0000		95.2	81 - 118	3.94	20
Bromobenzene	20.6100	0.50	0.09	20.0000		103	82 - 117	4.21	20
Bromochloromethane	17.8900	0.50	0.24	20.0000		89.4	70 - 136	9.79	20
Bromodichloromethane	20.7100	0.50	0.14	20.0000		104	80 - 122	7.20	20
Bromoform	17.8800	0.50	0.13	20.0000		89.4	53 - 145	13.0	20
Bromomethane	17.9300	0.50	0.42	20.0000		89.6	30 - 204	10.1	20
Carbon disulfide	17.9900	1.0	0.12	20.0000		90.0	85 - 131	1.96	20
Carbon tetrachloride	19.1700	0.50	0.19	20.0000		95.8	77 - 157	1.63	20
Chlorobenzene	19.4900	0.50	0.07	20.0000		97.4	86 - 113	4.03	20
Chloroethane	17.9600	0.50	0.40	20.0000		89.8	70 - 160	1.49	20
Chloroform	17.8100	0.50	0.17	20.0000		89.0	66 - 136	5.01	20
Chloromethane	17.9200	0.50	0.08	20.0000		89.6	52 - 138	1.40	20
cis-1,2-Dichloroethene	17.6900	0.50	0.13	20.0000		88.4	71 - 128	4.57	20
cis-1,3-Dichloropropene	18.2700	0.50	0.05	20.0000		91.4	71 - 123	9.04	20
Di-isopropyl ether	17.4500	0.50	0.12	20.0000		87.2	64 - 123	7.92	20
Dibromochloromethane	18.7100	0.50	0.14	20.0000		93.6	78 - 140	9.99	20
Dibromomethane	19.3500	0.50	0.10	20.0000		96.8	78 - 109	11.5	20
Dichlorodifluoromethane	19.2600	0.50	0.10	20.0000		96.3	64 - 144	2.36	20
Ethyl Acetate	176.930	10	1.8	200.000		88.5	55 - 123	22.9	20
Ethyl Ether	164.340	10	1.3	200.000		82.2	74 - 122	11.5	20
Ethyl tert-butyl ether	17.6700	0.50	0.11	20.0000		88.4	72 - 120	14.1	20
Ethylbenzene	41.5400	0.50	0.07	40.0000		104	90 - 116	2.88	20
Freon-113	18.3200	0.50	0.17	20.0000		91.6	76 - 143	2.21	20
Hexachlorobutadiene	21.3600	0.50	0.14	20.0000		107	81 - 129	0.420	20
Isopropylbenzene	20.2800	0.50	0.05	20.0000		101	83 - 129	1.04	20
m,p-Xylene	44.2000	1.0	0.08	40.0000		110	88 - 124	2.85	20
Methylene chloride	19.4300	1.0	0.46	20.0000		97.2	76 - 137	5.83	20
MTBE	17.3100	0.50	0.12	20.0000		86.6	67 - 121	18.4	20
n-Butylbenzene	19.7400	0.50	0.05	20.0000		98.7	83 - 129	0.152	20
n-Propylbenzene	22.1000	0.50	0.07	20.0000		110	85 - 124	0.499	20
Naphthalene	18.3200	0.50	0.15	20.0000		91.6	67 - 113	18.2	20
o-Xylene	40.5600	0.50	0.05	40.0000		101	82 - 129	3.59	20
sec-Butylbenzene	20.0900	0.50	0.04	20.0000		100	86 - 127	0.249	20

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## Certificate of Analysis

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### Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0325 - MSVOA\_W (continued)

#### LCS Dup (B8K0325-BSD1) - Continued

Prepared: 11/9/2018 Analyzed: 11/9/2018

Styrene	19.2300	0.50	0.06	20.0000		96.2	83 - 122	3.87	20	
tert-Amyl methyl ether	18.1800	0.50	0.11	20.0000		90.9	61 - 114	18.1	20	
tert-Butanol	84.8300	10	2.9	100.000		84.8	45 - 121	34.4	20	R
tert-Butylbenzene	19.8500	0.50	0.06	20.0000		99.2	84 - 130	0.759	20	
Tetrachloroethene	20.3800	0.50	0.07	20.0000		102	87 - 123	1.98	20	
Toluene	40.7300	0.50	0.07	40.0000		102	84 - 115	4.91	20	
trans-1,2-Dichloroethene	17.7300	0.50	0.11	20.0000		88.6	60 - 148	4.56	20	
trans-1,3-Dichloropropene	17.8500	0.50	0.04	20.0000		89.2	77 - 118	12.4	20	
Trichloroethene	19.6600	0.50	0.05	20.0000		98.3	79 - 129	4.53	20	
Trichlorofluoromethane	17.2300	0.50	0.14	20.0000		86.2	68 - 162	1.17	20	
Vinyl acetate	205.850	10	1.3	200.000		103	65 - 134	15.3	20	
Vinyl chloride	17.6500	0.50	0.05	20.0000		88.2	73 - 128	2.93	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.37</i>			<i>25.0000</i>		<i>89.5</i>	<i>57 - 152</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.82</i>			<i>25.0000</i>		<i>103</i>	<i>62 - 134</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.93</i>			<i>25.0000</i>		<i>87.7</i>	<i>56 - 167</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.18</i>			<i>25.0000</i>		<i>101</i>	<i>33 - 170</i>			



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### Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8K0328 - MSVOA\_W

##### Blank (B8K0328-BLK1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

Gasoline Range Organics	ND	50	15						
Surrogate: 1,2-Dichloroethane-d4	21.40			25.0000		85.6	57 - 152		
Surrogate: 4-Bromofluorobenzene	23.60			25.0000		94.4	62 - 134		
Surrogate: Dibromofluoromethan	20.85			25.0000		83.4	56 - 167		
Surrogate: Toluene-d8	23.60			25.0000		94.4	33 - 170		

##### LCS (B8K0328-BS1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

Gasoline Range Organics	950.000	50	15	1000.00		95.0	70 - 130		
Surrogate: 1,2-Dichloroethane-d4	20.88			25.0000		83.5	57 - 152		
Surrogate: 4-Bromofluorobenzene	24.43			25.0000		97.7	62 - 134		
Surrogate: Dibromofluoromethan	20.24			25.0000		81.0	56 - 167		
Surrogate: Toluene-d8	24.37			25.0000		97.5	33 - 170		

##### LCS Dup (B8K0328-BSD1)

Prepared: 11/9/2018 Analyzed: 11/9/2018

Gasoline Range Organics	950.000	50	15	1000.00		95.0	70 - 130	0.00	20
Surrogate: 1,2-Dichloroethane-d4	21.84			25.0000		87.4	57 - 152		
Surrogate: 4-Bromofluorobenzene	24.76			25.0000		99.0	62 - 134		
Surrogate: Dibromofluoromethan	20.65			25.0000		82.6	56 - 167		
Surrogate: Toluene-d8	24.53			25.0000		98.1	33 - 170		



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### Notes and Definitions

S13	Surrogate recovery was below laboratory acceptance limit. Sample reanalysis showed the same low recovery.
S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
D7	A lesser amount of sample was analyzed due to matrix.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

#### Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

# CHAIN OF CUSTODY RECORD

Page 1 of 2

For Laboratory Use Only  
ATLCOG Ver:20180321

Method of Transport	Sample Conditions Upon Receipt
<input checked="" type="checkbox"/> Client <input type="checkbox"/> FedEx <input type="checkbox"/> GSO <input type="checkbox"/> Other:	Condition: <input type="checkbox"/> Y <input type="checkbox"/> N 1. CHILLED <input type="checkbox"/> Y <input type="checkbox"/> N 2. HEADSPACE (VOL) <input type="checkbox"/> Y <input type="checkbox"/> N 3. CONTAINER INTACT <input checked="" type="checkbox"/> Y <input type="checkbox"/> N 4. SEALED <input type="checkbox"/> Y <input type="checkbox"/> N

Instruction: Complete all shaded areas.

Company: Leighton Consulting Address: 17781 Cowan City: Irvine State: CA Zip: 92614 Tel: 949-250-1421 Fax:	
Attn: Ross Surrency Email: rsurrency@leightongroup.com	SEND REPORT TO: Address: 17781 Cowan City: Irvine State: CA Zip: 92614 Tel: 949-250-1421 Fax:
Company: Leighton Consulting Address: 17781 Cowan City: Irvine State: CA Zip: 92614	SEND INVOICE TO: Address: 17781 Cowan City: Irvine State: CA Zip: 92614 Tel: 949-250-1421 Fax:

Project Name: LAUSD - Colfax ES		Quote #: D18J041	Special Instructions/Comments:	
Project No.: 11640.008		PO #:		
Sampler: J. Bobiwash				
ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Sample Description	Time
1	1804142-01	PERI-SW-0.5		7:12
2	1804142-02	PERI-SW-1.5		7:14
3	1804142-03	PERI-SW-3.0		7:17
4	1804142-04	PERI-SE-0.5		7:21
5	1804142-05	PERI-SE-1.5		7:22
6	1804142-06	PERI-SE-3.0		7:23
7	1804142-07	PER22-NW-0.5		8:19
8	1804142-08	PER22-NW-1.5		8:20
9	1804142-09	PER22-NW-3.0		8:21
10				

Requested Analysis		Sample Matrix		Container	
TPH-DRO, ORO (C13-C40) 8015		Select Solid Matrix		Type: 1=Tube; 2=Vial; 3=Canister; 4=Pin	Remarks
Mercury 7471A		Select Non-aqueous Matrix		Material: 1=Glass; 2=Plastic; 3=Metal	
Arsenic 6020		Select Wastewater Matrix		Prevalence: 1=HCL; 2=HNO3; 3=H2SO4	
Lead 6010B		Select Water Matrix		5=Latex; 6=Rubber; 7=Canvas	
Select Analysis					
Select Analysis					
Select Analysis					
Select Analysis					
Select Analysis					
8015 (GRO)					
8082 (PCBs)					
8081 (Organochlorine Pesticides)					

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM. 2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM. 3. The following turnaround time conditions apply: TAT = 0: 300% Surcharge SAME BUSINESS DAY (COB 5:00 PM) TAT = 1: 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 2: 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3: 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4: 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5: NO SURCHARGE 5TH BUSINESS DAY (COB 5:00 PM) 4. Weekend, holiday, after-hours work --- ask for quote. 5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote. 6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples. 7. Electronic records maintained for five (5) years from report date. 8. Hard copy reports will be disposed of after 45 calendar days from report date. 9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$27 sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested. - Hard copy and regenerated reports: \$37.50 per hard copy report requested; \$50.00 per regenerated/reformatted report; \$35 per reprocedured EDD. 10. Rush TAT/STLC samples: add 2 days to analysis TAT for extraction procedure. 11. Unanalyzed samples will incur a disposal fee of \$7 per sample. 12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted. Jennifer Bobiwash Printed Name Signature
---	---



Instruction: Complete all shaded areas.

