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1 April 2014

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Subject: 205-209 Brush Street
Oakland, California
RO0002962

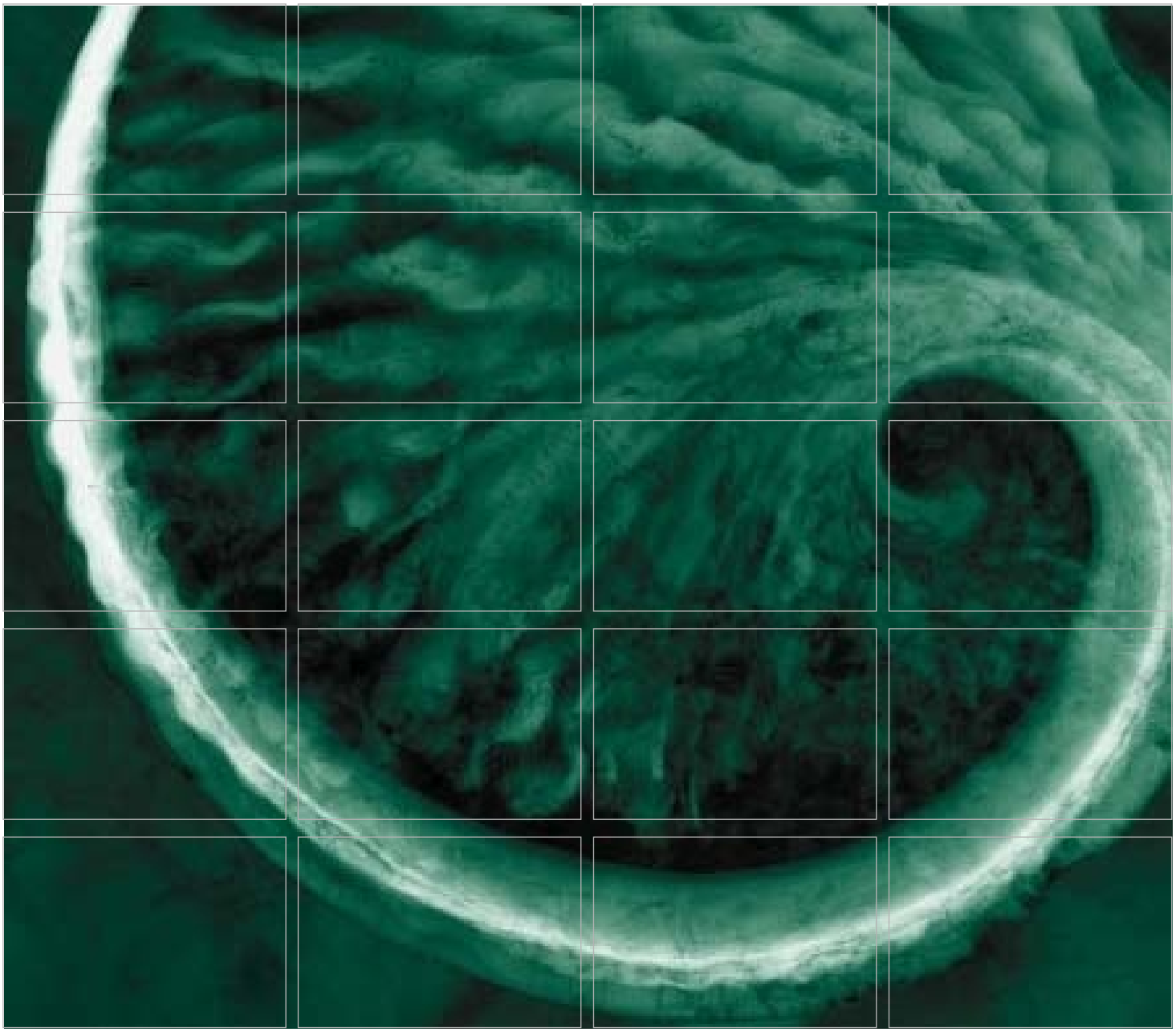
To whom it may concern:

As the legally authorized representative of PG&E, who contracted ERM-West, Inc. (ERM) to prepare the *Phase II Environmental Site Investigation*, I have reviewed the report and declare under the penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,

Ben A. LePage, Ph.D.

Manager, Remediation



Phase II Environmental Site Investigation

Prepared for:
Pacific Gas and Electric Company

Port of Oakland
205-209 Brush Street
Oakland, California

March 2014

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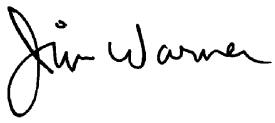
Pacific Gas and Electric Company

Phase II Environmental Site Investigation

Port of Oakland
205-209 Brush Street
Oakland, California

March 2014

Project No. 0231462.03



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LIST OF ACRONYMS

µg/L	Micrograms per liter
1,1,1-TCA	1,1,1-Trichloroethane
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
Cal/EPA	California Environmental Protection Agency
Calscience	Calscience Environmental Laboratories, Inc.
CHHSL	California Human Health Screening Level (Cal/EPA)
COC	Chain of Custody
CNG	Compressed natural gas
CS	Alameda County Contaminated Sites
EDR	Environmental Database Resources, Inc.
EHD	Alameda County Environmental Health Department
ERM	ERM-West, Inc.
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
HASP	Health and Safety Plan
mg/kg	Milligrams per kilogram
MTBE	Methyl tert-butyl ether
OFSA	Oakland Fire Services Agency
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PG&E	Pacific Gas and Electric Company
PID	Photoionization detector
QA/QC	Quality assurance/quality control
REC	Recognized environmental condition
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
SB-#	Soil boring location
SLIC	Spills, Leaks, Investigations and Cleanups

SVOC	Semivolatile organic compound
SVP-#	Soil vapor point location
SWRCB	State Water Resources Control Board
TCE	Trichloroethene
TPH	Total petroleum hydrocarbon
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline
TPH-mo	Total petroleum hydrocarbons as motor oil
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground storage tank
VOC	Volatile organic compound

1.0 INTRODUCTION

This report presents the scope and results of a Phase II limited site investigation performed by ERM-West, Inc. (ERM) at the Port of Oakland Property located at 205-209 Brush Street in Oakland, Alameda County, California (the "site" or "subject property"; Figure 1). The scope of work completed was consistent with the 16 January 2014 *Port of Oakland Phase II Environmental Site Assessment Work Plan, 205-209 Brush Street, Oakland, California* (Phase II Work Plan; ERM 2014). The limited site investigation was performed at the request of Pacific Gas and Electric Company (PG&E) to address the findings of the *Phase I Environmental Site Assessment, Former Port of Oakland Facilities Operations and Maintenance Property* (Phase I ESA; ERM 2013). The following subsections provide a site description and the findings of the Phase I ESA.

1.1 DOCUMENT ORGANIZATION

This report presents the following information:

- Section 1.0 presents the project background;
- Section 2.0 describes the field activities;
- Section 3.0 presents the results of the investigation; and
- Section 4.0 lists documents referenced in this report.

Figures, tables, and appendices follow the report text.

1.2 SITE DESCRIPTION

The subject property consists of an approximately 0.74-acre parcel of land that is improved with three vacant structures and concrete- and/or asphalt-paved areas. The subject property is identified as Alameda County Assessor's Parcel Number 001-0111-005-01. The subject property is situated in a primarily commercial and light industrial area in Oakland, Alameda County, California. Adjacent properties and surrounding areas include Market Street, with Sincere Home Décor and Sincere Hardware Supply beyond to the west; 3rd Street, with Extra Space Storage beyond to the north; Brush Street, with Digital Realty and 2nd Street beyond to the east; and a compressed natural gas (CNG) gas station, and storage and parking lots to the south. A layout of the subject property is provided in Figure 2.

The site is occupied by three commercial buildings located in the northern and eastern portions of the site, with a paved yard comprising the remainder of the 0.74-acre property. Building 2 (labeled as 2 on Figure 2) is in the northern portion of the site and consists of a single-story, plus mezzanine, approximately 6,096-square-foot office and warehouse building. The building was most recently occupied by construction offices and diver storage. Building 3 (labeled as 3 on Figure 2) adjoins the southeastern portion of Building 2. The single-story building consists of approximately 1,081 square feet and was most recently used as a vehicle maintenance facility. A covered vehicle wash area and associated sump (labeled as 4 on Figure 2) are adjacent to the east of Building 3. Building 1 (labeled as 6 on Figure 2) is in the southeastern portion of the subject property. The office/warehouse building consists of approximately 15,692 square feet within a single story and mezzanine. The building was most recently occupied by a paint shop, locker rooms, and offices. An overhang located adjacent to the northwestern exterior of Building 1 was previously used as a solvent drum storage area. The remainder of the site consists of an open, concrete-paved yard, with the exception of an asphalt-paved area at the western side of the subject property, where former underground storage tanks (USTs) had been removed. The subject property is surrounded by fencing, with an access gate along the western boundary at Market Street. The subject property is currently vacant, but is used for storage of documents and furniture by the Port of Oakland.

1.2.1 Site Topography

The subject property is located in a generally flat area. Based on site visit observations and topographic map review, the subject property is generally flat and is situated at an average elevation of 12 feet above mean sea level. Topography in the site vicinity has a slight slope toward the south-southwest. The closest surface water body to the subject property is the San Francisco Bay, located approximately 0.25-mile south of the site.

1.3 SITE BACKGROUND

Based on an interview with personnel familiar with the subject property and review of historical photographs and records, the subject property was occupied by residences in the late 1800s, followed by a blacksmith shop, carpenter shop, and hotel in the early 1900s. By the early 1950s, the subject property was occupied by a retail store, junk yard, machine shop, and restaurant, and by the late 1950s, a truck repair and cleaning facility was also located on site. By the late 1960s, a paint and varnish facility, including an exterior varnish tank, was located on the subject property.

The Port of Oakland's Facilities Operations and Maintenance facility was first located on the site in the early 1970s. Former operations at this facility included hazardous waste storage, fueling of vehicles including USTs and associated dispenser islands, vehicle maintenance and repair including a hydraulic lift, and painting.

Findings from the Phase I ESA identified the following areas of environmental concern at the subject property for additional investigation. These areas are discussed in detail in the Phase I ESA (ERM, 2013).

- One 1,000-gallon diesel UST and one 10,000-gallon gasoline UST, along with associated fuel dispensers, piping, concrete and soil overlying the USTs, were removed from the site under the oversight of the Oakland Fire Services Agency (OFSA) in 2003. According to an *Underground Storage Tank Removal, 209 Brush Street, Oakland, California*, prepared by Geomatrix Consultants (Geomatrix), dated July 2003, the USTs were installed in the western-central portion of the site in 1987, and were upgraded in 1998. Drawings subsequently provided to PG&E from the Port of Oakland indicate the initial installation of USTs and associated piping and dispensing island occurred in 1970. During the removal of the tanks, soil beneath the tanks was observed to be stained and a strong hydrocarbon odor was reportedly noted. A limited excavation was conducted during the removal of the tank; however, sampling results indicate that impacted soil still remained within the former tank area and groundwater samples indicated the presence of total petroleum hydrocarbons (TPH) as gasoline (TPH-g) and diesel (TPH-d), as well as associated volatile organic compounds (VOCs) (benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tert-butyl ether (MTBE) and lead. The site is considered an open case by the Alameda County Environmental Health Department (EHD) and was identified as a recognized environmental condition (REC) for the site.
- The subject property address of 205 Brush Street is listed as Port of Oakland/Downtown Oakland CNG Station on the Alameda County Contaminated Sites (CS) and Spills, Leaks, Investigations, and Cleanups (SLIC) databases in the Environmental Database Resources, Inc. (EDR) report, on the State Water Resources Control Board (SWRCB) GeoTracker database, and on the EHD database. Based on the EDR report and regulatory agency databases, the above listings are associated with the adjacent (south) CNG station. According to the records reviewed, and a report entitled *Removal Action Oversight and Documentation At Downtown Oakland CNG Station, 205/209 Brush Street, Oakland, CA* (R&M Environmental, 2007), stained, odiferous soil was encountered during soil excavation associated with construction of the CNG station on the Port of Oakland-owned property in 2007.

Approximately 200 cubic yards of soil was excavated, and soil contaminated with TPH and VOCs reportedly remains in place. Based on the 2007 report, the soil contamination was considered to possibly be from a previous UST release at the Port of Oakland property adjacent to the north (the subject property). The case is listed as open – site assessment as of April 2007 on the GeoTracker and EHD databases. The case open status and potential source being the subject property represent an REC.

- Based on historical documents reviewed, the subject property has a history of commercial and industrial uses since the early 1900s associated with potential environmental concerns. The long history of commercial and industrial activities at the site, and associated potential subsurface impacts, represent an REC for the subject property.