<b>Company:</b> Leighton Consulting		<b>Address:</b> 17781 Cowan		<b>Tel:</b> 949-250-1421	
<b>City:</b> Irvine		<b>State:</b> CA		<b>Zip:</b> 92614	
<b>SEND REPORT TO:</b>		<b>SEND INVOICE TO:</b>		<b>QA/QC</b>	
<b>Attn:</b> Ross Surrency	<b>Email:</b> rsurrency@leightongroup.com	<b>Attn:</b> Accounts Payable	<input type="checkbox"/> same as SEND REPORT TO	<b>EDD</b>	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV
<b>Company:</b> Leighton Consulting		<b>Company:</b> Leighton Group	<b>Email:</b> acctpayable@leightongroup.com	<input type="radio"/> Excel <input type="radio"/> EDF <input type="radio"/> Equis	<input type="checkbox"/>
<b>Address:</b> 17781 Cowan		<b>Address:</b> 17781 Cowan		<input type="radio"/>	<input type="checkbox"/>
<b>City:</b> Irvine	<b>State:</b> CA	<b>City:</b> Irvine	<b>State:</b> CA	<b>Zip:</b> 92614	<input type="checkbox"/>

Project Name: LAUSD - Colfax ES				Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:					
Sampler: J. Bobiwash							
ITEM	Laboratory ID (For Lab Use Only)	Sample Description		Date	Time		
1	1504142-15	PER22-NE-0.5		11/3/18	825		
2	1504142-16	PER22-NE-1.5		11/3/18	827		
3	1504142-17	PER22-NE-3.0			828		
4	1504142-18	PER12-NE-0.5			747		
5	1504142-19	PER12-NE-1.5		748	747		
6	1504142-20	PER12-NE-3.0		749	749		
7	1504142-21	PER12-SE-0.5		742	742		
8	1504142-22	PER12-SE-1.5		743	743		
9	1504142-23	PER12-SE-3.0		11/3/18	745		
10							

**TERMS**

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples submitted after 3:00 PM are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
  - TAT - 0: 100% Surcharge SAME BUSINESS DAY (if received by 9:00 AM)
  - TAT - 1: 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
  - TAT - 2: 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
  - TAT - 3: 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
  - TAT - 4: 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
  - TAT - 5: NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hour work --- ask for quote.
  - Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
5. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
  - Electronic records maintained for five (5) years from report date.
6. Hard copy reports will be disposed of after 45 calendar days from report date.
  - Storage and Report Fees:
    - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.
    - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.
7. Hard copy reports will be disposed of after 45 calendar days from report date.
  - Storage and Report Fees:
    - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.
    - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
  - Storage and Report Fees:
    - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.
    - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.
9. Storage and Report Fees:
  - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.
  - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested.
10. Rush TATs/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of \$7 per sample.
12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.
13. regenerated/reformatted report: \$35 per processed EDD.

Relinquished by: (Signature and Printed Name) Jennifer Bobiwash	Date: 11/21/18	Time: 1046	Received by: (Signature and Printed Name) Jennifer Bobiwash	Date: 11/23/18	Time: 1046
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Jennifer Bobiwash

Printed Name \_\_\_\_\_ Signature \_\_\_\_\_



3275 Walnut Ave., Signal Hill, CA 90755  
Tel: (562) 989-4045 • Fax: (562) 989-4040

# CHAIN OF CUSTODY RECORD

Page 3 of 3

Instruction: Complete all shaded areas.

For Laboratory Use Only		ATCOC Ver: 20180321	
Sample Conditions Upon Receipt		Condition	
1. CHILLED	<input type="checkbox"/>	Y	N
2. HEADSPACE (VDA)	<input type="checkbox"/>	Y	N
3. CONTAINER INTACT	<input type="checkbox"/>	Y	N
4. SEALED	<input type="checkbox"/>	Y	N
Method of Transport		Condition	
Client	<input type="checkbox"/>	ATL	<input type="checkbox"/>
FedEx	<input type="checkbox"/>	OnTrac	<input type="checkbox"/>
GSO	<input type="checkbox"/>		<input type="checkbox"/>
Other:	<input type="checkbox"/>		<input type="checkbox"/>

Company: Leighton Consulting		Address: 17781 Cowan		Tel: 949-250-1421	
City: Irvine		State: CA		Zip: 92614	
Fax: 92614		SEND INVOICE TO:		SEND REPORT TO:	
Attn: Accounts Payable		Email: accounts payable@leightongroup.com		EDD: <input type="checkbox"/> Excel <input type="checkbox"/> EDF <input type="checkbox"/> Equis <input type="checkbox"/>	
Company: Leighton Group		Address: 17781 Cowan		State: CA	
City: Irvine		Zip: 92614		QA/QC: <input type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV <input type="checkbox"/>	

Project Name: LAUSD - Colfax ES		Quote #: D18J041		Special Instructions/Comments:	
Project No.: 11640.008		PO #:			
Sampler: J. Bobiwash					
Laboratory ID (For Lab Use Only)		Sample ID / Location		Sample Description	
ITEM	1	PER14-NE-0.5	11/3/18	Time	7:57
2	PER14-NE-1.5				7:58
3	PER14-NE-3.0				7:58
4	PER14-SE-0.5				8:03
5	PER14-SE-1.5				8:04
6	PER14-SE-3.0				8:05
7	EB-2				
8	DRUM COMPOSITE				
9					
10					

Requested Analysis		Sample Matrix		Container	
TPH-DRO, ORO (C13-C40) 8015		Select Non-aqueous Matrix		Type: 1-Tube, 2-Vial, 3-Liter, 4-Pint	
Mercury 7471A		Select Wastewater Matrix		Quantity	
Arsenic 6020		Select Water Matrix		1	
Lead 6010B		Select Solid Matrix		5	
6010 / 7000 (Title 22 Metals)		Soil		1	
Select Analysis				4	
8015 (DRO)					
8015 (GRO)					
8082 (PCBs)					
8015 (GRO)					
8082 (PCBs)					
8081 (Organochlorine Pesticides)					
VOC					
HOLD					
Turnaround Time (TAT)					
Material: 1-Glass, 2-Plastic, 3-Metal					
Preservative: 1-HCl, 2-HNO3, 3-H2SO4					
4-HCl, 5-HNO3, 6-NaOH, 7-NH4OH, 8-NH4SCN					
Remarks					

CUSTODY		TERMS		PROJECT SAMPLES		CUSTOMER	
Relinquished by: (Signature and Printed Name)		Relinquished by: (Signature and Printed Name)		Relinquished by: (Signature and Printed Name)		Relinquished by: (Signature and Printed Name)	
Date: 11/3/18		Date: 11/3/18		Date: 11/3/18		Date: 11/3/18	
Time: 1:54		Time: 1:54		Time: 1:54		Time: 1:54	
Signature: Jennifer Bobiwash		Signature: Jennifer Bobiwash		Signature: Jennifer Bobiwash		Signature: Jennifer Bobiwash	
Printed Name: Jennifer Bobiwash		Printed Name: Jennifer Bobiwash		Printed Name: Jennifer Bobiwash		Printed Name: Jennifer Bobiwash	



December 27, 2018

Ross Surrency  
Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614  
Tel: (949) 250-1421  
Fax: (949) 757-7230

ELAP No.: 1838  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Re: ATL Work Order Number : 1804912  
Client Reference : LAUSD- Colfax ES, 11640.008

Enclosed are the results for sample(s) received on December 21, 2018 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez", is placed above the printed name.

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 12/27/2018

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PER1-SE2-0.5	1804912-01	Soil	12/21/18 8:12	12/21/18 10:10
PER1-S-0.5	1804912-03	Soil	12/21/18 8:27	12/21/18 10:10
PER1-SW2-0.5	1804912-05	Soil	12/21/18 8:41	12/21/18 10:10

### CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 12/27/2018

### DETECTION SUMMARY

**Client Sample ID PER1-SE2-0.5**

**Lab ID: 1804912-01**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	2.9	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:23	
Chlordane [2C]	27	8.5	1.1	1	B8L0747	12/26/2018	12/26/18 15:23	
Dieldrin [2C]	6.4	2.0	0.26	1	B8L0747	12/26/2018	12/26/18 15:23	
gamma-Chlordane [2C]	1.9	1.0	0.89	1	B8L0747	12/26/2018	12/26/18 15:23	
Heptachlor epoxide [2C]	0.66	1.0	0.09	1	B8L0747	12/26/2018	12/26/18 15:23	J

**Client Sample ID PER1-S-0.5**

**Lab ID: 1804912-03**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDE	5.9	2.0	0.11	1	B8L0747	12/26/2018	12/26/18 15:34	
4,4'-DDT	5.0	2.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:34	
alpha-Chlordane	18	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:34	
Chlordane	180	8.5	1.1	1	B8L0747	12/26/2018	12/26/18 15:34	
Dieldrin	30	2.0	0.26	1	B8L0747	12/26/2018	12/26/18 15:34	
gamma-Chlordane	13	1.0	0.89	1	B8L0747	12/26/2018	12/26/18 15:34	
Heptachlor epoxide [2C]	3.1	1.0	0.09	1	B8L0747	12/26/2018	12/26/18 15:34	

**Client Sample ID PER1-SW2-0.5**

**Lab ID: 1804912-05**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO/**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane [2C]	320	10	1.2	10	B8L0747	12/26/2018	12/26/18 16:31	
Chlordane	2600	85	11	10	B8L0747	12/26/2018	12/26/18 16:31	
Dieldrin	70	20	2.6	10	B8L0747	12/26/2018	12/26/18 16:31	
gamma-Chlordane	190	10	8.9	10	B8L0747	12/26/2018	12/26/18 16:31	
Heptachlor epoxide	38	10	0.89	10	B8L0747	12/26/2018	12/26/18 16:31	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 12/27/2018