2.0 FIELD ACTIVITIES

To address the identified RECs, ERM designed a limited Phase II site investigation. The initial scope of work was provided in the Phase II Work Plan and included the installation of eight soil borings for collection of soil and groundwater samples (SB-1 through SB-8). In addition, soil vapor sampling was proposed at two locations (SB-4 and SB-7). However, the Port of Oakland provided additional early drawings of the UST infrastructure following the preparation of the Phase II Work Plan. Based on the additional information, two additional boring locations (SB-9 and SB-10) were added to the scope. The sampling locations are shown in Figure 2. Each soil boring location was selected based on RECs identified during the Phase I ESA. Rationales for soil boring locations are summarized in Table 1.

Soil and groundwater sampling activities were performed on 23 and 24 January 2014. Soil vapor sampling activities were performed on 27 January 2014. Sampling could not be completed at SB-1 due to the presence of concrete treated base that could not be cleared from the hole. Soil samples were collected from boring locations SB-2 through SB-10 and, with the exception of SB-10, groundwater samples were collected from each boring. Soil vapor point (SVP) SVP-4 and SVP-7 were installed adjacent to SB-4 and SB-7, respectively.

The following subsections describe the field investigation activities and procedures.

2.1 PREPARATION AND PERMITTING

A project-specific Health and Safety Plan (HASP) was prepared prior to implementing the field activities. The HASP summarized current site conditions and activities planned during the site investigation. All field staff reviewed the HASP prior to conducting work on site, and ERM's health and safety requirements were discussed with all ERM employees, ERM subcontractors, site personnel, and visitors during the morning tailgate meeting.

ERM implemented internal subsurface utility clearance procedures prior to initiation of field activities. Proposed boring locations were marked in the field prior to initiating the fieldwork. In accordance with the ERM subsurface clearance policy, ERM contacted Underground Services Alert, a service that notifies public utilities of the location and scope of proposed

subsurface investigations and if in conflict, requires them to mark their utilities. As a further precaution, ERM contracted Cruz Brothers, a private utility locator, to mark subsurface utilities and structures potentially in conflict with the proposed scope of work. Private utility surveying was conducted on 21 January 2014.

As required, ERM obtained a drilling permit, Permit Number W2014-0024, from the Alameda County Public Works Agency. The permit was issued on 14 January 2014 and was valid through 27 January 2014.

Concrete and asphalt saw-cutting was completed for all boring locations by Del Secco Diamond Core and Saw on 23 January 2014.

2.2 SOIL SAMPLING

Soil borings were hand-cleared using a hand auger to a minimum of 5 feet below ground surface (bgs), as required by ERM's internal subsurface utility clearance protocol. Soil borings SB-4, SB-5, SB-6, SB-7, and SB-9 were located within 10 feet of an identified underground utility, which required hand-auger clearance to a depth of 8 feet bgs to ensure all locations were clear of subsurface utilities. Due to potential fueling infrastructure, soil boring SB-10, a shallow boring to investigate the potential for shallow contamination, was completed to its total depth of 6.5 feet bgs using a hand auger. At the completion of hand augering, deeper soil borings were continuously cored to total depth using direct-push drilling techniques.

During drilling activities, ERM field personnel logged the soils in accordance with the Unified Soil Classification System guidelines. Soil cores were screened in the field for the presence of VOCs using an organic vapor analyzer with a photoionization detector (PID) and the results were noted on the boring logs. In addition, physical observations such as staining and odor were also recorded on the boring logs. Copies of boring logs are included in Appendix A.

As outlined in the Phase II Work Plan, it was anticipated that two vadose zone soil samples would be collected from each boring based on field observations and/or PID readings. Due to elevated PID readings and visual observations, additional soil samples were collected from SB-2 and SB-9 to profile the vertical extent of impact. Soil boring SB-10 was completed to determine if shallow soil impact was present at this location due to potential fueling infrastructure identified in early drawings provided by the Port of Oakland. Evidence of contamination was not

observed below 2 feet bgs, so the boring was terminated at 6.5 feet bgs. Soil sample intervals collected from each boring location are summarized in Table 2.

Soil samples were collected in brass sleeves or acetate liners and capped at each end with Teflon tape and plastic end caps. Each soil sample collected was labeled, placed in a zip-top-style plastic bag, and packed in an ice-filled cooler. The samples were transported under standard chain-of-custody (COC) documentation to Calscience Environmental Laboratories, Inc. (Calscience), a California-certified laboratory in Garden Grove, California. The soil samples analyzed for the following parameters:

- TPH-g), TPH-d, and TPH as motor oil (TPH-mo) by United States Environmental Protection Agency (USEPA) Method 8015B(M) with silica gel cleanup;
- VOCs plus fuel oxygenates by USEPA Method 8260B;
- Semivolatile organic compounds (SVOCs) by USEPA Method 8270C;
- California Title 22 Metals by USEPA Methods 6010/7000 series; and
- Organochlorine pesticides and polychlorinated biphenyls (PCBs) by USEPA Method 8081A/8082.

Deeper soil samples collected from all boring locations were placed on hold for organochlorine pesticides and PCBs analysis pending the results of shallow sample analysis. Based on shallow sample analytical results, ERM instructed the laboratory to analyze the deeper soil samples from SB-5 and SB-8 for organochlorine pesticides and PCBs.

2.3 GROUNDWATER SAMPLING

Soil borings SB-2 through SB-9 were completed to first encountered groundwater. Borings SB-5, SB-6, and SB-9 were completed to a depth of 12 feet bgs and borings SB-2, SB-3, SB-4, SB-7, and SB-8 were completed to a depth of 15 feet bgs. Temporary well points constructed of polyvinyl chloride blank and screen was installed in each boring and grab groundwater samples were collected using a peristaltic pump. Each groundwater sample was contained in clean, laboratory-provided sample containers. A duplicate sample was collected at SB-2 (SB-2-DUP).

Following sample collection, groundwater sample containers were labeled, placed in zip-top-style plastic bags, and packed in an ice-filled cooler. The samples were transported under standard COC

documentation to Calscience. The groundwater samples were analyzed for the following parameters:

- TPH-g, TPH-d, and TPH-mo by USEPA Method 8015B(M) with silica gel cleanup;
- VOCs including fuel oxygenates by USEPA Method 8260B;
- SVOCs by USEPA Method 8270C;
- California Title 22 Metals by USEPA Methods 6010/7000 series; and
- Organochlorine pesticides and PCBs by USEPA Method 8081A/8082.

Grab groundwater samples for metals analyses were field-filtered prior to collection in the laboratory-provided containers. After sampling was completed, the temporary wells were removed from each borehole and each location was backfilled with hydrated bentonite chips. All borings were patched with concrete to grade.

2.4 SOIL VAPOR SAMPLING

Soil vapor probe construction and sampling activities were performed in accordance with the *Final Active Soil Gas Advisory* (California Environmental Protection Agency [Cal/EPA] 2012). The two temporary soil vapor probes SVP-4 and SVP-7 were completed to a depth of 5.5 feet bgs using a hand auger to ensure that the locations were clear of subsurface utilities. Once the total depth of the boring was reached, the temporary soil vapor probe construction materials were installed as follows:

- Each probe consisted of 0.25-inch outer-diameter Teflon tubing equipped with a stainless-steel coupler and vapor point. The vapor point was lowered to 5 feet bgs.
- A 1-foot-thick annular filter pack was installed around the vapor point. The filter pack consisted of clean, washed, well-graded silica sand, and extended approximately 0.5 foot below and 0.5 foot above the vapor point.
- Dry granular bentonite was then added to the annular space to 1 foot above the sand pack.
- The remainder of annular space consisted of hydrated bentonite to ground surface.

Prior to sampling the soil vapor probes, subsurface conditions were allowed to equilibrate for at least 48 hours. Soil vapor samples for laboratory analysis were collected in evacuated 1-liter stainless-steel Summa canisters. A duplicate soil vapor sample was collected at SVP-4 (SVP-4-DUP).

Following sample collection, soil vapor samples were labeled, packaged, and stored in accordance with instructions from Calscience. A courier from Calscience picked up the samples from ERM's Walnut Creek, California, office on the date of sample collection and transported the samples under standard COC documentation to Calscience. The soil vapor samples were analyzed for VOCs including naphthalene by USEPA Method TO-15.

After sampling was completed, each temporary soil vapor probe was abandoned by removing the construction materials and backfilling the borehole using hydrated bentonite chips. The two borings were patched with concrete to grade.

2.5 DATA ANALYSIS AND REVIEW

ERM performed a data quality assurance/quality control (QA/QC) review of the analytical results in accordance with the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999, and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, July 2004. The data quality review evaluated holding times, preservation methods, method blank sample results, laboratory control sample recoveries, and matrix and surrogate spike recoveries. Based on ERM's data quality review, the quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents. The laboratory data packages and the QA/QC review are provided in Appendices B and C, respectively.

3.0 INVESTIGATION RESULTS

This section summarizes the results of the limited Phase II site investigation.

3.1 GEOLOGY AND HYDROGEOLOGY

Shallow soil stratigraphy observed during this investigation included a fill layer ranging in thickness from 0.5 to 3 feet that is underlain by fine-grained sands, sandy silts, and clayey silts/sands. Detailed soil lithology for the borings is presented on the boring logs included as Appendix A.

During sampling activities, apparently saturated soil was encountered in the eight deeper borings (SB-2 through SB-9) at depths of approximately 7 to 8.5 feet bgs.

3.2 SOIL ANALYTICAL RESULTS

Soil analytical results are summarized on Tables 3 through 7. Detectable concentrations are compared within the tables to the following compound-specific, risk-based screening levels:

- Environmental Screening Levels (ESLs) for commercial/industrial land use where groundwater is a current or potential source of drinking water from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (San Francisco Bay Regional Water Quality Control Board [RWQCB] 2013);
- California Human Health Screening Levels (CHHSLs) for commercial/industrial land uses provided in *Use of CHHSLs in Evaluation of Contaminated Properties* (Cal/EPA, 2005 [September 2010 update]); and
- Regional Screening Levels (RSLs) from USEPA Region IX online RSL table, as updated November 2013 for commercial/industrial land use.

Figure 3 presents soil analytical results that exceed their respective ESLs. ESLs were chosen as the most relevant screening levels as the site is ultimately under the RWQCB's oversight given its status as a former UST site. The analytical results for soil are summarized below.

3.2.1 *Total Petroleum Hydrocarbons and Volatile Organic Compounds in Site Soil*

As seen in Table 3, TPH-d, TPH-mo, TPH-g, and various VOCs were detected in soil samples collected during the investigation. The summary table below outlines TPH and VOC detections in soil samples collected during the investigation.

Constituent	Number of Samples	Number of Detections	Number of Exceedances	Concentration Ranges (mg/kg)	Exceedances (mg/kg)	ESL (mg/kg)
TPH-d	20	9	4	13 (SB-9 at 2.5-3') to 9,900 (SB-8 at 0.5-1')	170 (SB-2 at 1.5-2') 390 (SB-5 at 0.5-1') 560 (SB-9 at 6-6.5') 9,900 (SB-8 at 0.5-1')	110
TPH-mo	20	8	2	34 (SB-6 at 0.5-1') to 10,000 (SB-8 at 0.5-1')	680 (SB-5 at 0.5-1') 10,000 (SB-8 at 0.5-1')	500
TPH-g	20	6	2	1.6 (SB-8 at 0.5-1') to 2,300 (SB-2 at 8.5-9')	1,600 (SB-9 at 6-6.5') 2,300 (SB-2 at 8.5-9')	500
Benzene	20	2	2	1.1 (SB-9 at 6-6.5') to 3.1 (SB-9 at 11.5-12')	1.1 (SB-9 at 6-6.5') 3.1 (SB-9 at 11.5-12')	0.044
Toluene	20	2	2	3.5 (SB-9 at 11.5-12') to 100 (SB-2 at 8.5-9')	3.5 (SB-9 at 11.5-12') 100 (SB-2 at 8.5-9')	2.9
Ethylbenzene	20	3	2	1.9 (SB-9 at 11.5-12') to 54 (SB-2 at 8.5-9')	21 (SB-9 at 6-6.5') 54 (SB-2 at 8.5-9')	3.3
p/m-Xylenes	20	3	2	1.5 (SB-9 at 6-6.5') to 220 (SB-2 at 8.5-9')	6.8 (SB-9 at 11.5-12') 220 (SB-2 at 8.5-9')	2.3
o-Xylenes	20	2	1	2.1 (SB-9 at 11.5-12') to 81 (SB-2 at 8.5-9')	81 (SB-2 at 8.5-9')	2.3
Naphthalene	20	1	1	24 (SB-9 at 6-6.5')	24 (SB-9 at 6-6.5')	1.2
Other VOCs	20	6	0	See Table 3	None	Varies

Figure 3 provides locations and depths where TPH and VOC concentrations exceeded regulatory screening levels.