**Client Sample ID PER1-SE2-0.5**

**Lab ID: 1804912-01**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8L0747	12/26/2018	12/26/18 15:23	
4,4'-DDE	ND	2.0	0.11	1	B8L0747	12/26/2018	12/26/18 15:23	
4,4'-DDT	ND	2.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:23	
Aldrin	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:23	
alpha-BHC	ND	1.0	0.11	1	B8L0747	12/26/2018	12/26/18 15:23	
<b>alpha-Chlordane</b>	<b>2.9</b>	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:23	
beta-BHC	ND	1.0	0.06	1	B8L0747	12/26/2018	12/26/18 15:23	
<b>Chlordane [2C]</b>	<b>27</b>	8.5	1.1	1	B8L0747	12/26/2018	12/26/18 15:23	
delta-BHC	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:23	
<b>Dieldrin [2C]</b>	<b>6.4</b>	2.0	0.26	1	B8L0747	12/26/2018	12/26/18 15:23	
Endosulfan I	ND	1.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:23	
Endosulfan II	ND	2.0	0.15	1	B8L0747	12/26/2018	12/26/18 15:23	
Endosulfan sulfate	ND	2.0	0.16	1	B8L0747	12/26/2018	12/26/18 15:23	
Endrin	ND	2.0	0.14	1	B8L0747	12/26/2018	12/26/18 15:23	
Endrin aldehyde	ND	2.0	0.31	1	B8L0747	12/26/2018	12/26/18 15:23	
Endrin ketone	ND	2.0	0.13	1	B8L0747	12/26/2018	12/26/18 15:23	
gamma-BHC	ND	1.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:23	
<b>gamma-Chlordane [2C]</b>	<b>1.9</b>	1.0	0.89	1	B8L0747	12/26/2018	12/26/18 15:23	
Heptachlor	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:23	
<b>Heptachlor epoxide [2C]</b>	<b>0.66</b>	1.0	0.09	1	B8L0747	12/26/2018	12/26/18 15:23	J
Methoxychlor	ND	5.0	0.18	1	B8L0747	12/26/2018	12/26/18 15:23	
Toxaphene	ND	50	4.7	1	B8L0747	12/26/2018	12/26/18 15:23	
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>56.5 %</i>	<i>43 - 84</i>			B8L0747	12/26/2018	12/26/18 15:23	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>59.3 %</i>	<i>54 - 118</i>			B8L0747	12/26/2018	12/26/18 15:23	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 12/27/2018

**Client Sample ID PER1-S-0.5**

**Lab ID: 1804912-03**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.07	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>4,4'-DDE</b>	<b>5.9</b>	2.0	0.11	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>4,4'-DDT</b>	<b>5.0</b>	2.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:34	
Aldrin	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:34	
alpha-BHC	ND	1.0	0.11	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>alpha-Chlordane</b>	<b>18</b>	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:34	
beta-BHC	ND	1.0	0.06	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>Chlordane</b>	<b>180</b>	8.5	1.1	1	B8L0747	12/26/2018	12/26/18 15:34	
delta-BHC	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>Dieldrin</b>	<b>30</b>	2.0	0.26	1	B8L0747	12/26/2018	12/26/18 15:34	
Endosulfan I	ND	1.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:34	
Endosulfan II	ND	2.0	0.15	1	B8L0747	12/26/2018	12/26/18 15:34	
Endosulfan sulfate	ND	2.0	0.16	1	B8L0747	12/26/2018	12/26/18 15:34	
Endrin	ND	2.0	0.14	1	B8L0747	12/26/2018	12/26/18 15:34	
Endrin aldehyde	ND	2.0	0.31	1	B8L0747	12/26/2018	12/26/18 15:34	
Endrin ketone	ND	2.0	0.13	1	B8L0747	12/26/2018	12/26/18 15:34	
gamma-BHC	ND	1.0	0.10	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>gamma-Chlordane</b>	<b>13</b>	1.0	0.89	1	B8L0747	12/26/2018	12/26/18 15:34	
Heptachlor	ND	1.0	0.12	1	B8L0747	12/26/2018	12/26/18 15:34	
<b>Heptachlor epoxide [2C]</b>	<b>3.1</b>	1.0	0.09	1	B8L0747	12/26/2018	12/26/18 15:34	
Methoxychlor	ND	5.0	0.18	1	B8L0747	12/26/2018	12/26/18 15:34	
Toxaphene	ND	50	4.7	1	B8L0747	12/26/2018	12/26/18 15:34	
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>65.4 %</i>		<i>43 - 84</i>		B8L0747	12/26/2018	<i>12/26/18 15:34</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>71.6 %</i>		<i>54 - 118</i>		B8L0747	12/26/2018	<i>12/26/18 15:34</i>	





## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 12/27/2018

**Client Sample ID PER1-SW2-0.5**

**Lab ID: 1804912-05**

### Organochlorine Pesticides by EPA 8081

Analyst: CO/

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	20	0.70	10	B8L0747	12/26/2018	12/26/18 16:31	
4,4'-DDE	ND	20	1.1	10	B8L0747	12/26/2018	12/26/18 16:31	
4,4'-DDT	ND	20	1.0	10	B8L0747	12/26/2018	12/26/18 16:31	
Aldrin	ND	10	1.2	10	B8L0747	12/26/2018	12/26/18 16:31	
alpha-BHC	ND	10	1.1	10	B8L0747	12/26/2018	12/26/18 16:31	
<b>alpha-Chlordane [2C]</b>	<b>320</b>	10	1.2	10	B8L0747	12/26/2018	12/26/18 16:31	
beta-BHC	ND	10	0.60	10	B8L0747	12/26/2018	12/26/18 16:31	
<b>Chlordane</b>	<b>2600</b>	85	11	10	B8L0747	12/26/2018	12/26/18 16:31	
delta-BHC	ND	10	1.2	10	B8L0747	12/26/2018	12/26/18 16:31	
<b>Dieldrin</b>	<b>70</b>	20	2.6	10	B8L0747	12/26/2018	12/26/18 16:31	
Endosulfan I	ND	10	1.0	10	B8L0747	12/26/2018	12/26/18 16:31	
Endosulfan II	ND	20	1.5	10	B8L0747	12/26/2018	12/26/18 16:31	
Endosulfan sulfate	ND	20	1.6	10	B8L0747	12/26/2018	12/26/18 16:31	
Endrin	ND	20	1.4	10	B8L0747	12/26/2018	12/26/18 16:31	
Endrin aldehyde	ND	20	3.1	10	B8L0747	12/26/2018	12/26/18 16:31	
Endrin ketone	ND	20	1.3	10	B8L0747	12/26/2018	12/26/18 16:31	
gamma-BHC	ND	10	1.0	10	B8L0747	12/26/2018	12/26/18 16:31	
<b>gamma-Chlordane</b>	<b>190</b>	10	8.9	10	B8L0747	12/26/2018	12/26/18 16:31	
Heptachlor	ND	10	1.2	10	B8L0747	12/26/2018	12/26/18 16:31	
<b>Heptachlor epoxide</b>	<b>38</b>	10	0.89	10	B8L0747	12/26/2018	12/26/18 16:31	
Methoxychlor	ND	50	1.8	10	B8L0747	12/26/2018	12/26/18 16:31	
Toxaphene	ND	500	47	10	B8L0747	12/26/2018	12/26/18 16:31	
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>68.9 %</i>		<i>43 - 84</i>		B8L0747	12/26/2018	<i>12/26/18 16:31</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>70.7 %</i>		<i>54 - 118</i>		B8L0747	12/26/2018	<i>12/26/18 16:31</i>	





## Certificate of Analysis

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17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
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### QUALITY CONTROL SECTION

#### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S

##### Blank (B8L0747-BLK1)

Prepared: 12/26/2018 Analyzed: 12/26/2018

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.11
4,4'-DDE [2C]	ND	2.0	0.11
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.12
Aldrin [2C]	ND	1.0	0.12
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.12
delta-BHC [2C]	ND	1.0	0.12
Dieldrin	ND	2.0	0.26
Dieldrin [2C]	ND	2.0	0.26
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.15
Endosulfan II [2C]	ND	2.0	0.15
Endosulfan sulfate	ND	2.0	0.16
Endosulfan Sulfate [2C]	ND	2.0	0.16
Endrin	ND	2.0	0.14
Endrin [2C]	ND	2.0	0.14
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.89
gamma-Chlordane [2C]	ND	1.0	0.89
Heptachlor	ND	1.0	0.12
Heptachlor [2C]	ND	1.0	0.12
Heptachlor epoxide	ND	1.0	0.09



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B8L0747-BLK1) - Continued

Prepared: 12/26/2018 Analyzed: 12/26/2018

Heptachlor epoxide [2C]	ND	1.0	0.09						
Methoxychlor	ND	5.0	0.18						
Methoxychlor [2C]	ND	5.0	0.18						
Toxaphene	ND	50	4.7						
Toxaphene [2C]	ND	50	4.7						

Surrogate: Decachlorobiphenyl	12.30			16.6667		73.8	43 - 84		
Surrogate: Decachlorobiphenyl [	9.303			16.6667		55.8	43 - 84		
Surrogate: Tetrachloro-m-xylene	13.14			16.6667		78.9	54 - 118		
Surrogate: Tetrachloro-m-xylene	13.82			16.6667		82.9	54 - 118		

##### LCS (B8L0747-BS1)

Prepared: 12/26/2018 Analyzed: 12/26/2018

4,4'-DDD	16.2990	2.0	0.07	16.6667		97.8	73 - 110		
4,4'-DDD [2C]	14.7428	2.0	0.07	16.6667		88.5	73 - 110		
4,4'-DDE	16.1233	2.0	0.11	16.6667		96.7	71 - 99		
4,4'-DDE [2C]	14.4622	2.0	0.11	16.6667		86.8	71 - 99		
4,4'-DDT	13.4623	2.0	0.10	16.6667		80.8	51 - 106		
4,4'-DDT [2C]	14.3267	2.0	0.10	16.6667		86.0	51 - 106		
Aldrin	14.0992	1.0	0.12	16.6667		84.6	67 - 95		
Aldrin [2C]	12.9605	1.0	0.12	16.6667		77.8	67 - 95		
alpha-BHC	14.9648	1.0	0.11	16.6667		89.8	67 - 94		
alpha-BHC [2C]	13.1625	1.0	0.11	16.6667		79.0	67 - 94		
alpha-Chlordane	15.3452	1.0	0.12	16.6667		92.1	69 - 99		
alpha-Chlordane [2C]	12.9402	1.0	0.12	16.6667		77.6	69 - 99		
beta-BHC	15.8093	1.0	0.06	16.6667		94.9	67 - 99		
beta-BHC [2C]	14.0820	1.0	0.06	16.6667		84.5	67 - 99		
delta-BHC	15.9018	1.0	0.12	16.6667		95.4	73 - 103		
delta-BHC [2C]	15.0855	1.0	0.12	16.6667		90.5	73 - 103		
Dieldrin	14.5963	2.0	0.26	16.6667		87.6	65 - 93		
Dieldrin [2C]	12.5000	2.0	0.26	16.6667		75.0	65 - 93		
Endosulfan I	13.8935	1.0	0.10	16.6667		83.4	65 - 91		
Endosulfan I [2C]	11.4357	1.0	0.10	16.6667		68.6	65 - 91		
Endosulfan II	15.2102	2.0	0.15	16.6667		91.3	65 - 102		
Endosulfan II [2C]	13.7330	2.0	0.15	16.6667		82.4	65 - 102		
Endosulfan sulfate	15.6455	2.0	0.16	16.6667		93.9	64 - 106		
Endosulfan Sulfate [2C]	12.6860	2.0	0.16	16.6667		76.1	64 - 106		
Endrin	16.6870	2.0	0.14	16.6667		100	64 - 111		
Endrin [2C]	14.0988	2.0	0.14	16.6667		84.6	64 - 111		
Endrin aldehyde	14.5242	2.0	0.31	16.6667		87.1	64 - 109		
Endrin aldehyde [2C]	9.60917	2.0	0.31	16.6667		57.7	64 - 109		L4
Endrin ketone	13.7792	2.0	0.13	16.6667		82.7	57 - 101		
Endrin ketone [2C]	13.6128	2.0	0.13	16.6667		81.7	57 - 101		