3.2.2 Semivolatile Organic Compounds in Site Soil

SVOCs were detected in three of the 20 samples analyzed. As seen in Table 4 and Figure 3, concentrations of SVOCs in two samples (SB-2 at 8.5 to 9′ and SB-9 at 6 to 6.5′) exceeded their regulatory screening levels. These compounds include anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, 2-methylnapththalene, naphthalene, and phenanthrene.

3.2.3 Metals in Site Soil

Metal concentrations detected in soil are provided in Table 5. Four samples (SB-4 at 0.5 to 1′, SB-5 at 0.5 to 1′, SB-7 at 0.5 to 1′, and SB-8 at 0.5 to 1′) contained metals concentrations in excess of regulatory screening levels. These metals include arsenic, copper, lead, molybdenum, and zinc.

3.2.4 Organochlorine Pesticides in Site Soil

Organochlorine pesticides were detected in three of the nine samples analyzed for these compounds. Detected compounds included 4,4′-DDD, 4,4′-DDT, and heptachlor epoxide. As seen in Table 6 and Figure 3, two samples (SB5 at 0.5 to 1′ and SB-8 at 0.5 to 1′) contained concentrations of heptachlor epoxide above its ESL of 0.014 mg/kg. To assess these detections, ERM instructed the laboratory to analyze deeper samples from these borings (SB-5 at 6.5 to 7.0 and SB-8 at 6.0 to 6.5) for pesticides; pesticides were not detected above laboratory reporting limits in the deeper soil samples.

3.2.5 Polychlorinated Biphenyls in Site Soil

The results of PCBs in soil are provided in Table 7. As seen in this table, PCBs were detected in three of the nine soil samples analyzed. Two PCB compounds, Aroclor-1254 and Aroclor-1260, were detected at concentrations above their regulatory screening levels, including their ESLs of 0.74 mg/kg, in two shallow soil samples collected from borings SB-5 and SB-8 (SB-5 at 0.5 to 1′ and SB-8 at 0.5 to 1′). The location of these exceedances is shown on Figure 3.

ERM instructed the laboratory to analyze the deeper soil samples (SB-5 at 6.5 to 7.0 and SB-8 at 6.0 to 6.5) collected at these two locations for PCBs;

PCBs were not detected above laboratory reporting limits in the deeper soil samples.

3.3 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results are presented in Tables 8 through 12. For comparison purposes, groundwater ESLs established by the RWQCB and Maximum Contaminant Levels established by California Department of Public Health and the USEPA are also presented on Tables 8 through 12 with the groundwater data. As previously discussed, the RWQCB ESLs are the most relevant screening levels, as the ultimate site closure will be overseen by the RWQCB as a former UST site. Figures 4 and 5 present exceedances of ESLs in groundwater samples collected during this investigation.

Groundwater samples were collected in eight borings (SB-2 through SB-9). The following sections summarize the results for each chemical class.

3.3.1 Total Petroleum Hydrocarbons and Volatile Organic Compounds in Site Groundwater

As seen in Table 8, elevated concentrations of TPH-d, TPH-mo, TPH-g, and various VOCs were detected in groundwater samples collected during the investigation. The summary table below outlines TPH and VOC detections in groundwater samples collected during the investigation:

Constituent	Number of Samples	Number of Detections	Number of Exceedances	Concentration Ranges (µg/L)	Exceedances (µg/L)	ESL (µg/L)
TPH-d	9	4	3	53 (SB-5) to 60,000 (SB-9)	14,000 (SB-2-DUP) 19,000 (SB-2) 60,000 (SB-9)	100
TPH-mo	9	2	2	360 (SB-2-DUP) to 480 (SB-2)	360 (SB-2-DUP) 480 (SB-2)	100
TPH-g	9	5	5	120 (SB-3) to 130,000 (SB-9)	120 (SB-3) 140 (SB-5) 14,000 (SB-2-DUP) 63,000 (SB-2) 130,000 (SB-9)	100

Constituent	Number of Samples	Number of Detections	Number of Exceedances	Concentration Ranges (µg/L)	Exceedances (µg/L)	ESL (µg/L)
Benzene	9	4	3	0.54 (SB-5) to 10,000 (SB-9)	1,300 (SB-2-DUP) 1,800 (SB-2) 10,000 (SB-9)	1
Toluene	9	5	3	4.2 (SB-8) to 38,000 (SB-9)	3,100 (SB-2-DUP) 15,000 (SB-2) 38,000 (SB-9)	40
Ethylbenzene	9	5	3	1.8 (SB-8) to 6,800 (SB-2)	1,300 (SB-2-DUP) 6,300 (SB-9) 6,800 (SB-2)	30
p/m-Xylenes	9	5	3	4.6 (SB-8) to 26,000 (SB-2)	3,100 (SB-2-DUP) 24,000 (SB-9) 26,000 (SB-2)	20
o-Xylenes	9	5	3	1.0 (SB-8) to 10,000 (SB-2 and SB-9)	1,500 (SB-2-DUP) 10,000 (SB-2) 10,000 (SB-9)	20
MTBE	9	2	2	18 (SB-2-DUP) to 160 (SB-9)	18 (SB-2-DUP) 160 (SB-9)	5
Naphthalene	9	1	1	1,400 (SB-2)	1,400 (SB-2)	6.1
Other VOCs	9	4	3	See Table 8		Varies

Groundwater samples from these borings did not contain any evidence of a light, nonaqueous-phase liquid (LNAPL).

3.3.2 Semivolatile Organic Compounds in Site Groundwater

As seen in Table 9, SVOCs were detected in groundwater samples collected from two locations (SB-2 and SB-9). As seen on Figure 4, the SVOC concentrations that exceeded their respective ESL include anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, fluoranthene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene.

3.3.3 Metals in Site Groundwater

As seen in Table 10, dissolved metals were detected in all nine samples analyzed. Metals detected include arsenic, barium, chromium, cobalt, molybdenum, nickel, silver, and zinc. As shown on Figure 5, concentrations of metals exceeded their respective ESLs in five of the nine samples analyzed. Metals concentrations exceeding ESLs included arsenic

(SB-2 and SB-9), cobalt (SB-3), nickel (SB-2, SB-3, SB-6, and SB-8), and silver (SB-3 and SB-9).

3.3.4 Organochlorine Pesticides in Site Groundwater

As seen in Table 11, organochlorine pesticides were not detected above laboratory reporting limits in any of the groundwater samples analyzed during this investigation.

3.3.5 Polychlorinated Biphenyls in Site Groundwater

As seen in Table 12, PCBs were not detected above laboratory reporting limits in any of the groundwater samples analyzed during this investigation.

3.4 SOIL VAPOR ANALYTICAL RESULTS

Soil vapor analytical results are summarized on Table 13, along with the commercial/industrial CHHSLs, ESLs, and RSLs for comparison purposes. As previously discussed, the most relevant screening level for the site will most likely be the ESLs. Figure 6 presents the location and compounds in exceedance of their respective ESL.

One soil vapor sample from each soil vapor boring location (SVP-4 and SVP-7) and one duplicate soil vapor sample from SVP-4 was submitted for laboratory analysis as part of the field activities. As seen in Table 13, VOCs were detected in both soil vapor samples collected during the investigation. Detected VOCs include acetone, benzene, 2-butanone, PCE, trichloroethene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA). Naphthalene, which was requested by the EHD, was not detected in soil vapor collected from either location. As shown on Figure 6, only PCE was detected in the sample from SB-7 at a concentration in excess of its ESL of 2,100 micrograms per cubic meter.

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Figures

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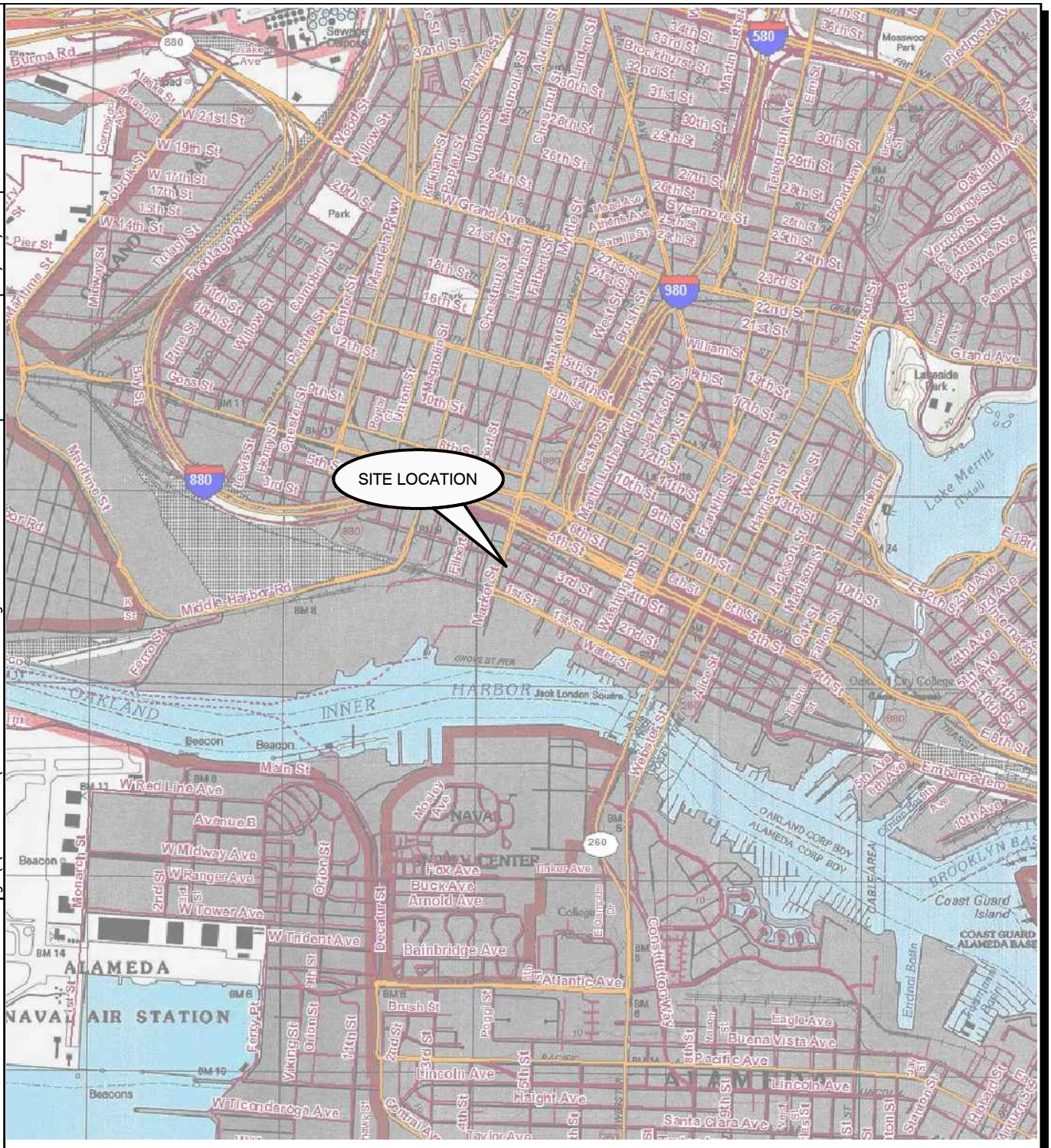

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N

References:
TOPO!® Software
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Oakland West, California
Dated: 1997

Figure 1
Site Location
205/209 Brush Street
Oakland, California

ERM 05/13

Aerial Photo Source: © 2009 Google Earth Pro Ver 5.0.11733.9347

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Date: 02/13/14
Project No. 0231462.00

LEGEND

1. Former UST Location
2. Former Diver's Boat and Equipment Storage
3. Former Vehicle Maintenance
4. Former Vehicle Wash Area
5. Former Solvent Storage Area
6. Storage, Former Offices and Paint Shop

Site Boundary
Soil Sampling Location
Soil and Grab Groundwater Sampling Location
Soil Vapor Sampling Point

N

0 40
Approx. Scale (feet)

Figure 2
Sample Locations
205/209 Brush Street
Oakland, California

ERM 02/14

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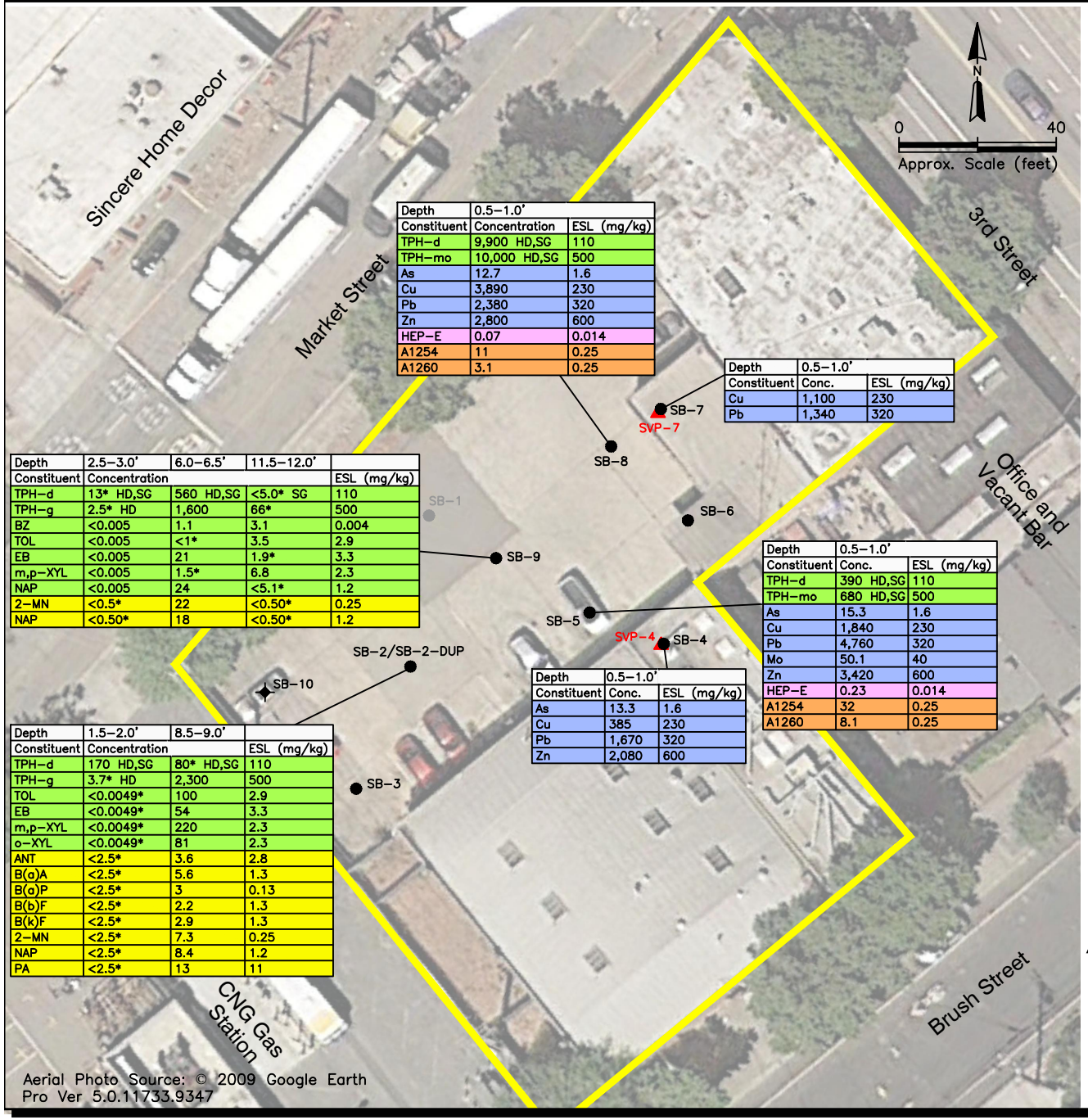

Depth	0.5–1.0'	
Constituent	Concentration	ESL (mg/kg)
TPH–d	9,900 HD,SG	110
TPH–mo	10,000 HD,SG	500
As	12.7	1.6
Cu	3,890	230
Pb	2,380	320
Zn	2,800	600
HEP–E	0.07	0.014
A1254	11	0.25
A1260	3.1	0.25

Depth	0.5–1.0'	
Constituent	Conc.	ESL (mg/kg)
Cu	1,100	230
Pb	1,340	320

Depth	2.5–3.0'	6.0–6.5'	11.5–12.0'	
Constituent	Concentration			ESL (mg/kg)
TPH–d	13* HD,SG	560 HD,SG	<5.0* SG	110
TPH–g	2.5* HD	1,600	66*	500
BZ	<0.005	1.1	3.1	0.004
TOL	<0.005	<1*	3.5	2.9
EB	<0.005	21	1.9*	3.3
m,p–XYL	<0.005	1.5*	6.8	2.3
NAP	<0.005	24	<5.1*	1.2
2–MN	<0.5*	22	<0.50*	0.25
NAP	<0.50*	18	<0.50*	1.2

Depth	0.5–1.0'	
Constituent	Conc.	ESL (mg/kg)
TPH–d	390 HD,SG	110
TPH–mo	680 HD,SG	500
As	15.3	1.6
Cu	1,840	230
Pb	4,760	320
Mo	50.1	40
Zn	3,420	600
HEP–E	0.23	0.014
A1254	32	0.25
A1260	8.1	0.25

Depth	0.5–1.0'	
Constituent	Conc.	ESL (mg/kg)
As	13.3	1.6
Cu	385	230
Pb	1,670	320
Zn	2,080	600

Depth	1.5–2.0'	8.5–9.0'	
Constituent	Concentration		ESL (mg/kg)
TPH–d	170 HD,SG	80* HD,SG	110
TPH–g	3.7* HD	2,300	500
TOL	<0.0049*	100	2.9
EB	<0.0049*	54	3.3
m,p–XYL	<0.0049*	220	2.3
o–XYL	<0.0049*	81	2.3
ANT	<2.5*	3.6	2.8
B(a)A	<2.5*	5.6	1.3
B(a)P	<2.5*	3	0.13
B(b)F	<2.5*	2.2	1.3
B(k)F	<2.5*	2.9	1.3
2–MN	<2.5*	7.3	0.25
NAP	<2.5*	8.4	1.2
PA	<2.5*	13	11

LEGEND

- Site Boundary
- Soil Sampling Location
- Soil and Grab Groundwater Sampling Location
- Soil Vapor Sampling Point

Depth	0.5–1.0'	
Constituent	Conc.	ESL
Cu	1,100	230
Pb	1,340	320

Sample Depth (ft. bgs)
ESL for Soil in mg/kg
Concentration in mg/kg
Chemical Constituent

ESL: Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource

- TPH or VOCs
- Metals
- Pesticide
- PCBs
- SVOCs

* = Concentration Does Not Exceed ESL

HD – The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
SG – The sample extract was subjected to Silica Gel treatment prior to analysis.

TPH–g – Total Petroleum Hydrocarbons as Gasoline
TPH–d – Total Petroleum Hydrocarbons as Diesel
TPH–mo – Total Petroleum Hydrocarbons as Motor Oil
BZ – Benzene
TOL – Toluene
EB – Ethylbenzene
m,p–XYL – m,p–Xylene
o–XYL – o–Xylene
NAP – Naphthalene
As – Arsenic
Cu – Copper
Mo – Molybdenum
Pb – Lead
Zn – Zinc
HEP–E – Heptachlor Epoxide
A1254 – Aroclor 1254
A1260 – Aroclor 1260
ANT – Anthracene
B(a)A – Benzo(a)Anthracene
B(a)P – Benzo(a)Pyrene
B(b)F – Benzo(b)Fluoranthene
B(k)F – Benzo(k)Fluoranthene
2–MN – 2–Methylnaphthalene
PA – Phenanthrene

Figure 3

TPH, VOCs, Metals, Pesticides, PCBs, and SVOCs in Soil Exceeding ESLs
205/209 Brush Street
Oakland, California

ERM 02/14

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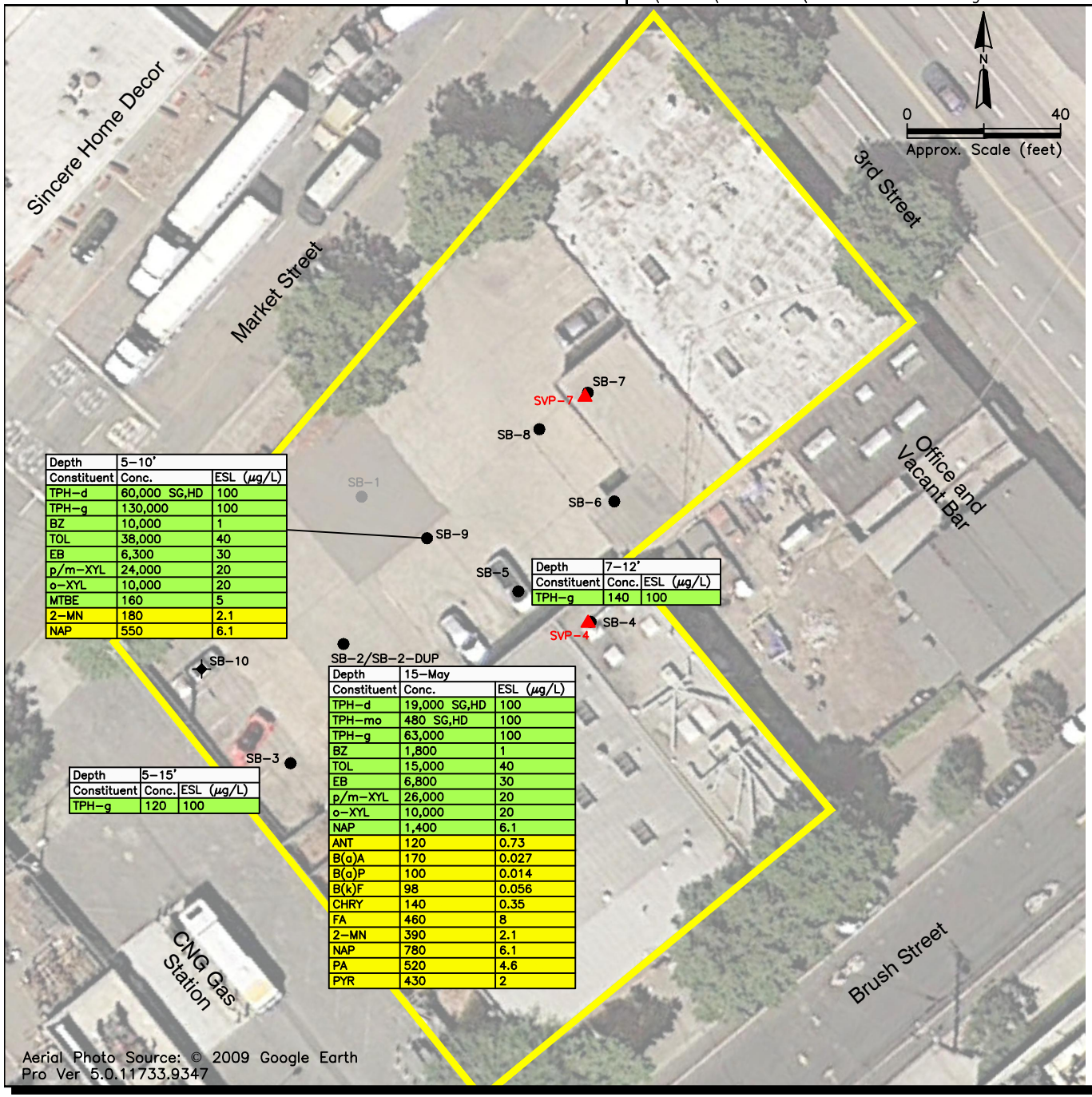

Depth	5-10'	
Constituent	Conc.	ESL (µg/L)
TPH-d	60,000 SG,HD	100
TPH-g	130,000	100
BZ	10,000	1
TOL	38,000	40
EB	6,300	30
p/m-XYL	24,000	20
o-XYL	10,000	20
MTBE	160	5
2-MN	180	2.1
NAP	550	6.1

Depth	7-12'	
Constituent	Conc.	ESL (µg/L)
TPH-g	140	100

Depth	5-15'	
Constituent	Conc.	ESL (µg/L)
TPH-g	120	100

SB-2/SB-2-DUP

Depth	15-May	
Constituent	Conc.	ESL (µg/L)
TPH-d	19,000 SG,HD	100
TPH-mo	480 SG,HD	100
TPH-g	63,000	100
BZ	1,800	1
TOL	15,000	40
EB	6,800	30
p/m-XYL	26,000	20
o-XYL	10,000	20
NAP	1,400	6.1
ANT	120	0.73
B(a)A	170	0.027
B(a)P	100	0.014
B(k)F	98	0.056
CHRY	140	0.35
FA	460	8
2-MN	390	2.1
NAP	780	6.1
PA	520	4.6
PYR	430	2

LEGEND

- Site Boundary
- Soil Sampling Location
- Soil and Grab Groundwater Sampling Location
- Soil Vapor Sampling Point

Depth	7-12'	
Constituent	Conc.	ESL
TPH-g	140	100

- Sample Depth (ft. bgs)
- ESL for Groundwater in µg/L
- Concentration in µg/L
- Chemical Constituent

ESL: Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource

TPH or VOCs SVOCs

HD – The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
SG – The sample extract was subjected to Silica Gel treatment prior to analysis.