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B8L0747-BS1) - Continued

Prepared: 12/26/2018 Analyzed: 12/26/2018

gamma-BHC	13.9870	1.0	0.10	16.6667		83.9	65 - 96		
gamma-BHC [2C]	12.6672	1.0	0.10	16.6667		76.0	65 - 96		
gamma-Chlordane	18.8218	1.0	0.89	16.6667		113	65 - 113		
gamma-Chlordane [2C]	12.3777	1.0	0.89	16.6667		74.3	65 - 113		
Heptachlor	14.3947	1.0	0.12	16.6667		86.4	61 - 96		
Heptachlor [2C]	13.0073	1.0	0.12	16.6667		78.0	61 - 96		
Heptachlor epoxide	13.9403	1.0	0.09	16.6667		83.6	64 - 89		
Heptachlor epoxide [2C]	12.2378	1.0	0.09	16.6667		73.4	64 - 89		
Methoxychlor	15.7358	5.0	0.18	16.6667		94.4	67 - 109		
Methoxychlor [2C]	14.2280	5.0	0.18	16.6667		85.4	67 - 109		
Surrogate: Decachlorobiphenyl	10.25			16.6667		61.5	43 - 84		
Surrogate: Decachlorobiphenyl [	9.685			16.6667		58.1	43 - 84		
Surrogate: Tetrachloro-m-xylene	12.95			16.6667		77.7	54 - 118		
Surrogate: Tetrachloro-m-xylene	13.23			16.6667		79.4	54 - 118		

##### Duplicate (B8L0747-DUP1)

Source: 1804912-05

Prepared: 12/26/2018 Analyzed: 12/27/2018

4,4'-DDD	ND	20	0.70		ND			20	
4,4'-DDD [2C]	ND	20	0.70		ND			20	
4,4'-DDE	ND	20	1.1		ND			20	
4,4'-DDE [2C]	ND	20	1.1		ND			20	
4,4'-DDT	ND	20	1.0		ND			20	
4,4'-DDT [2C]	ND	20	1.0		ND			20	
Aldrin	ND	10	1.2		ND			20	
Aldrin [2C]	ND	10	1.2		ND			20	
alpha-BHC	ND	10	1.1		ND			20	
alpha-BHC [2C]	ND	10	1.1		ND			20	
alpha-Chlordane	379.072	10	1.2		378.652		0.111	20	
alpha-Chlordane [2C]	459.703	10	1.2		315.943		37.1	20	R3
beta-BHC	ND	10	0.60		ND			20	
beta-BHC [2C]	ND	10	0.60		ND			20	
delta-BHC	ND	10	1.2		ND			20	
delta-BHC [2C]	ND	10	1.2		ND			20	
Dieldrin	68.1950	20	2.6		70.2750		3.00	20	
Dieldrin [2C]	65.8400	20	2.6		65.6383		0.307	20	
Endosulfan I	ND	10	1.0		ND			20	
Endosulfan I [2C]	ND	10	1.0		ND			20	
Endosulfan II	ND	20	1.5		ND			20	
Endosulfan II [2C]	ND	20	1.5		ND			20	
Endosulfan sulfate	ND	20	1.6		ND			20	
Endosulfan Sulfate [2C]	ND	20	1.6		ND			20	
Endrin	ND	20	1.4		ND			20	



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S (continued)

##### Duplicate (B8L0747-DUP1) - Continued

Source: 1804912-05

Prepared: 12/26/2018 Analyzed: 12/27/2018

Endrin [2C]	ND	20	1.4		ND				20	
Endrin aldehyde	ND	20	3.1		ND				20	
Endrin aldehyde [2C]	ND	20	3.1		ND				20	
Endrin ketone	ND	20	1.3		ND				20	
Endrin ketone [2C]	ND	20	1.3		ND				20	
gamma-BHC	ND	10	1.0		ND				20	
gamma-BHC [2C]	ND	10	1.0		ND				20	
gamma-Chlordane	173.037	10	8.9		186.035			7.24	20	
gamma-Chlordane [2C]	131.637	10	8.9		146.612			10.8	20	
Heptachlor	ND	10	1.2		ND			NR	20	
Heptachlor [2C]	ND	10	1.2		ND			NR	20	
Heptachlor epoxide	26.4483	10	0.89		37.8233			35.4	20	R3
Heptachlor epoxide [2C]	31.3867	10	0.89		36.8967			16.1	20	
Methoxychlor	ND	50	1.8		ND				20	
Methoxychlor [2C]	ND	50	1.8		ND				20	

Surrogate: Decachlorobiphenyl

12.71

16.6667

76.2

43 - 84

Surrogate: Decachlorobiphenyl [

14.04

16.6667

84.3

43 - 84

S10

Surrogate: Tetrachloro-m-xylene

11.77

16.6667

70.6

54 - 118

Surrogate: Tetrachloro-m-xylene

11.05

16.6667

66.3

54 - 118

##### Matrix Spike (B8L0747-MS1)

Source: 1804912-01

Prepared: 12/26/2018 Analyzed: 12/26/2018

4,4'-DDD	15.8255	2.0	0.07	16.6667	ND	95.0	73 - 110			
4,4'-DDD [2C]	14.3878	2.0	0.07	16.6667	ND	86.3	73 - 110			
4,4'-DDE	17.8575	2.0	0.11	16.6667	ND	107	71 - 99			M2
4,4'-DDE [2C]	11.3972	2.0	0.11	16.6667	ND	68.4	71 - 99			M2
4,4'-DDT	15.9515	2.0	0.10	16.6667	ND	95.7	51 - 106			
4,4'-DDT [2C]	12.6503	2.0	0.10	16.6667	ND	75.9	51 - 106			
Aldrin	13.6953	1.0	0.12	16.6667	ND	82.2	67 - 95			
Aldrin [2C]	10.4535	1.0	0.12	16.6667	ND	62.7	67 - 95			M2
alpha-BHC	14.4035	1.0	0.11	16.6667	ND	86.4	67 - 94			
alpha-BHC [2C]	12.0957	1.0	0.11	16.6667	ND	72.6	67 - 94			
alpha-Chlordane	21.5322	1.0	0.12	16.6667	2.91317	112	69 - 99			M2
alpha-Chlordane [2C]	30.0100	1.0	0.12	16.6667	10.2552	119	69 - 99			M2
beta-BHC	15.1140	1.0	0.06	16.6667	ND	90.7	67 - 99			
beta-BHC [2C]	13.1360	1.0	0.06	16.6667	ND	78.8	67 - 99			
delta-BHC	14.0487	1.0	0.12	16.6667	ND	84.3	73 - 103			
delta-BHC [2C]	12.2622	1.0	0.12	16.6667	ND	73.6	73 - 103			
Dieldrin	26.5545	2.0	0.26	16.6667	6.40617	121	65 - 93			M2
Dieldrin [2C]	26.7927	2.0	0.26	16.6667	6.44633	122	65 - 93			M2
Endosulfan I	19.0825	1.0	0.10	16.6667	ND	114	65 - 91			M2
Endosulfan I [2C]	10.0850	1.0	0.10	16.6667	ND	60.5	65 - 91			M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B8L0747-MS1) - Continued

Source: 1804912-01

Prepared: 12/26/2018 Analyzed: 12/26/2018

Endosulfan II	15.8923	2.0	0.15	16.6667	ND	95.4	65 - 102			
Endosulfan II [2C]	11.1937	2.0	0.15	16.6667	ND	67.2	65 - 102			
Endosulfan sulfate	13.2123	2.0	0.16	16.6667	ND	79.3	64 - 106			
Endosulfan Sulfate [2C]	10.7497	2.0	0.16	16.6667	ND	64.5	64 - 106			
Endrin	16.8110	2.0	0.14	16.6667	ND	101	64 - 111			
Endrin [2C]	12.1573	2.0	0.14	16.6667	ND	72.9	64 - 111			
Endrin aldehyde	16.1817	2.0	0.31	16.6667	ND	97.1	64 - 109			
Endrin aldehyde [2C]	9.44967	2.0	0.31	16.6667	ND	56.7	64 - 109			M2
Endrin ketone	12.3915	2.0	0.13	16.6667	ND	74.3	57 - 101			
Endrin ketone [2C]	11.9710	2.0	0.13	16.6667	ND	71.8	57 - 101			
gamma-BHC	13.4815	1.0	0.10	16.6667	ND	80.9	65 - 96			
gamma-BHC [2C]	12.1887	1.0	0.10	16.6667	ND	73.1	65 - 96			
gamma-Chlordane	26.3907	1.0	0.89	16.6667	6.95667	117	65 - 113			M2
gamma-Chlordane [2C]	14.0157	1.0	0.89	16.6667	1.86200	72.9	65 - 113			
Heptachlor	12.2212	1.0	0.12	16.6667	ND	73.3	61 - 96			
Heptachlor [2C]	11.5670	1.0	0.12	16.6667	ND	69.4	61 - 96			
Heptachlor epoxide	13.5093	1.0	0.09	16.6667	0.549333	77.8	64 - 89			
Heptachlor epoxide [2C]	11.8483	1.0	0.09	16.6667	0.655833	67.2	64 - 89			
Methoxychlor	12.5665	5.0	0.18	16.6667	ND	75.4	67 - 109			
Methoxychlor [2C]	12.3915	5.0	0.18	16.6667	ND	74.3	67 - 109			
Surrogate: Decachlorobiphenyl	11.33			16.6667		68.0	43 - 84			
Surrogate: Decachlorobiphenyl [	11.11			16.6667		66.7	43 - 84			
Surrogate: Tetrachloro-m-xylene	11.48			16.6667		68.9	54 - 118			
Surrogate: Tetrachloro-m-xylene	9.925			16.6667		59.5	54 - 118			