TPH-g – Total Petroleum Hydrocarbons as Gasoline
TPH-d – Total Petroleum Hydrocarbons as Diesel
TPH-mo – Total Petroleum Hydrocarbons as Motor Oil
BZ – Benzene
TOL – Toluene
EB – Ethylbenzene
m,p-XYL – m,p-Xylene
o-XYL – o-Xylene
MTBE – Methyl tert-butyl ether
NAP – Naphthalene
ANT – Anthracene
B(a)A – Benzo(a)Anthracene
B(a)P – Benzo(a)Pyrene
B(k)F – Benzo(a)Fluoranthene
CHRY – Chrysene
FA – Fluoranthene
2-MN – 2-Methylnaphthalene
PA – Phenanthrene
PYR – Pyrene

Figure 4

TPH, VOCs, and SVOCs in Groundwater Exceeding ESLs
205/209 Brush Street
Oakland, California

ERM 02/14

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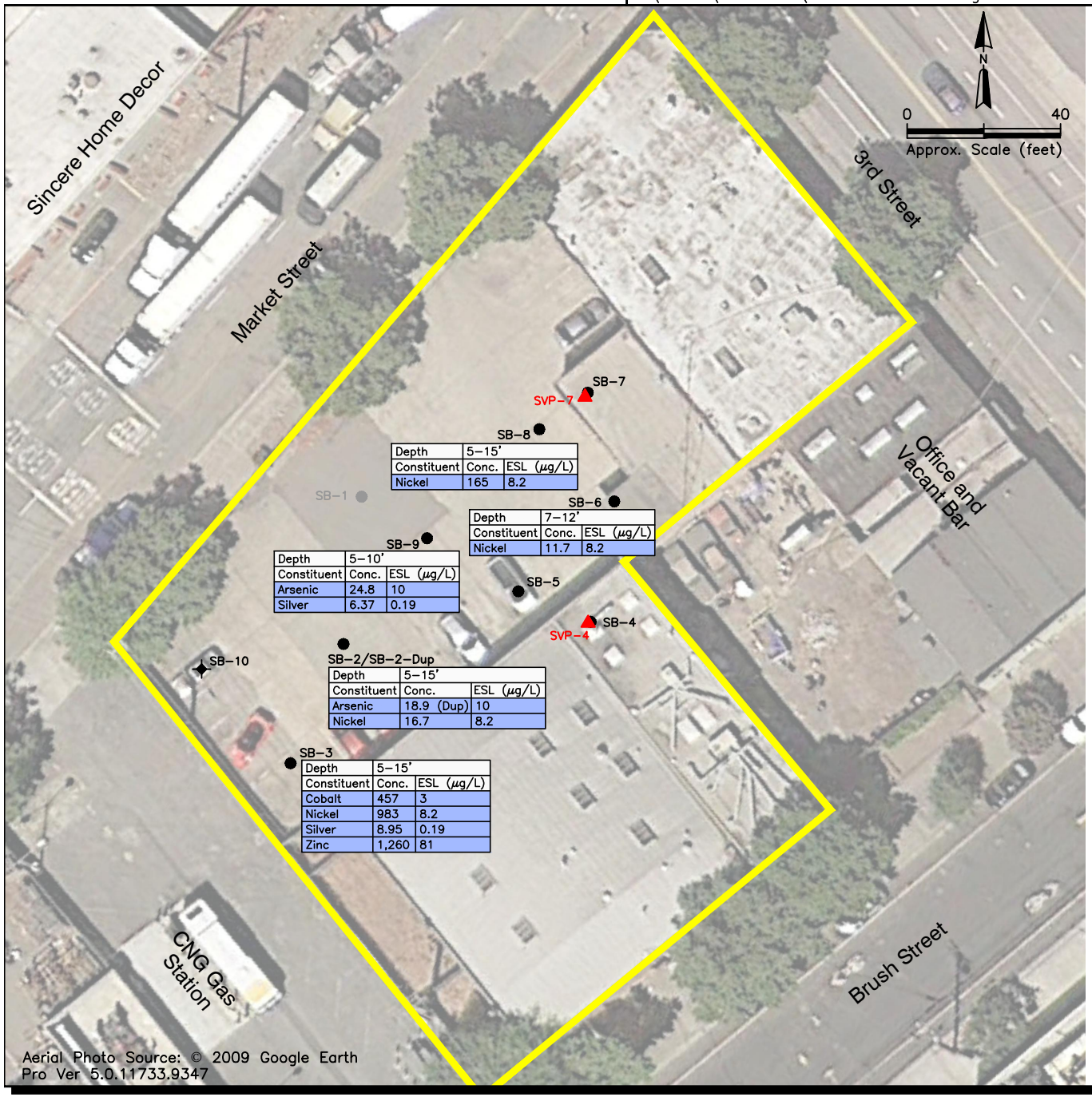

LEGEND

- Site Boundary
- Soil Sampling Location
- Soil and Grab Groundwater Sampling Location
- Soil Vapor Sampling Point

Depth	7-12'	
Constituent	Conc.	ESL
Nickel	11.7	8.2

- Sample Depth (ft. bgs)
- ESL for Groundwater in µg/L
- Concentration in µg/L
- Chemical Constituent

Metals in Groundwater

ESL: Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource

Figure 5

Metals in Groundwater Exceeding ESLs
205/209 Brush Street
Oakland, California

ERM 02/14

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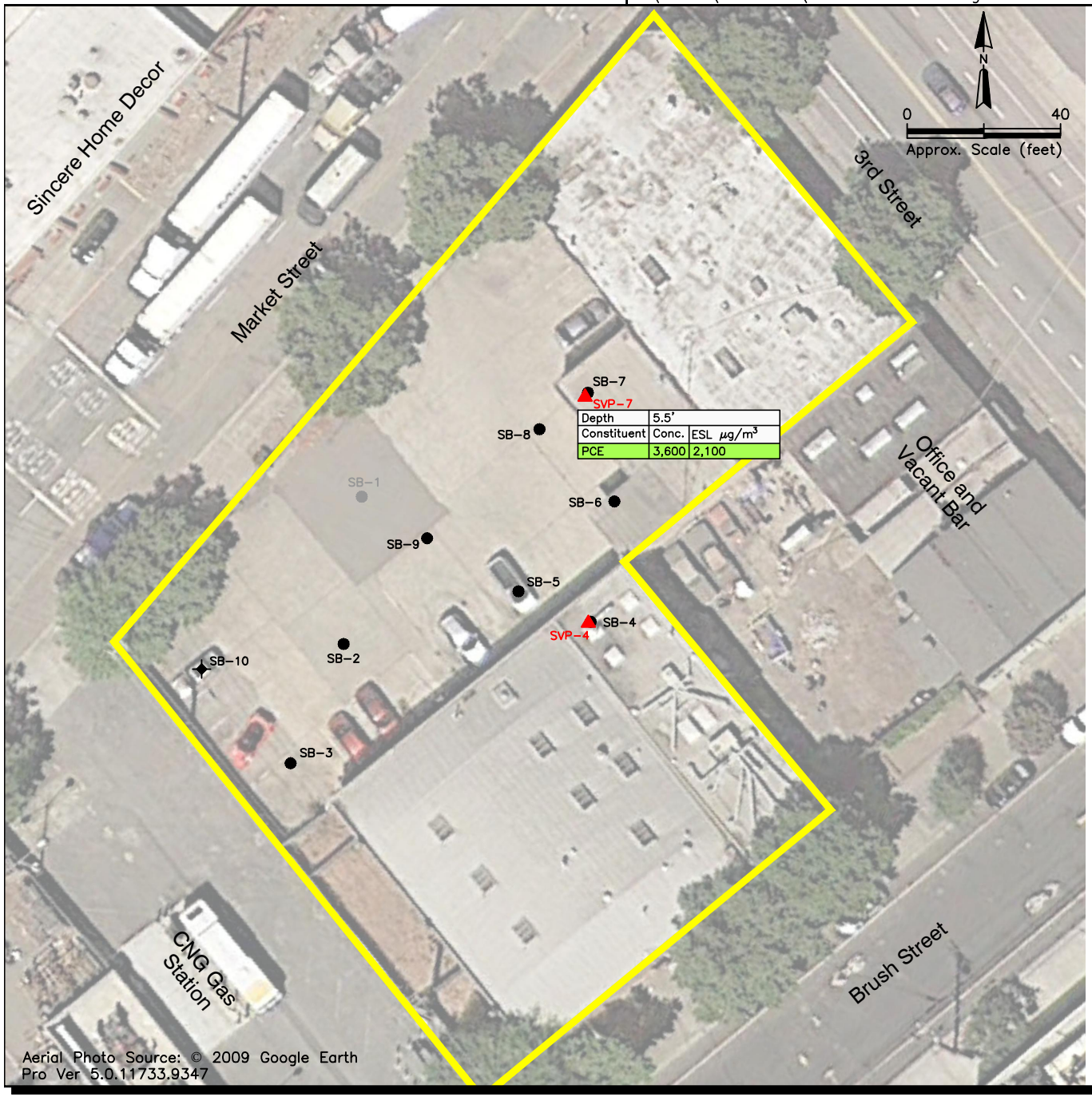

LEGEND

- Site Boundary
- Soil Sampling Location
- Soil and Grab Groundwater Sampling Location
- Soil Vapor Sampling Point

Depth	5.5'	
Constituent	Conc.	ESL
PCE	3,600	2,100

- Sample Depth (ft. bgs)
- ESL for Soil Vapor in $\mu g/m^3$
- Concentration in $\mu g/m^3$
- Chemical Constituent

VOCs in Soil Vapor

ESL: Commercial/Industrial Environmental Screening Level for Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)

PCE – Tetrachloroethene

Figure 6

VOCs in Soil Vapor Exceeding ESLs
205/209 Brush Street
Oakland, California

ERM 02/14

Tables

Table 1
Rationale for Boring Location Selection
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sampling Location	Rationale for Selection
SB-1	Former location of gasoline/diesel USTs. Soil excavation samples and groundwater samples collected during tank removal in 2003 reported elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-g), TPH as diesel (TPH-d), benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tert-butyl ether (MTBE), and lead.
SB-2	Southeast and downgradient of former location of gasoline/diesel USTs. Extent of soil contamination has not been defined from former USTs.
SB-3	Southern property boundary adjacent to CNG station. Soil contamination was identified during CNG station installation; however, extent has not been delineated.
SB-4	Subject property building located in southeastern portion of the site. Historical operations included blacksmith, machine shop, truck repair, paint and varnish facility, adjacent varnish aboveground storage tank (AST), paint shop, and paint booth. A soil vapor sample will also be conducted at SB-4 (SVP-4-DUP).
SB-5	Former solvent storage area where ground surface appeared compromised.
SB-6	Former vehicle wash area where a sump and former chemical storage was observed.
SB-7	Former vehicle maintenance building where hydraulic lift and used oil drums were observed. Historical operations included vehicle maintenance and repair. A soil vapor sample will also be conducted at SB-7 (SVP-7).
SB-8	Adjacent to the south and downgradient of former vehicle maintenance building. Historical operations in the vicinity of this location included vehicle maintenance and repair.
SB-9	Adjacent to the east of the former location of gasoline/diesel USTs. Soil excavation samples and groundwater samples collected during tank removal in June 2003 reported elevated concentrations of TPH-g, TPH-d, BTEX, MTBE, and lead.
SB-10	Adjacent to the north of former gasoline/diesel fuel lines and dispenser islands along the southern property boundary.