##### Matrix Spike Dup (B8L0747-MSD1)

Source: 1804912-01

Prepared: 12/26/2018 Analyzed: 12/26/2018

4,4'-DDD	16.1912	2.0	0.07	16.6667	ND	97.1	73 - 110	2.28	20	
4,4'-DDD [2C]	15.1260	2.0	0.07	16.6667	ND	90.8	73 - 110	5.00	20	
4,4'-DDE	18.4702	2.0	0.11	16.6667	ND	111	71 - 99	3.37	20	M2
4,4'-DDE [2C]	10.9848	2.0	0.11	16.6667	ND	65.9	71 - 99	3.68	20	M2
4,4'-DDT	15.5380	2.0	0.10	16.6667	ND	93.2	51 - 106	2.63	20	
4,4'-DDT [2C]	11.5427	2.0	0.10	16.6667	ND	69.3	51 - 106	9.16	20	
Aldrin	15.8387	1.0	0.12	16.6667	ND	95.0	67 - 95	14.5	20	M2
Aldrin [2C]	9.91200	1.0	0.12	16.6667	ND	59.5	67 - 95	5.32	20	M2
alpha-BHC	14.6942	1.0	0.11	16.6667	ND	88.2	67 - 94	2.00	20	
alpha-BHC [2C]	11.6163	1.0	0.11	16.6667	ND	69.7	67 - 94	4.04	20	
alpha-Chlordane	20.7577	1.0	0.12	16.6667	2.91317	107	69 - 99	3.66	20	M2
alpha-Chlordane [2C]	28.8372	1.0	0.12	16.6667	10.2552	111	69 - 99	3.99	20	M2
beta-BHC	14.2378	1.0	0.06	16.6667	ND	85.4	67 - 99	5.97	20	
beta-BHC [2C]	12.3852	1.0	0.06	16.6667	ND	74.3	67 - 99	5.88	20	
delta-BHC	14.1942	1.0	0.12	16.6667	ND	85.2	73 - 103	1.03	20	



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 12/27/2018

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B8L0747 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B8L0747-MSD1) - Continued

Source: 1804912-01

Prepared: 12/26/2018 Analyzed: 12/26/2018

delta-BHC [2C]	11.6720	1.0	0.12	16.6667	ND	70.0	73 - 103	4.93	20	M2
Dieldrin	26.3237	2.0	0.26	16.6667	6.40617	120	65 - 93	0.873	20	M2
Dieldrin [2C]	26.2323	2.0	0.26	16.6667	6.44633	119	65 - 93	2.11	20	M2
Endosulfan I	18.9755	1.0	0.10	16.6667	ND	114	65 - 91	0.562	20	M2
Endosulfan I [2C]	9.59583	1.0	0.10	16.6667	ND	57.6	65 - 91	4.97	20	M2
Endosulfan II	15.9850	2.0	0.15	16.6667	ND	95.9	65 - 102	0.581	20	
Endosulfan II [2C]	10.6967	2.0	0.15	16.6667	ND	64.2	65 - 102	4.54	20	M2
Endosulfan sulfate	11.8220	2.0	0.16	16.6667	ND	70.9	64 - 106	11.1	20	
Endosulfan Sulfate [2C]	10.2038	2.0	0.16	16.6667	ND	61.2	64 - 106	5.21	20	M2
Endrin	13.4357	2.0	0.14	16.6667	ND	80.6	64 - 111	22.3	20	R3
Endrin [2C]	10.6065	2.0	0.14	16.6667	ND	63.6	64 - 111	13.6	20	M2
Endrin aldehyde	12.8515	2.0	0.31	16.6667	ND	77.1	64 - 109	22.9	20	R3
Endrin aldehyde [2C]	7.92283	2.0	0.31	16.6667	ND	47.5	64 - 109	17.6	20	M2
Endrin ketone	11.8942	2.0	0.13	16.6667	ND	71.4	57 - 101	4.10	20	
Endrin ketone [2C]	10.4962	2.0	0.13	16.6667	ND	63.0	57 - 101	13.1	20	
gamma-BHC	13.0690	1.0	0.10	16.6667	ND	78.4	65 - 96	3.11	20	
gamma-BHC [2C]	11.6312	1.0	0.10	16.6667	ND	69.8	65 - 96	4.68	20	
gamma-Chlordane	26.7828	1.0	0.89	16.6667	6.95667	119	65 - 113	1.48	20	M2
gamma-Chlordane [2C]	13.7287	1.0	0.89	16.6667	1.86200	71.2	65 - 113	2.07	20	
Heptachlor	12.0550	1.0	0.12	16.6667	ND	72.3	61 - 96	1.37	20	
Heptachlor [2C]	11.0660	1.0	0.12	16.6667	ND	66.4	61 - 96	4.43	20	
Heptachlor epoxide	14.7902	1.0	0.09	16.6667	0.549333	85.4	64 - 89	9.05	20	
Heptachlor epoxide [2C]	11.4040	1.0	0.09	16.6667	0.655833	64.5	64 - 89	3.82	20	
Methoxychlor	12.1490	5.0	0.18	16.6667	ND	72.9	67 - 109	3.38	20	
Methoxychlor [2C]	11.1383	5.0	0.18	16.6667	ND	66.8	67 - 109	10.7	20	M2
Surrogate: Decachlorobiphenyl	10.66			16.6667		64.0	43 - 84			
Surrogate: Decachlorobiphenyl [	10.49			16.6667		62.9	43 - 84			
Surrogate: Tetrachloro-m-xylene	10.65			16.6667		63.9	54 - 118			
Surrogate: Tetrachloro-m-xylene	9.728			16.6667		58.4	54 - 118			



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 12/27/2018

### Notes and Definitions

S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

#### Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

# CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only		ATLCOC Ver:20180321	
Method of Transport	Sample Conditions Upon Receipt		
	Condition	Y	N
<input checked="" type="checkbox"/> Client	<input type="checkbox"/> ATL	1. CHILLED	<input checked="" type="checkbox"/> 5. # OF SAMPLES MATCH COC
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	2. HEADSPACE (VOA)	<input type="checkbox"/> 6. PRESERVED
<input type="checkbox"/> GSO		3. CONTAINER INTACT	<input checked="" type="checkbox"/> 7. COOLER TEMP, deg C: 25
<input type="checkbox"/> Other:		4. SEALED	<input type="checkbox"/>

CUSTOMER	Company: Leighton Consulting		Address: 17781 Cowan		Tel: 949-250-1421	
	City: Irvine		State: CA		Zip: 92614	
	Fax:					
	SEND REPORT TO:		SEND INVOICE TO:		<input type="checkbox"/> same as SEND REPORT TO	
Attn: Ross Surrency	Email: rsurrency@leightongroup.com	Attn: Accounts Payable	Email: acctpayable@leightongroup.com	EDD		
Company: Leighton Consulting		Company: Leighton Group		QA/QC		
Address: 17781 Cowan		Address: 17781 Cowan		<input type="radio"/> Excel <input checked="" type="checkbox"/> Routine <input type="radio"/> EDF <input type="checkbox"/> Caltrans <input type="radio"/> Equis <input type="checkbox"/> Legal <input type="radio"/> _____ <input type="checkbox"/> RWQCB <input type="radio"/> _____ <input type="checkbox"/> Level IV		
City: Irvine	State: CA	Zip: 92614	City: Irvine	State: CA	Zip: 92614	

PROJECT SAMPLES	Project Name: LAUSD - Colfax ES		Quote #: D18J041	Special Instructions/Comments:		Requested Analysis										Sample Matrix					Container		Remarks							
	Project No.: 11640.008		PO #:																											
	Sampler:																													
	ITEM	Laboratory ID (For Lab Use Only)	Sample Description		Date	Time	8081 (Organochlorine Pesticides)	8082 (PCBs)	8015 (GRO)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Lead 6010B	Arsenic 6020	Mercury 7471A	TPH-DRO, ORO (C13-C40) 8015	Hold	Soil	Select Solid Matrix	Select Water Matrix	Select Wastewater Matrix	Select Non-aqueous Matrix	Enter Custom Matrix	Turnaround Time (TAT)	Quantity	Type: 1=Tube; 2=VOA; 3=Uter; 4=Pin; 5=Jar; 6=Bedlar; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=AC; 5=2N H4O2; 6=NaOH; 7=NA2S2O3
	1	1804912 -01	PERI-SEZ-0.5	12/21/18	0812	X														X					3	1	5	1	4	
	2	-02	PERI-SEZ-1.5		0815													X												
	3	-03	PERI-S-0.5		0827	X																								
	4	-04	PERI-S-1.5		0830													X												
	5	-05	PERI-SWZ-0.5		0841	X																								
	6	-06	PERI-SWZ-1.0		0955													X												
7																														
8																														
9																														
10																														

SW	1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.		to the subcontract lab --- ask for quote.		regenerated/reformatted report; \$35 per reprocessed EDD.	
	2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.		6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.		10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.	
	3. The following turnaround time conditions apply: TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)		7. Electronic records maintained for five (5) years from report date.		11. Unanalyzed samples will incur a disposal fee of \$7 per sample.	
	4. Weekend, holiday, after-hours work --- ask for quote.		8. Hard copy reports will be disposed of after 45 calendar days from report date.		12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.	
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective		9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20 sample/week if extended storage is requested. - Hard copy and regenerated reports/EDDs: \$17.50 per hard copy report requested; \$50.00 per				
Relinquished by: (Signature and Printed Name) <i>Kevin C. Hall</i> Date: 12/21/18 Time: 10:10		Received by: (Signature and Printed Name) <i>Kevin C. Hall</i> Date: 12/21/18 Time: 10:10		As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.		
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____		Received by: (Signature and Printed Name) _____ Date: _____ Time: _____		Printed Name <i>Kevin C. Hall</i>		Signature <i>Kevin C. Hall</i>
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____		Received by: (Signature and Printed Name) _____ Date: _____ Time: _____				





January 02, 2019

Ross Surrency  
Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614  
Tel: (949) 250-1421  
Fax: (949) 757-7230

ELAP No.: 1838  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Re: ATL Work Order Number : 1804912

Client Reference : LAUSD- Colfax ES, 11640.008

Enclosed are the results for sample(s) received on December 21, 2018 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez", followed by the initials "ER" in a smaller, stylized font.

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 01/02/2019

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PER1-SW2-1.0	1804912-06	Soil	12/21/18 8:55	12/21/18 10:10

### CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

### DETECTION SUMMARY

**Client Sample ID PER1-SW2-1.0**

**Lab ID: 1804912-06**

#### Organochlorine Pesticides by EPA 8081

**Analyst: CO**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
alpha-Chlordane	63	5.0	0.59	5	B9A0010	12/31/2018	01/02/19 11:39	
Chlordane	440	42	5.5	5	B9A0010	12/31/2018	01/02/19 11:39	
Dieldrin	12	10	1.3	5	B9A0010	12/31/2018	01/02/19 11:39	
gamma-Chlordane [2C]	40	5.0	4.4	5	B9A0010	12/31/2018	01/02/19 11:39	



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Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 01/02/2019

**Client Sample ID PER1-SW2-1.0**

**Lab ID: 1804912-06**

### Organochlorine Pesticides by EPA 8081

Analyst: CO

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	10	0.35	5	B9A0010	12/31/2018	01/02/19 11:39	
4,4'-DDE	ND	10	0.54	5	B9A0010	12/31/2018	01/02/19 11:39	
4,4'-DDT	ND	10	0.50	5	B9A0010	12/31/2018	01/02/19 11:39	
Aldrin	ND	5.0	0.62	5	B9A0010	12/31/2018	01/02/19 11:39	
alpha-BHC	ND	5.0	0.53	5	B9A0010	12/31/2018	01/02/19 11:39	
<b>alpha-Chlordane</b>	<b>63</b>	5.0	0.59	5	B9A0010	12/31/2018	01/02/19 11:39	
beta-BHC	ND	5.0	0.30	5	B9A0010	12/31/2018	01/02/19 11:39	
<b>Chlordane</b>	<b>440</b>	42	5.5	5	B9A0010	12/31/2018	01/02/19 11:39	
delta-BHC	ND	5.0	0.62	5	B9A0010	12/31/2018	01/02/19 11:39	
<b>Dieldrin</b>	<b>12</b>	10	1.3	5	B9A0010	12/31/2018	01/02/19 11:39	
Endosulfan I	ND	5.0	0.50	5	B9A0010	12/31/2018	01/02/19 11:39	
Endosulfan II	ND	10	0.77	5	B9A0010	12/31/2018	01/02/19 11:39	
Endosulfan sulfate	ND	10	0.80	5	B9A0010	12/31/2018	01/02/19 11:39	
Endrin	ND	10	0.68	5	B9A0010	12/31/2018	01/02/19 11:39	
Endrin aldehyde	ND	10	1.6	5	B9A0010	12/31/2018	01/02/19 11:39	
Endrin ketone	ND	10	0.63	5	B9A0010	12/31/2018	01/02/19 11:39	
gamma-BHC	ND	5.0	0.52	5	B9A0010	12/31/2018	01/02/19 11:39	
<b>gamma-Chlordane [2C]</b>	<b>40</b>	5.0	4.4	5	B9A0010	12/31/2018	01/02/19 11:39	
Heptachlor	ND	5.0	0.59	5	B9A0010	12/31/2018	01/02/19 11:39	
Heptachlor epoxide	ND	5.0	0.44	5	B9A0010	12/31/2018	01/02/19 11:39	
Methoxychlor	ND	25	0.89	5	B9A0010	12/31/2018	01/02/19 11:39	
Toxaphene	ND	250	23	5	B9A0010	12/31/2018	01/02/19 11:39	
<i>Surrogate: Decachlorobiphenyl</i>	<i>64.3 %</i>	<i>43 - 84</i>			B9A0010	12/31/2018	<i>01/02/19 11:39</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>72.5 %</i>	<i>54 - 118</i>			B9A0010	12/31/2018	<i>01/02/19 11:39</i>	



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Reported : 01/02/2019

### QUALITY CONTROL SECTION

#### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S

##### Blank (B9A0010-BLK1)

Prepared: 12/31/2018 Analyzed: 1/2/2019

4,4'-DDD	ND	2.0	0.07
4,4'-DDD [2C]	ND	2.0	0.07
4,4'-DDE	ND	2.0	0.11
4,4'-DDE [2C]	ND	2.0	0.11
4,4'-DDT	ND	2.0	0.10
4,4'-DDT [2C]	ND	2.0	0.10
Aldrin	ND	1.0	0.12
Aldrin [2C]	ND	1.0	0.12
alpha-BHC	ND	1.0	0.11
alpha-BHC [2C]	ND	1.0	0.11
alpha-Chlordane	ND	1.0	0.12
alpha-Chlordane [2C]	ND	1.0	0.12
beta-BHC	ND	1.0	0.06
beta-BHC [2C]	ND	1.0	0.06
Chlordane	ND	8.5	1.1
Chlordane [2C]	ND	8.5	1.1
delta-BHC	ND	1.0	0.12
delta-BHC [2C]	ND	1.0	0.12
Dieldrin	ND	2.0	0.26
Dieldrin [2C]	ND	2.0	0.26
Endosulfan I	ND	1.0	0.10
Endosulfan I [2C]	ND	1.0	0.10
Endosulfan II	ND	2.0	0.15
Endosulfan II [2C]	ND	2.0	0.15
Endosulfan sulfate	ND	2.0	0.16
Endosulfan Sulfate [2C]	ND	2.0	0.16
Endrin	ND	2.0	0.14
Endrin [2C]	ND	2.0	0.14
Endrin aldehyde	ND	2.0	0.31
Endrin aldehyde [2C]	ND	2.0	0.31
Endrin ketone	ND	2.0	0.13
Endrin ketone [2C]	ND	2.0	0.13
gamma-BHC	ND	1.0	0.10
gamma-BHC [2C]	ND	1.0	0.10
gamma-Chlordane	ND	1.0	0.89
gamma-Chlordane [2C]	ND	1.0	0.89
Heptachlor	ND	1.0	0.12
Heptachlor [2C]	ND	1.0	0.12
Heptachlor epoxide	ND	1.0	0.09



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Reported : 01/02/2019

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S (continued)

##### Blank (B9A0010-BLK1) - Continued

Prepared: 12/31/2018 Analyzed: 1/2/2019

Heptachlor epoxide [2C]	ND	1.0	0.09						
Methoxychlor	ND	5.0	0.18						
Methoxychlor [2C]	ND	5.0	0.18						
Toxaphene	ND	50	4.7						
Toxaphene [2C]	ND	50	4.7						

Surrogate: Decachlorobiphenyl	10.84			16.6667		65.0	43 - 84		
Surrogate: Decachlorobiphenyl [	10.62			16.6667		63.7	43 - 84		
Surrogate: Tetrachloro-m-xylene	11.28			16.6667		67.7	54 - 118		
Surrogate: Tetrachloro-m-xylene	11.94			16.6667		71.6	54 - 118		

##### LCS (B9A0010-BS1)

Prepared: 12/31/2018 Analyzed: 1/2/2019

4,4'-DDD	16.1442	2.0	0.07	16.6667		96.9	73 - 110		
4,4'-DDD [2C]	14.6753	2.0	0.07	16.6667		88.1	73 - 110		
4,4'-DDE	15.5615	2.0	0.11	16.6667		93.4	71 - 99		
4,4'-DDE [2C]	15.1607	2.0	0.11	16.6667		91.0	71 - 99		
4,4'-DDT	12.9487	2.0	0.10	16.6667		77.7	51 - 106		
4,4'-DDT [2C]	15.0292	2.0	0.10	16.6667		90.2	51 - 106		
Aldrin	13.0577	1.0	0.12	16.6667		78.3	67 - 95		
Aldrin [2C]	14.4683	1.0	0.12	16.6667		86.8	67 - 95		
alpha-BHC	13.3020	1.0	0.11	16.6667		79.8	67 - 94		
alpha-BHC [2C]	14.1887	1.0	0.11	16.6667		85.1	67 - 94		
alpha-Chlordane	15.3170	1.0	0.12	16.6667		91.9	69 - 99		
alpha-Chlordane [2C]	15.0642	1.0	0.12	16.6667		90.4	69 - 99		
beta-BHC	14.4295	1.0	0.06	16.6667		86.6	67 - 99		
beta-BHC [2C]	14.6652	1.0	0.06	16.6667		88.0	67 - 99		
delta-BHC	15.1262	1.0	0.12	16.6667		90.8	73 - 103		
delta-BHC [2C]	15.0205	1.0	0.12	16.6667		90.1	73 - 103		
Dieldrin	13.8225	2.0	0.26	16.6667		82.9	65 - 93		
Dieldrin [2C]	13.2813	2.0	0.26	16.6667		79.7	65 - 93		
Endosulfan I	14.3960	1.0	0.10	16.6667		86.4	65 - 91		
Endosulfan I [2C]	13.8900	1.0	0.10	16.6667		83.3	65 - 91		
Endosulfan II	15.7413	2.0	0.15	16.6667		94.4	65 - 102		
Endosulfan II [2C]	15.5233	2.0	0.15	16.6667		93.1	65 - 102		
Endosulfan sulfate	14.7380	2.0	0.16	16.6667		88.4	64 - 106		
Endosulfan Sulfate [2C]	14.4813	2.0	0.16	16.6667		86.9	64 - 106		
Endrin	15.7947	2.0	0.14	16.6667		94.8	64 - 111		
Endrin [2C]	14.7912	2.0	0.14	16.6667		88.7	64 - 111		
Endrin aldehyde	15.4152	2.0	0.31	16.6667		92.5	64 - 109		
Endrin aldehyde [2C]	11.4538	2.0	0.31	16.6667		68.7	64 - 109		
Endrin ketone	14.7732	2.0	0.13	16.6667		88.6	57 - 101		
Endrin ketone [2C]	14.2802	2.0	0.13	16.6667		85.7	57 - 101		



## Certificate of Analysis

Leighton Consulting, Inc.  
17781 Cowan Street  
Irvine, CA 92614

Project Number : LAUSD- Colfax ES, 11640.008  
Report To : Ross Surrency  
Reported : 01/02/2019

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S (continued)