Table 2
Soil Sampling Intervals
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sampling Location	Shallow Sample Depth (ft bgs)	Vadose Zone Sample Depth (ft bgs)	Rationale for Selection
SB-2	1.5 to 2.0	8.5 to 9.0	1.0 to 1.5*, 5.0 to 5.5*, and 14.0 to 14.5
SB-3	0.5 to 1.0	6.0 to 6.5	
SB-4	0.5 to 1.0	7.0 to 7.5	
SB-5	0.5 to 1.0	6.5 to 7.0	
SB-6	0.5 to 1.0	7.0 to 7.5	2.5 to 3.0*
SB-7	0.5 to 1.0	7.0 to 7.5	
SB-8	0.5 to 1.0	6.0 to 6.5	
SB-9	2.5 to 3.0	6.0 to 6.5	
SB-10	0.5 to 1.0	6.0 to 6.5	1.0 to 1.5* and 11.5 to 12.0

Notes:
ft bgs = feet below ground surface
* = the laboratory was instructed to hold samples pending analytical results of other samples

Table 3
Total Petroleum Hydrocarbons and Volatile Organic Compounds in Soil
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	TPH-d*	TPH-mo*	TPH-g*	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene	Naphthalene	Tetrachloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Isopropylbenzene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene
SB-2	1.5 - 2.0	1/23/2014	**170 HD,SG**	**370 HD, SG**	**3.7 HD**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.049	<0.0049	<0.0049	<0.0049	**0.0052**	**0.015**	<0.0049	<0.0049
SB-2	8.5 - 9.0	1/23/2014	**80 HD,SG**	**65 HD, SG**	**2,300**	<5	**100**	**54**	**220**	**81**	<50	<5	**99**	**32**	<5	**17**	**8.1**	<5
SB-2	14.0 - 14.5	1/23/2014	<5.0 SG	<25 SG	<0.50	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
SB-3	0.5 - 1.0	1/23/2014	<4.9	<24	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-3	6.0 - 6.5	1/23/2014	<5.0	<25	<0.50	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
SB-4	0.5 - 1.0	1/24/2014	**70 SG,HD**	**380 SG,HD**	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-4	7.0 - 7.5	1/24/2014	<5.0	<25	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-5	0.5 - 1.0	1/23/2014	**390 HD,SG**	**680 HD,SG**	<0.50	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
SB-5	6.5 - 7.0	1/23/2014	<4.9 SG	<24 SG	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-6	0.5 - 1.0	1/23/2014	**15 HD,SG**	**34 HD,SG**	<0.50	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
SB-6	7.0 - 7.5	1/23/2014	<4.9 SG	<24 SG	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-7	0.5 - 1.0	1/24/2014	**22 SG,HD**	**58 SG,HD**	<0.50	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.052	**0.006**	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
SB-7	7.0 - 7.5	1/24/2014	<5.0	<25	<0.50	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.051	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
SB-8	0.5 - 1.0	1/23/2014	**9,900 HD,SG**	**10,000 HD,SG**	**1.6 HD**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SB-8	6.0 - 6.5	1/23/2014	<5.0 SG	<25 SG	<0.50	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
SB-9	2.5 - 3.0	1/23/2014	**13 HD,SG**	<25 SG	**2.5 HD**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	**0.0082**	<0.005	<0.005
SB-9	6.0 - 6.5	1/23/2014	**560 HD,SG**	**67 HD,SG**	**1,600**	**1.1**	<1	**21**	**1.5**	<1	**24**	<1	**2.5**	**1**	**8.8**	**36**	**17**	**5.5**
SB-9	11.5 - 12.0	1/23/2014	<5.0 SG	<25 SG	**66**	**3.1**	**3.5**	**1.9**	**6.8**	**2.1**	<5.1	<0.51	**2.8**	**0.85**	<0.51	<0.51	<0.51	<0.51
SB-10	0.5 - 1.0	1/24/2014	<5.0	<25	<0.50	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
SB-10	6.0 - 6.5	1/24/2014	<5.0	<25	<0.50	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
	C/I Shallow ESLs (drinking water)		*110*	*500*	*500*	*0.044*	*2.9*	*3.3*	*2.3*	*2.3*	*1.2*	*0.7*	---	---	---	---	---	---
	C/I Shallow ESLs (non-potable water)		*110*	*500*	*500*	*1.2*	*9.3*	*4.7*	*11*	*11*	*4.8*	*2.6*	---	---	---	---	---	---
	C/I CHHSLs		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	C/I RSLs		---	---	---	*5.4*	*45,000*	*2.7*	*2,500*	*3,000*	---	*110*	*260*	*10,000*	---	*21,000*	*51,000*	*100,000*

Legend:

ft bgs = feet below ground surface
TPH-d = Total Petroleum Hydrocarbons as Diesel
TPH-mo = Total Petroleum Hydrocarbons as Motor Oil
TPH-g = Total Petroleum Hydrocarbons as Gasoline
C/I = Commercial/Industrial
ESL = Environmental Screening Level
CHHSL = California Human Health Screening Level
RSL = Regional Screening Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit

Qualifiers:

HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
SG - The sample extract was subjected to Silica Gel treatment prior to analysis.

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).
* = Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8015B Modified (M) with silica gel cleanup.
Samples were analyzed by USEPA Method 8260B.
ESL (drinking water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table A-2, December 2013.
ESL (non-potable water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Not Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table B-2, December 2013.

CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties* , Table 1, September 2010.
RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 4
Semivolatile Organic Compounds in Soil
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Acenaphthene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenzofuran	Fluoranthene	Fluorene	Indeno (1,2,3-c,d) Pyrene	2-Methylnaphthalene	1-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
SB-2	1.5 - 2.0	1/23/2014	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
SB-2	8.5 - 9.0	1/23/2014	**1.7**	**3.6**	**5.6**	**3.0**	**2.2**	**0.79**	**2.9**	**4.7**	**0.92**	**12**	**1.9**	**0.94**	**7.3**	**3.9**	**8.4**	**13**	**13**
SB-2	14.0 - 14.5	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-3	0.5 - 1.0	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-3	6.0 - 6.5	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-4	0.5 - 1.0	1/24/2014	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	**1.4**	<0.99	<0.99	<0.99	<0.99	<0.99	<0.99	**1.4**
SB-4	7.0 - 7.5	1/24/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-5	0.5 - 1.0	1/23/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
SB-5	6.5 - 7.0	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-6	0.5 - 1.0	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-6	7.0 - 7.5	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-7	0.5 - 1.0	1/24/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-7	7.0 - 7.5	1/24/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-8	0.5 - 1.0	1/23/2014	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
SB-8	6.0 - 6.5	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-9	2.5 - 3.0	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-9	6.0 - 6.5	1/23/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**22**	**12**	**18**	<5.0	<5.0
SB-9	11.5 - 12.0	1/23/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-10	0.5 - 1.0	1/24/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-10	6.0 - 6.5	1/24/2014	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		C/I Shallow ESLs (drinking water)	*16*	*2.8*	*1.3*	*0.13*	*1.3*	*27*	*1.3*	*13*	*---*	*40*	*8.9*	*1.3*	*0.25*	*---*	*1.2*	*11*	*85*
		C/I Shallow ESLs (non-potable water)	*19*	*2.8*	*1.3*	*0.13*	*1.3*	*27*	*1.3*	*13*	*---*	*40*	*8.9*	*1.3*	*0.25*	*---*	*4.8*	*11*	*85*
		C/I CHHSLs	*---*	*---*	*---*	*0.13*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*	*---*
		C/I RSLs	*33,000*	*170,000*	*2.1*	*0.21*	*2.1*	*---*	*21*	*210*	*---*	*22,000*	*22,000*	*2.1*	*2,200*	*53*	*18*	*---*	*17,000*

Legend:
ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
CHHSL = California Human Health Screening Level
RSL = Regional Screening Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit

Notes:
All concentrations reported in milligrams per kilogram (mg/kg).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8270C.
ESL (drinking water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table A-2, December 2013.

ESL (non-potable water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Not Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table B-2, December 2013.

CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties* , Table 1, September 2010.

RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 5
Total Metals in Soil
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
SB-2	1.5 - 2.0	1/23/2014	<0.765	**3.43**	**120**	**0.312**	**0.661**	**22.9**	**5.99**	**55.8**	**312**	**0.400**	**23.1**	<0.765	<0.255	<0.765	**20.0**	**339**	**4.50**
SB-2	8.5 - 9.0	1/23/2014	<0.732	**0.775**	**59.7**	<0.244	<0.488	**43.6**	**7.06**	**8.47**	**2.48**	<0.244	**33.5**	<0.732	<0.244	<0.732	**27.1**	**22.2**	<0.0845
SB-2	14.0 - 14.5	1/23/2014	<0.773	**2.47**	**63.8**	<0.258	<0.515	**39.3**	**7.95**	**8.90**	**1.94**	<0.258	**33.1**	<0.773	<0.258	<0.773	**27.6**	**21.2**	<0.0820
SB-3	0.5 - 1.0	1/23/2014	<0.769	**1.77**	**61.2**	<0.256	<0.513	**5.68**	**5.33**	**25.8**	**5.15**	<0.256	**6.79**	<0.769	<0.256	<0.769	**19.6**	**66.0**	**0.134**
SB-3	6.0 - 6.5	1/23/2014	<0.773	**0.921**	**46.4**	<0.258	<0.515	**28.3**	**2.45**	**9.34**	**2.16**	<0.258	**13.9**	<0.773	<0.258	<0.773	**17.5**	**20.1**	<0.0805
SB-4	0.5 - 1.0	1/24/2014	**1.16**	**13.3**[a]	**309**	**0.522**	**4.98**	**36.2**	**9.65**	**385**	**1,670**	<0.251	**43.1**	<0.754	<0.251	<0.754	**23.8**	**2,080**	**1.55**
SB-4	7.0 - 7.5	1/24/2014	<0.765	**1.48**	**54.7**	<0.255	<0.510	**34.1**	**7.08**	**16.8**	**25.6**	<0.255	**24.9**	<0.765	<0.255	<0.765	**23.6**	**37.5**	<0.0835
SB-5	0.5 - 1.0	1/23/2014	**33.5**	**15.3**[a]	**921**	**0.267**	**4.89**	**50.9**	**13.6**	**1,840**	**4,760**	**50.1**	**73.9**	<0.773	**0.448**	<0.773	**28.5**	**3,420**	**7.14**
SB-5	6.5 - 7.0	1/23/2014	<0.758	**2.03**	**58.0**	<0.253	<0.505	**36.1**	**9.11**	**10.3**	**5.17**	**0.361**	**28.1**	<0.758	<0.253	<0.758	**27.7**	**20.5**	<0.0805
SB-6	0.5 - 1.0	1/23/2014	<0.758	**4.69**	**87.1**	<0.253	**0.657**	**30.7**	**4.34**	**37.3**	**249**	**1.10**	**22.3**	<0.758	<0.253	<0.253	**21.1**	**447**	**0.876**
SB-6	7.0 - 7.5	1/23/2014	<0.725	**1.37**	**42.8**	<0.242	<0.483	**37.3**	**3.52**	**6.15**	**1.77**	**0.607**	**22.6**	<0.725	<0.242	<0.725	**23.1**	**15.5**	<0.0835
SB-7	0.5 - 1.0	1/24/2014	**4.88**	**8.3**	**99.4**	**0.265**	**1.59**	**42**	**3.79**	**1,100**	**1,340**	<0.250	**21.7**	<0.750	<0.250	<0.750	**27**	**515**	**3.34**
SB-7	7.0 - 7.5	1/24/2014	<0.735	**1.98**	**55.4**	**0.294**		**42.7**	**7.28**	**14.8**	**13.7**	<0.245	**31.6**	<0.735	<0.245	<0.735	**28.8**	**29.1**	<0.0835
SB-8	0.5 - 1.0	1/23/2014	**12.0**	**12.7**[a]	**513**	<0.244	**7.19**	**44.9**	**8.09**	**3,890**	**2,380**	**6.22**	**47.2**	<0.732	**1.31**	<0.732	**26.4**	**2,800**	**8.10**
SB-8	6.0 - 6.5	1/23/2014	<0.735	**1.45**	**57.9**	<0.245	<0.490	**32.1**	**11.0**	**11.1**	**3.88**	<0.245	**27.0**	<0.735	<0.245	<0.735	**25.4**	**20.6**	<0.0835
SB-9	2.5 - 3.0	1/23/2014	<0.743	**5.23**	**219**	<0.248	**0.518**	**35.3**	**7.16**	**130**	**287**	**15.3**	**44.4**	<0.743	**0.776**	<0.743	**31.3**	**256**	<0.0875
SB-9	6.0 - 6.5	1/23/2014	<0.714	**1.25**	**51.0**	<0.238	<0.476	**31.3**	**5.53**	**7.99**	**2.53**	<0.238	**22.2**	<0.714	<0.238	<0.714	**20.3**	**17.3**	<0.0835
SB-9	11.5 - 12.0	1/23/2014	<0.754	**1.03**	**74.7**	**0.273**	<0.503	**73.4**	**7.54**	**11.8**	**2.62**	<0.251	**44.9**	<0.754	<0.251	<0.754	**36.1**	**24.8**	<0.0845
SB-10	0.5 - 1.0	1/24/2014	<0.718	**2.51**	**125**	**0.317**	<0.478	**7.95**	**7.3**	**29.1**	**5.37**	<0.239	**8.61**	<0.718	<0.239	<0.718	**26.6**	**86.1**	**0.139**
SB-10	6.0 - 6.5	1/24/2014	<0.758	<0.758	**28.5**	<0.253	<0.505	**29.4**	**1.9**	**11.1**	**1.32**	<0.253	**9.56**	<0.758	<0.253	<0.758	**18.4**	**11.6**	<0.0845
C/I Shallow ESLs (drinking water)			*40*	*1.6*	*1,500*	*8*	*12*	*2,500*	*80*	*230*	*320*	*40*	*150*	*10*	*40*	*10*	*200*	*600*	*10*
C/I Shallow ESLs (non-potable water)			*40*	*1.6*	*1,500*	*8*	*12*	*2,500*	*80*	*230*	*320*	*40*	*150*	*10*	*40*	*10*	*200*	*600*	*10*
C/I CHHSLs			*380*	*0.24*	*63,000*	*190*	*7.5*	*100,000**	*3,200*	*38,000*	*320*	*4,800*	*16,000*	*4,800*	*4,800*	*63*	*6,700*	*100,000*	*180*
C/I RSLs			*410*	*2.4*	*190,000*	*2,000*	*800*	*1,500,000**	*1,900*	*41,000*	*800*	*5,100*	*64,000*	*5,100*	*5,100*	*10*	*5,100*	*310,000*	*43*

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

CHHSL = California Human Health Screening Level

RSL = Regional Screening Level

* = Total chromium screening levels not established. The screening levels for chromium III were used.