##### LCS (B9A0010-BS1) - Continued

Prepared: 12/31/2018 Analyzed: 1/2/2019

gamma-BHC	13.9995	1.0	0.10	16.6667		84.0	65 - 96		
gamma-BHC [2C]	14.0143	1.0	0.10	16.6667		84.1	65 - 96		
gamma-Chlordane	15.6818	1.0	0.89	16.6667		94.1	65 - 113		
gamma-Chlordane [2C]	14.9582	1.0	0.89	16.6667		89.7	65 - 113		
Heptachlor	14.9030	1.0	0.12	16.6667		89.4	61 - 96		
Heptachlor [2C]	14.6573	1.0	0.12	16.6667		87.9	61 - 96		
Heptachlor epoxide	13.8850	1.0	0.09	16.6667		83.3	64 - 89		
Heptachlor epoxide [2C]	13.9490	1.0	0.09	16.6667		83.7	64 - 89		
Methoxychlor	16.7568	5.0	0.18	16.6667		101	67 - 109		
Methoxychlor [2C]	13.5067	5.0	0.18	16.6667		81.0	67 - 109		
Surrogate: Decachlorobiphenyl	12.99			16.6667		78.0	43 - 84		
Surrogate: Decachlorobiphenyl [	12.01			16.6667		72.0	43 - 84		
Surrogate: Tetrachloro-m-xylene	13.45			16.6667		80.7	54 - 118		
Surrogate: Tetrachloro-m-xylene	12.97			16.6667		77.8	54 - 118		

##### Duplicate (B9A0010-DUP1)

Source: 1804912-06

Prepared: 12/31/2018 Analyzed: 1/2/2019

4,4'-DDD	ND	10	0.35		ND			20	
4,4'-DDD [2C]	ND	10	0.35		ND			20	
4,4'-DDE	ND	10	0.54		ND			20	
4,4'-DDE [2C]	ND	10	0.54		ND			20	
4,4'-DDT	ND	10	0.50		ND			20	
4,4'-DDT [2C]	ND	10	0.50		ND			20	
Aldrin	ND	5.0	0.62		ND			20	
Aldrin [2C]	ND	5.0	0.62		ND			20	
alpha-BHC	ND	5.0	0.53		ND			20	
alpha-BHC [2C]	ND	5.0	0.53		ND			20	
alpha-Chlordane	44.7583	5.0	0.59		62.9025		33.7	20	R3
alpha-Chlordane [2C]	77.1783	5.0	0.59		107.352		32.7	20	R3
beta-BHC	ND	5.0	0.30		ND			20	
beta-BHC [2C]	ND	5.0	0.30		ND			20	
delta-BHC	ND	5.0	0.62		ND			20	
delta-BHC [2C]	ND	5.0	0.62		ND			20	
Dieldrin	8.79917	10	1.3		12.3167		33.3	20	R3, J
Dieldrin [2C]	9.08167	10	1.3		12.2292		29.5	20	R3, J
Endosulfan I	ND	5.0	0.50		ND			20	
Endosulfan I [2C]	ND	5.0	0.50		ND			20	
Endosulfan II	ND	10	0.77		ND			20	
Endosulfan II [2C]	ND	10	0.77		ND			20	
Endosulfan sulfate	ND	10	0.80		ND			20	
Endosulfan Sulfate [2C]	ND	10	0.80		ND			20	
Endrin	ND	10	0.68		ND			20	



## Certificate of Analysis

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17781 Cowan Street  
Irvine, CA 92614

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Report To : Ross Surrency  
Reported : 01/02/2019

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S (continued)

Duplicate (B9A0010-DUP1) - Continued				Source: 1804912-06		Prepared: 12/31/2018 Analyzed: 1/2/2019				
Endrin [2C]	ND	10	0.68		ND				20	
Endrin aldehyde	ND	10	1.6		ND				20	
Endrin aldehyde [2C]	ND	10	1.6		ND				20	
Endrin ketone	ND	10	0.63		ND				20	
Endrin ketone [2C]	ND	10	0.63		ND				20	
gamma-BHC	ND	5.0	0.52		ND				20	
gamma-BHC [2C]	ND	5.0	0.52		ND				20	
gamma-Chlordane	27.6117	5.0	4.4		39.4708			35.4	20	R3
gamma-Chlordane [2C]	28.8642	5.0	4.4		40.2867			33.0	20	R3
Heptachlor	ND	5.0	0.59		ND				20	
Heptachlor [2C]	ND	5.0	0.59		ND				20	
Heptachlor epoxide	ND	5.0	0.44		ND				20	
Heptachlor epoxide [2C]	ND	5.0	0.44		ND				20	
Methoxychlor	ND	25	0.89		ND				20	
Methoxychlor [2C]	ND	25	0.89		ND				20	
Surrogate: Decachlorobiphenyl	5.435			16.6667		32.6	43 - 84			S10
Surrogate: Decachlorobiphenyl [	7.524			16.6667		45.1	43 - 84			
Surrogate: Tetrachloro-m-xylene	9.485			16.6667		56.9	54 - 118			
Surrogate: Tetrachloro-m-xylene	6.838			16.6667		41.0	54 - 118			S10

Matrix Spike (B9A0010-MS1)				Source: 1804912-06		Prepared: 12/31/2018 Analyzed: 1/2/2019				
4,4'-DDD	9.86500	10	0.35	16.6667	ND	59.2	73 - 110			J, M2
4,4'-DDD [2C]	8.15000	10	0.35	16.6667	ND	48.9	73 - 110			J, M2
4,4'-DDE	10.6550	10	0.54	16.6667	ND	63.9	71 - 99			M2
4,4'-DDE [2C]	10.1000	10	0.54	16.6667	ND	60.6	71 - 99			M2
4,4'-DDT	8.47333	10	0.50	16.6667	ND	50.8	51 - 106			J, M2
4,4'-DDT [2C]	10.2058	10	0.50	16.6667	ND	61.2	51 - 106			
Aldrin	9.98417	5.0	0.62	16.6667	ND	59.9	67 - 95			M2
Aldrin [2C]	10.5917	5.0	0.62	16.6667	ND	63.6	67 - 95			M2
alpha-BHC	9.67833	5.0	0.53	16.6667	ND	58.1	67 - 94			M2
alpha-BHC [2C]	9.92000	5.0	0.53	16.6667	ND	59.5	67 - 94			M2
alpha-Chlordane	62.5475	5.0	0.59	16.6667	62.9025	-2.13	69 - 99			M2
alpha-Chlordane [2C]	113.581	5.0	0.59	16.6667	107.352	37.4	69 - 99			M2
beta-BHC	9.25417	5.0	0.30	16.6667	ND	55.5	67 - 99			M2
beta-BHC [2C]	9.87750	5.0	0.30	16.6667	ND	59.3	67 - 99			M2
delta-BHC	7.42167	5.0	0.62	16.6667	ND	44.5	73 - 103			M2
delta-BHC [2C]	7.00500	5.0	0.62	16.6667	ND	42.0	73 - 103			M2
Dieldrin	20.7458	10	1.3	16.6667	12.3167	50.6	65 - 93			M2
Dieldrin [2C]	23.4625	10	1.3	16.6667	12.2292	67.4	65 - 93			
Endosulfan I	10.3767	5.0	0.50	16.6667	ND	62.3	65 - 91			M2
Endosulfan I [2C]	9.50667	5.0	0.50	16.6667	ND	57.0	65 - 91			M2



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike (B9A0010-MS1) - Continued

Source: 1804912-06

Prepared: 12/31/2018 Analyzed: 1/2/2019

Endosulfan II	4.78750	10	0.77	16.6667	ND	28.7	65 - 102		J, M2
Endosulfan II [2C]	5.60500	10	0.77	16.6667	ND	33.6	65 - 102		J, M2
Endosulfan sulfate	2.87500	10	0.80	16.6667	ND	17.2	64 - 106		J, M2
Endosulfan Sulfate [2C]	7.65083	10	0.80	16.6667	ND	45.9	64 - 106		J, M2
Endrin	9.51917	10	0.68	16.6667	ND	57.1	64 - 111		J, M2
Endrin [2C]	9.59500	10	0.68	16.6667	ND	57.6	64 - 111		J, M2
Endrin aldehyde	3.74000	10	1.6	16.6667	ND	22.4	64 - 109		J, M2
Endrin aldehyde [2C]	5.11167	10	1.6	16.6667	ND	30.7	64 - 109		J, M2
Endrin ketone	2.81667	10	0.63	16.6667	ND	16.9	57 - 101		J, M2
Endrin ketone [2C]	2.37500	10	0.63	16.6667	ND	14.2	57 - 101		J, M2
gamma-BHC	9.55250	5.0	0.52	16.6667	ND	57.3	65 - 96		M2
gamma-BHC [2C]	9.93167	5.0	0.52	16.6667	ND	59.6	65 - 96		M2
gamma-Chlordane	37.1142	5.0	4.4	16.6667	39.4708	-14.1	65 - 113		M2
gamma-Chlordane [2C]	43.9850	5.0	4.4	16.6667	40.2867	22.2	65 - 113		M2
Heptachlor	10.0500	5.0	0.59	16.6667	ND	60.3	61 - 96		M2
Heptachlor [2C]	9.57917	5.0	0.59	16.6667	ND	57.5	61 - 96		M2
Heptachlor epoxide	18.8633	5.0	0.44	16.6667	ND	113	64 - 89		M2
Heptachlor epoxide [2C]	20.1992	5.0	0.44	16.6667	ND	121	64 - 89		M2
Methoxychlor	4.80083	25	0.89	16.6667	ND	28.8	67 - 109		J, M2
Methoxychlor [2C]	6.43500	25	0.89	16.6667	ND	38.6	67 - 109		M2, J
Surrogate: Decachlorobiphenyl	8.945			16.6667		53.7	43 - 84		
Surrogate: Decachlorobiphenyl [	10.05			16.6667		60.3	43 - 84		
Surrogate: Tetrachloro-m-xylene	9.450			16.6667		56.7	54 - 118		
Surrogate: Tetrachloro-m-xylene	9.626			16.6667		57.8	54 - 118		