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

[a] = The screening levels for arsenic exceed the background concentrations of arsenic of 3.5 to 12.0 mg/kg

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 6010/7000 series.

ESL (drinking water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table A-2, December 2013.

ESL (non-potable water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Not Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table B-2, December 2013.

CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties* , Table 1, September 2010.

RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the ESLs and/or projected arsenic background.

Table 6
Organochlorine Pesticides in Soil
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	4,4'-DDD	4,4'-DDT	Heptachlor Epoxide
SB-2	1.5 - 2.0	1/23/2014	<0.005	<0.005	<0.005
SB-2	8.5 - 9.0	1/23/2014	NA	NA	NA
SB-2	14.0 - 14.5	1/23/2014	NA	NA	NA
SB-3	0.5 - 1.0	1/23/2014	<0.005	<0.005	<0.005
SB-3	6.0 - 6.5	1/23/2014	NA	NA	NA
SB-4	0.5 - 1.0	1/24/2014	**0.026**	**0.028**	<0.005
SB-4	7.0 - 7.5	1/24/2014	NA	NA	NA
SB-5	0.5 - 1.0	1/23/2014	<0.005	<0.005	**0.23**
SB-5	6.5 - 7.0	1/23/2014	<0.005	<0.005	<0.005
SB-6	0.5 - 1.0	1/23/2014	<0.005	<0.005	<0.005
SB-6	7.0 - 7.5	1/23/2014	NA	NA	NA
SB-7	0.5 - 1.0	1/24/2014	<0.005	<0.005	<0.005
SB-7	7.0 - 7.5	1/24/2014	NA	NA	NA
SB-8	0.5 - 1.0	1/23/2014	<0.005	<0.005	**0.07**
SB-8	6.0 - 6.5	1/23/2014	<0.005	<0.005	<0.005
SB-9	2.5 - 3.0	1/23/2014	<0.005	<0.005	<0.005
SB-9	6.0 - 6.5	1/23/2014	NA	NA	NA
SB-9	11.5 - 12.0	1/23/2014	NA	NA	NA
SB-10	0.5 - 1.0	1/24/2014	<0.005	<0.005	<0.005
SB-10	6.0 - 6.5	1/24/2014	NA	NA	NA
	C/I Shallow ESLs (drinking water)		*10.0*	*4.0*	*0.014*
	C/I Shallow ESLs (non-potable water)		*10.0*	*4.0*	*0.014*
	C/I CHHSLs		*9.0*	*6.3*	*---*
	C/I RSLs		*7.2*	*7.0*	*0.19*

Legend:
ft bgs = feet below ground surface
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
C/I = Commercial/Industrial
ESL = Environmental Screening Level
CHHSL = California Human Health Screening Level
RSL = Regional Screening Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit
NA = Not analyzed

Notes:
All concentrations reported in milligrams per kilogram (mg/kg).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8081A.
Pesticides not listed were not detected above laboratory reporting limits.
ESL (drinking water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table A-2, December 2013.

ESL (non-potable water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Not Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* , Table B-2, December 2013.

CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties* , Table 1, September 2010.

RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 7
Polychlorinated Biphenyls in Soil
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Aroclor-1254	Aroclor-1260
SB-2	1.5 - 2.0	1/23/2014	<0.05	<0.05
SB-2	8.5 - 9.0	1/23/2014	NA	NA
SB-2	14.0 - 14.5	1/23/2014	NA	NA
SB-3	0.5 - 1.0	1/23/2014	<0.05	<0.05
SB-3	6.0 - 6.5	1/23/2014	NA	NA
SB-4	0.5 - 1.0	1/24/2014	<0.05	<0.05
SB-4	7.0 - 7.5	1/24/2014	NA	NA
SB-5	0.5 - 1.0	1/23/2014	**32**	**8.1**
SB-5	6.5 - 7.0	1/23/2014	<0.05	<0.05
SB-6	0.5 - 1.0	1/23/2014	<0.05	<0.05
SB-6	7.0 - 7.5	1/23/2014	NA	NA
SB-7	0.5 - 1.0	1/24/2014	<0.05	<0.05
SB-7	7.0 - 7.5	1/24/2014	NA	NA
SB-8	0.5 - 1.0	1/23/2014	**11**	**3.1**
SB-8	6.0 - 6.5	1/23/2014	<0.05	<0.05
SB-9	2.5 - 3.0	1/23/2014	**0.094**	**0.054**
SB-9	6.0 - 6.5	1/23/2014	NA	NA
SB-9	11.5 - 12.0	1/23/2014	NA	NA
SB-10	0.5 - 1.0	1/24/2014	<0.05	<0.05
SB-10	6.0 - 6.5	1/24/2014	NA	NA
	C/I Shallow ESLs (drinking water)		*0.74*	*0.74*
	C/I Shallow ESLs (non-potable water)		*0.74*	*0.74*
	C/I CHHSLs		*0.3*	*0.3*
	C/I RSLs		*0.74*	*0.74*

Legend:
ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
CHHSL = California Human Health Screening Level
RSL = Regional Screening Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit
NA = Not analyzed

Notes:
All concentrations reported in milligrams per kilogram (mg/kg).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8082.
PCBs not listed were not detected above laboratory reporting limits.
ESL (drinking water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook* ,
ESL (non-potable water) = Commercial/Industrial Environmental Screening Level for Shallow Soils (≤3 meters bgs) Groundwater Is Not Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board,
CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties* , Table 1, September 2010.
RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 8
Total Petroleum Hydrocarbons and Volatile Organic Compounds in Groundwater
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Interval / Screen Interval (ft bgs)	Date Sampled	TPH-d*	TPH-mo*	TPH-g*	Benzene	Toluene	Ethylbenzene	p/m-Xylenes	o-Xylene	Methyl tert-butyl ether (MTBE)	Naphthalene	1,2,4-Trimethylbenzene	1,3,5--Trimethylbenzene	Isopropylbenzene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene
SB-2	5 - 15	1/24/2014	**19,000 SG,HD**	**480 SG,HD**	**63,000**	**1,800**	**15,000**	**6,800**	**26,000**	**10,000**	<100	**1,400**	**9,900**	**2,900**	**390**	**1,500**	**760**	**150**
SB-2-DUP	5 - 15	1/24/2014	**14,000 SG,HD**	**360 SG,HD**	**14,000**	**1,300**	**3,100**	**1,300**	**3,100**	**1,500**	**18**	<100	**560**	**160**	**63**	**140**	**17**	<10
SB-3	5 - 15	1/24/2014	<50	<250	**120**	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-4	5 - 15	1/27/2014	<50	<250	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-5	7 - 12	1/24/2014	**53 SG,HD**	<250	**140**	**0.54**	**5.7**	**2.7**	**11**	**3.6**	<1.0	<10	**4.0**	**1.2**	<1.0	<1.0	<1.0	<1.0
SB-6	7 - 12	1/24/2014	<50	<250	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-7	5 - 15	1/24/2014	<50	<250	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-8	5 - 15	1/24/2014	<50	<250	<50	<0.50	**4.2**	**1.8**	**4.6**	**1.0**	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-9	5 - 10	1/24/2014	**60,000 SG,HD**	<250	**130,000**	**10,000**	**38,000**	**6,300**	**24,000**	**10,000**	**160**	<1,000	**6,600**	**1,800**	**220**	**810**	**370**	<100
Trip Blank 1	Lab Prepared	1/24/2014	NA	NA	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trip Blank 2	Lab Prepared	1/24/2014	NA	NA	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		Drinking Water ESLs	*100*	*100*	*100*	*1*	*40*	*30*	*20*	*20*	*5*	*6.1*	---	---	---	---	---	---
		Non-Potable Groundwater ESLs	*640*	*640*	*500*	*27*	*130*	*43*	*100*	*100*	*1,800*	*24*	---	---	---	---	---	---
		C/I Groundwater ESLs for Vapor Intrusion	---	---	---	*12*	*34,000*	*130*	*13,000*	*13,000*	*10,000*	*220*	---	---	---	---	---	---
		MCLs	---	---	---	*5*	*1,000*	*700*	*10,000*	*10,000*		---	---	---	---	---	--	---

Legend:
ft bgs = feet below ground surface
TPH-d = Total Petroleum Hydrocarbons as Diesel
TPH-mo = Total Petroleum Hydrocarbons as Motor Oil
TPH-g = Total Petroleum Hydrocarbons as Gasoline
C/I = Commercial/Industrial
ESL = Environmental Screening Level
MCL = Maximum Contaminant Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit
NA = Not Analyzed

Qualifiers:
HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
SG - The sample extract was subjected to Silica Gel treatment prior to analysis.

Notes:
All concentrations reported in micrograms per liter (µg/L).
* = Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8015B Modified (M) with silica gel cleanup.
Samples were analyzed by USEPA Method 8260B.
Drinking Water ESLs = Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook* , Table F-1a, December 2013.
Non-Potable Groundwater ESLs = Commercial/Industrial Environmental Screening Level where Groundwater is not a Current or Potential Drinking Water Resource, San Francisco Bay RWQCB, *ESL Workbook* , Table F-1b, December 2013.
ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook* , Table E-1 - All Sand, December 2013.
MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 9
Semivolatile Organic Compounds in Groundwater
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Interval / Screen Interval (ft bgs)	Date Sampled	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (k) Fluoranthene	Chrysene	Fluoranthene	2-Methylnaphthalene	1-Methylnaphthalene	2-Methylphenol	3/4-Methylphenol	2,4-Dimethylphenol	Naphthalene	Phenanthrene	Pyrene
SB-2	5 - 15	1/24/2014	**120**	**170**	**100**	**98**	**140**	**460**	**390**	**210**	<97	<97	<97	**780**	**520**	**430**
SB-2-DUP	5 - 15	1/24/2014	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	**19**	**11**	**11**	**17**	**16**	**59**	**12**	**18**
SB-3	5 - 15	1/24/2014	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SB-4	5 - 15	1/27/2014	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SB-5	7 - 12	1/24/2014	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
SB-6	7 - 12	1/24/2014	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SB-7	5 - 15	1/24/2014	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
SB-8	5 - 15	1/24/2014	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SB-9	5 - 10	1/24/2014	<49	<49	<49	<49	<49	<49	**180**	**99**	**76**	**130**	<49	**550**	<49	<49
Trip Blank 1	Lab Prepared	1/24/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank 2	Lab Prepared	1/24/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drinking Water ESLs			*0.73*	*0.027*	*0.014*	*0.056*	*0.35*	*8*	*2.1*	----	---	---	*100*	*6.1*	*4.6*	*2*
Non-Potable Groundwater ESLs			*0.73*	*0.027*	*0.014*	*0.4*	*0.35*	*8*	*2.1*	---	---	---	*110*	*24*	*4.6*	*2*
C/I Groundwater ESLs for Vapor Intrusion			---	---	---	---	---	---	---	---	---	---	---	*220*	---	---
MCLs			---	---	*0.2*	---	---	---	---	---	---	---	---	---	---	---

Legend:

ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
MCL = Maximum Contaminant Level
--- = No screening level established
SB-# = Soil Boring Location
< = Analyte not detected at or above the stated laboratory reporting limit
NA = Not Analyzed