##### Matrix Spike Dup (B9A0010-MSD1)

Source: 1804912-06

Prepared: 12/31/2018 Analyzed: 1/2/2019

4,4'-DDD	10.6042	10	0.35	16.6667	ND	63.6	73 - 110	7.22	20	M2
4,4'-DDD [2C]	12.6192	10	0.35	16.6667	ND	75.7	73 - 110	43.0	20	R3
4,4'-DDE	10.9583	10	0.54	16.6667	ND	65.7	71 - 99	2.81	20	M2
4,4'-DDE [2C]	11.2108	10	0.54	16.6667	ND	67.3	71 - 99	10.4	20	M2
4,4'-DDT	8.36250	10	0.50	16.6667	ND	50.2	51 - 106	1.32	20	M2, J
4,4'-DDT [2C]	8.13417	10	0.50	16.6667	ND	48.8	51 - 106	22.6	20	M2, R3, J
Aldrin	11.1933	5.0	0.62	16.6667	ND	67.2	67 - 95	11.4	20	
Aldrin [2C]	10.4550	5.0	0.62	16.6667	ND	62.7	67 - 95	1.30	20	M2
alpha-BHC	9.49250	5.0	0.53	16.6667	ND	57.0	67 - 94	1.94	20	M2
alpha-BHC [2C]	9.59000	5.0	0.53	16.6667	ND	57.5	67 - 94	3.38	20	M2
alpha-Chlordane	62.3550	5.0	0.59	16.6667	62.9025	-3.29	69 - 99	0.308	20	M2
alpha-Chlordane [2C]	103.924	5.0	0.59	16.6667	107.352	-20.6	69 - 99	8.88	20	M2
beta-BHC	9.33167	5.0	0.30	16.6667	ND	56.0	67 - 99	0.834	20	M2
beta-BHC [2C]	9.64333	5.0	0.30	16.6667	ND	57.9	67 - 99	2.40	20	M2
delta-BHC	7.41583	5.0	0.62	16.6667	ND	44.5	73 - 103	0.0786	20	M2





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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B9A0010 - GCSEMI\_PCB/PEST\_S (continued)

##### Matrix Spike Dup (B9A0010-MSD1) - Continued

Source: 1804912-06

Prepared: 12/31/2018 Analyzed: 1/2/2019

delta-BHC [2C]	7.18167	5.0	0.62	16.6667	ND	43.1	73 - 103	2.49	20	M2
Dieldrin	20.8925	10	1.3	16.6667	12.3167	51.5	65 - 93	0.704	20	M2
Dieldrin [2C]	21.6500	10	1.3	16.6667	12.2292	56.5	65 - 93	8.04	20	M2
Endosulfan I	9.56500	5.0	0.50	16.6667	ND	57.4	65 - 91	8.14	20	M2
Endosulfan I [2C]	9.90417	5.0	0.50	16.6667	ND	59.4	65 - 91	4.10	20	M2
Endosulfan II	5.06583	10	0.77	16.6667	ND	30.4	65 - 102	5.65	20	M2, J
Endosulfan II [2C]	3.36417	10	0.77	16.6667	ND	20.2	65 - 102	50.0	20	M2, R3, J
Endosulfan sulfate	3.94000	10	0.80	16.6667	ND	23.6	64 - 106	31.3	20	M2, R3, J
Endosulfan Sulfate [2C]	3.38083	10	0.80	16.6667	ND	20.3	64 - 106	77.4	20	M2, R3, J
Endrin	10.4892	10	0.68	16.6667	ND	62.9	64 - 111	9.70	20	M2
Endrin [2C]	10.3983	10	0.68	16.6667	ND	62.4	64 - 111	8.04	20	M2
Endrin aldehyde	3.79083	10	1.6	16.6667	ND	22.7	64 - 109	1.35	20	M2, J
Endrin aldehyde [2C]	2.94667	10	1.6	16.6667	ND	17.7	64 - 109	53.7	20	M2, R3, J
Endrin ketone	3.29500	10	0.63	16.6667	ND	19.8	57 - 101	15.7	20	M2, J
Endrin ketone [2C]	3.39000	10	0.63	16.6667	ND	20.3	57 - 101	35.2	20	M2, R3, J
gamma-BHC	9.49417	5.0	0.52	16.6667	ND	57.0	65 - 96	0.613	20	M2
gamma-BHC [2C]	9.60250	5.0	0.52	16.6667	ND	57.6	65 - 96	3.37	20	M2
gamma-Chlordane	36.5392	5.0	4.4	16.6667	39.4708	-17.6	65 - 113	1.56	20	M2
gamma-Chlordane [2C]	40.2750	5.0	4.4	16.6667	40.2867	-0.0700	65 - 113	8.81	20	M2
Heptachlor	10.0417	5.0	0.59	16.6667	ND	60.3	61 - 96	0.0829	20	M2
Heptachlor [2C]	9.17250	5.0	0.59	16.6667	ND	55.0	61 - 96	4.34	20	M2
Heptachlor epoxide	17.4133	5.0	0.44	16.6667	ND	104	64 - 89	7.99	20	M2
Heptachlor epoxide [2C]	18.1917	5.0	0.44	16.6667	ND	109	64 - 89	10.5	20	M2
Methoxychlor	8.34250	25	0.89	16.6667	ND	50.1	67 - 109	53.9	20	M2, R3, J
Methoxychlor [2C]	5.92167	25	0.89	16.6667	ND	35.5	67 - 109	8.31	20	M2, J
Surrogate: Decachlorobiphenyl	10.91			16.6667		65.4	43 - 84			
Surrogate: Decachlorobiphenyl [	10.52			16.6667		63.1	43 - 84			
Surrogate: Tetrachloro-m-xylene	9.168			16.6667		55.0	54 - 118			
Surrogate: Tetrachloro-m-xylene	9.130			16.6667		54.8	54 - 118			



## Certificate of Analysis

Leighton Consulting, Inc.

17781 Cowan Street

Irvine , CA 92614

Project Number : LAUSD- Colfax ES, 11640.008

Report To : Ross Surrency

Reported : 01/02/2019

### Notes and Definitions

S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

#### Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

## Dominic Mata

---

**From:** Ross Surrency <rsurrency@leightongroup.com>  
**Sent:** Thursday, December 27, 2018 4:02 PM  
**To:** Dominic Mata  
**Subject:** RE: Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804912)

Dominic,

Thanks for this report. Please analyze sample PER1-SW2-1.0 that is on hold. Analyze for OCPs by 8081.

Ross Surrency, PG  
Associate Geologist  
**Leighton Consulting, Inc**  
17781 Cowan, Irvine, CA 92614  
(949) 681-4264 – Direct  
(949) 880-4439 – Cell

Geotechnical | Geoenvironmental | Materials Testing

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---

**From:** Dominic Mata [mailto:dominic@atlglobal.com]  
**Sent:** Thursday, December 27, 2018 3:28 PM  
**To:** Ross Surrency  
**Cc:** Kevin Hall; customer.relations@atlglobal.com  
**Subject:** Results - LAUSD-Colfax ES, 11640.008 (ATL# 1804912)

Good afternoon Ross,

Please find your results for the above project attached. If I can further assist, please let me know.

Thanks,



Dominic Mata | Project Coordinator  
ADVANCED TECHNOLOGY LABORATORIES  
3275 Walnut Avenue, Signal Hill CA 90755  
O: 562.989.4045 ext. 238 | <http://www.atlglobal.com>

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# APPENDIX E

## WASTE DISPOSAL DOCUMENTATION



Leighton

NO. 747731

## NON-HAZARDOUS WASTE DATA FORM

BESI #

300284

GENERATOR	Generator's Name and Mailing Address L.A.U.S.D. - OEHS ATTN: ANDREW MODUGNO 333 S. BEAUDRY AVE., 21ST FLOOR LOS ANGELES, CA 90017		Generator's Site Address (if different than mailing address) LAUSD - COLFAX ELEMENTARY SCHOOL 11724 ADDISON ST. VALLEY VILLAGE, CA 91807	
	Generator's Phone: 213-241-3199			
	Container type removed from site: <input checked="" type="checkbox"/> Drums <input type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____		Container type transported to receiving facility: <input type="checkbox"/> Drums <input checked="" type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____	
	Quantity _____		Quantity _____ Volume _____	
GENERATOR	WASTE DESCRIPTION <u>NON-HAZARDOUS WATER</u>		GENERATING PROCESS <u>WELL PURGING / DECON WATER</u>	
	COMPONENTS OF WASTE PPM %		COMPONENTS OF WASTE PPM %	
	1. <u>WATER</u> _____ <u>99-100%</u>		3. _____	
	2. <u>TPH</u> _____ <u>&lt;1%</u>		4. _____	
TRANSPORTER	Waste Profile _____ PROPERTIES: pH <u>7-10</u> <input type="checkbox"/> SOLID <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SLUDGE <input type="checkbox"/> SLURRY <input type="checkbox"/> OTHER _____			
	HANDLING INSTRUCTIONS: _____			
	Generator Printed/Typed Name <u>Travis R. Bobbitt</u>		Signature <u>[Signature]</u>	
	Month Day Year <u>11</u> <u>25</u> <u>18</u>			
TRANSPORTER	The Generator certifies that the waste as described is 100% non-hazardous			
	Transporter 1 Company Name BELSHIRE		Phone# 848-460-5200	
	Transporter 1 Printed/Typed Name <u>Carlos Villa</u>		Signature <u>[Signature]</u>	
	Month Day Year <u>11</u> <u>28</u> <u>18</u>			
RECEIVING FACILITY	Transporter Acknowledgment of Receipt of Materials			
	Transporter 2 Company Name NIETO & SONS TRUCKING, INC.		Phone# 714-880-8855	
	Transporter 2 Printed/Typed Name _____		Signature _____	
	Month Day Year ____			
RECEIVING FACILITY	Transporter Acknowledgment of Receipt of Materials			
	Designated Facility Name and Site Address DEMENNO KERDOON 2000 N. ALAMEDA ST. COMPTON, CA 90222		Phone# 310-537-7100	
	Printed/Typed Name _____		Signature _____	
	Month Day Year ____			
Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.				

APPENDIX F

PROUCL OUTPUT SPREADSHEET



Leighton

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.111/19/2018 2:42:30 PM								
5	From File			Colfax Arsenic Data.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Arsenic Concentrations (mg/kg)											
12												
13	General Statistics											
14	Total Number of Observations				42		Number of Distinct Observations				35	
15							Number of Missing Observations				0	
16	Minimum				0.98		Mean				5.319	
17	Maximum				13		Median				4.5	
18	SD				3.172		Std. Error of Mean				0.489	
19	Coefficient of Variation				0.596		Skewness				0.818	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.88		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.942		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.149		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.135		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				6.142		95% Adjusted-CLT UCL (Chen-1995)				6.189	
31							95% Modified-t UCL (Johnson-1978)				6.152	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.188		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.756		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.0717		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.137		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				2.808		k star (bias corrected MLE)				2.623	
42	Theta hat (MLE)				1.894		Theta star (bias corrected MLE)				2.027	
43	nu hat (MLE)				235.9		nu star (bias corrected)				220.4	
44	MLE Mean (bias corrected)				5.319		MLE Sd (bias corrected)				3.284	
45							Approximate Chi Square Value (0.05)				187	
46	Adjusted Level of Significance				0.0443		Adjusted Chi Square Value				185.9	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)				6.267		95% Adjusted Gamma UCL (use when n<50)				6.304	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.924		Shapiro Wilk Lognormal GOF Test					



[illegible]