Notes:

All concentrations reported in micrograms per liter (µg/L).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8270C.
Drinking Water ESLs = Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook* , Table F-1a, December 2013.
Non-Potable Groundwater ESLs = Commercial/Industrial Environmental Screening Level where Groundwater is not a Current or Potential Drinking Water Resource, San Francisco Bay RWQCB, *ESL Workbook* , Table F-1b, December 2013.
ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook* , Table E-1 - All Sand, December 2013.
MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Table 10
Total Metals in Groundwater
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Interval / Screen Interval (ft bgs)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
SB-2	5 - 15	1/24/2014	<15	**18.3**	**299**	<10	<10	<10	<10	<10	<10	<10	**16.7**	<15	<5	<15	<10	**11.9**	<0.5
SB-2-DUP	5 - 15	1/24/2014	<15	**18.9**	**225**	<10	<10	<10	<10	<10	<10	<10	**15.7**	<15	<5	<15	<10	**12.9**	<0.5
SB-3	5 - 15	1/24/2014	<15	<10	**14.5**	<10	<10	**14.2**	**457**	<10	<10	<10	**983**	<15	**8.95**	<15	<10	**1,260**	<0.5
SB-4	5 - 15	1/27/2014	<15	<10	**36.1**	<10	<10	<10	<10	<10	<10	<10	<10	<15	<5	<15	<10	**21**	<0.5
SB-5	7 - 12	1/24/2014	<15	<10	**159**	<10	<10	<10	<10	<10	<10	**17.1**	<10	<15	<5	<15	<10	**27.1**	<0.5
SB-6	7 - 12	1/24/2014	<15	<10	**156**	<10	<10	<10	<10	<10	<10	<10	**11.7**	<15	<5	<15	<10	**19.6**	<0.5
SB-7	5 - 15	1/24/2014	<15	<10	**64.8**	<10	<10	<10	<10	<10	<10	**13.4**	<10	<15	<5	<15	<10	**11.7**	<0.5
SB-8	5 - 15	1/24/2014	<15	<10	**116**	<10	<10	<10	<10	<10	<10	**24**	**165**	<15	<5	<15	<10	**15.5**	<0.5
SB-9	5 - 10	1/24/2014	<15	**24.8**	**179**	<10	<10	<10	<10	<10	<10	<10	<10	<15	**6.37**	<15	<10	**18.3**	<0.5
Trip Blank 1	Lab Prepared	1/24/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank 2	Lab Prepared	1/24/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Drinking Water ESLs		*6*	*10*	*1,000*	*0.53*	*0.25*	*50*	*3*	*3.1*	*2.5*	*78*	*8.2*	*5*	*0.19*	*2*	*19*	*81*	*0.025*
	Non-Potable Groundwater ESLs		*30*	*36*	*1,000*	*0.53*	*0.25*	*180*	*3*	*3.1*	*2.5*	*240*	*8.2*	*5*	*0.19*	*4*	*19*	*81*	*0.025*
	C/I Groundwater ESLs for Vapor Intrusion		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MCLs		*6*	*10*	*2,000*	*4*	*5*	*100*	---	*1,300*	*15*	---	---	*50*	---	*2*	---	---	*2*

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

MCL = Maximum Contaminant Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

NA = Not Analyzed

Notes:

All concentrations reported in micrograms per liter (µg/L).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 6010/7000 series.

Samples were field filtered.

Drinking Water ESLs = Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook* , Table F-1a, December 2013.

Non-Potable Groundwater ESLs = Commercial/Industrial Environmental Screening Level where Groundwater is not a Current or Potential Drinking Water Resource, San Francisco Bay RWQCB, *ESL Workbook* , Table F-1b, December 2013.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook* , Table E-1 - All Sand, December 2013.

MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the ESLs.

Table 11
Organochlorine Pesticides in Groundwater
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Interval / Screen Interval (ft bgs)	Date Sampled	Pesticides
SB-2	5 - 15	1/24/2014	ND
SB-2-DUP	5 - 15	1/24/2014	ND
SB-3	5 - 15	1/24/2014	ND
SB-4	5 - 15	1/27/2014	ND
SB-5	7 - 12	1/24/2014	ND
SB-6	7 - 12	1/24/2014	ND
SB-7	5 - 15	1/24/2014	ND
SB-8	5 - 15	1/24/2014	ND
SB-9	5 - 10	1/24/2014	ND
Trip Blank 1	Lab Prepared	1/24/2014	NA
Trip Blank 2	Lab Prepared	1/24/2014	NA
		Drinking Water ESLs	---
		Non-Potable Groundwater ESLs	---
		C/I Groundwater ESLs for Vapor Intrusion	---
		MCLs	---

Legend:
ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
MCL = Maximum Contaminant Level
--- = Screening levels varied for Pesticides
SB-# = Soil Boring Location
ND = Pesticides were not detected above laboratory reporting limits
NA = Not Analyzed

Notes:
All concentrations reported in micrograms per liter (µg/L).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8081A.
Drinking Water ESLs = Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook* , Table F-1a, December 2013.

Non-Potable Groundwater ESLs = Commercial/Industrial Environmental Screening Level where Groundwater is not a Current or Potential Drinking Water Resource, San Francisco Bay RWQCB, *ESL Workbook* , Table F-1b, December 2013.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook* , Table E-1 - All Sand, December 2013.

MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs and/or MCLs.

Table 12
Polychlorinated Biphenyls in Groundwater
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Interval / Screen Interval (ft bgs)	Date Sampled	PCBs
SB-2	5 - 15	1/24/2014	ND
SB-2-DUP	5 - 15	1/24/2014	ND
SB-3	5 - 15	1/24/2014	ND
SB-4	5 - 15	1/27/2014	ND
SB-5	7 - 12	1/24/2014	ND
SB-6	7 - 12	1/24/2014	ND
SB-7	5 - 15	1/24/2014	ND
SB-8	5 - 15	1/24/2014	ND
SB-9	5 - 10	1/24/2014	ND
Trip Blank 1	Lab Prepared	1/24/2014	NA
Trip Blank 2	Lab Prepared	1/24/2014	NA
		Drinking Water ESLs	---
		Non-Potable Groundwater ESLs	---
		C/I Groundwater ESLs for Vapor Intrusion	---
		MCLs	---

Legend:
ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
MCL = Maximum Contaminant Level
--- = Screening levels varied for PCBs
SB-# = Soil Boring Location
ND = PCBs not detected above laboratory reporting limits
NA = Not Analyzed

Notes:
All concentrations reported in micrograms per liter (µg/L).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8082.
Drinking Water ESLs = Commercial/Industrial Environmental Screening Level where Groundwater Is Current or Potential Drinking Water Resource, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook* , Table F-1a, December 2013.

Non-Potable Groundwater ESLs = Commercial/Industrial Environmental Screening Level where Groundwater is not a Current or Potential Drinking Water Resource, San Francisco Bay RWQCB, *ESL Workbook* , Table F-1b, December 2013.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook* , Table E-1 - All Sand, December 2013.

MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, November 2013.
Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs and/or MCLs.

Table 13
Volatile Organic Compounds in Soil Vapor
PG&E Port of Oakland
205-209 Brush Street
Oakland, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Acetone	Benzene	2-Butanone	Tetrachloroethene	Trichloroethene	1,1,1-Trichloroethane	Naphthalene
SVP-4	5.5	1/27/2014	**11**	<1.6	<4.6	**4.2**	<2.8	<2.8	<27
SVP-4-DUP	5.5	1/27/2014	**16**	<1.6	<4.5	**4.3**	<2.7	<2.8	<26
SVP-7	5.5	1/27/2014	**25**	**3.3**	**41**	**3,600**	**8.1**	**130**	<26
		C/I ESLs	*140,000,000*	*420*	*22,000,000*	*2,100*	*3,000*	*22,000,000*	*360*
		C/I CHHSLs	*---*	*122*	*---*	*603*	*1,770*	*2,790,000*	*106*
		C/I RSLs	*140,000*	*1.6*	*22,000*	*47*	*3*	*22,000*	*0.36*

Legend:

ft bgs = feet below ground surface
C/I = Commercial/Industrial
ESL = Environmental Screening Level
CHHSL = California Human Health Screening Level
RSL = Regional Screening Level
--- = No screening level established
SVP-# = Soil Vapor Probe Location
< = Analyte not detected at or above the stated laboratory reporting limit

Notes:

All concentrations reported in micrograms per cubic meter ($\mu g/m^3$).
Samples were analyzed by United States Environmental Protection Agency (USEPA) Method TO-15.
ESL = Commercial/Industrial Environmental Screening Level for Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only), San Francisco Bay Regional Water Quality Control Board, *ESL Workbook*, Table E-2, December 2013.
CHHSL = Commercial/Industrial California Human Health Screening Level, Cal/EPA, *Use of CHHSLs in Evaluation of Contaminated Properties*, Table 2, September 2010.

RSL = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Industrial Air Supporting Table, November 2013.

Bold values indicate detections at or above the laboratory reporting limit.
Values shaded gray indicate concentrations detected above the ESLs.

Appendix A
Boring Logs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-2

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 15 feet
Borehole Diameter: 4.0"
Initial Water Level: 6.95 feet bgs
Notes: Hand auger to 5.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 1.0'.
					Gravelly fill.
		117	SM		SILTY SAND (SM): black, fine grained sand, strong hydrocarbon odor. SB-2-1.5-2.0
		12.7	SP		SAND (SP): black to gray, with some silt, fine grained sand, strong hydrocarbon odor.
					SAND (SP): as above.
5		12.4			SAND (SP): black, fine grained, soft, strong hydrocarbon odor. SB-2-5.0-5.5 SAND (SP): gray, soft, strong hydrocarbon odor, wet.
		221	SM		SILTY SAND (SM): gray to light brown, fine grained sand, strong hydrocarbon odor, moist.
		1700			SILTY SAND (SM): light gray, soft, very strong hydrocarbon odor, damp. SB-2-8.5-9.0.
10		380	SP		SAND (SP): light brown to light gray, strong hydrocarbon odor, very moist.
		73	SM		SILTY SAND (SM): gray, crumbly, hydrocarbon odor, slightly moist.
		380			SILTY SAND (SM): as above.
					SILTY SAND (SM): gray to light brown, fine sand, hydrocarbon odor, slightly moist. SB-2-14-14.5
		15.8	SC		SILTY CLAYEY SAND (SC): gray to medium brown, crumbly, slight hydrocarbon odor, slightly moist.
15					Total Depth - 15 feet bgs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-3

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 15 feet
Borehole Diameter: 4.0"
Initial Water Level: 7.26 feet bgs
Notes: Hand auger to 5.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0".
					Gravelly fill. SB-3-0.5-1.0
		0.4	SP		GRAVELLY SAND (SP): light to medium brown, coarse grained, some silt, dry.
		0.9			SAND (SP): dark brown to black, fine gravel, some silt.
		0.4	SP		SAND (SP): as above.
5					SAND (SP): as above.
		0.7	SM		SILTY SAND (SM): dark brown to black, fine grained.
					SB-3-6.0-6.5
			SP		SAND (SP): medium brown, fine grained, wet.
					SAND (SP): medium brown, moist.
		1.7			SAND (SP): as above.
10			ML		SANDY SILT (ML): medium brown, fine sand, some clay, soft, slightly moist.
					SANDY SILT (ML): as above.
			SP		SAND (SP): fine grained, wet.
		0.4	SC		CLAYEY SAND (SC): medium brown, fine grained, slightly moist.
			ML		SANDY SILT (ML): fine grained, hard, slightly moist.
15					Total Depth - 15 feet bgs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-4

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/24/2014
Date Completed: 1/24/2014
Total Depth: 15 feet
Borehole Diameter: 4.0"
Initial Water Level: 8.06 feet bgs
Notes: Hand auger to 8.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0".
		0.0	SP		GRAVELLY SAND (SP): dark brown to black, angular gravel (0.5"), some silt, soft (fill). SB-4-0.5-1.0
		0.0	SP		SAND (SP): medium to dark brown to black, some silt, trace gravel, fine grained sand, slightly moist.
		0.0	SP		SAND (SP): medium to dark brown, fine grained sand, soft, slightly moist.
5		0.0	SP		SAND (SP): as above.
		0.1	SP		SAND (SP): medium brown, fine grained, soft, slightly moist.
			SP		SAND (SP): medium brown, fine grained, soft, moist.
			SP		SB-4-7.0-7.5
		0.0	SP	▽	SAND (SP): light to medium brown, wet.
			SP		SAND (SP): as above.
10		0.1	ML		SANDY SILT (ML): light to medium reddish brown, fine grained sand ,very stiff,.
		0.0	SP		SAND (SP): light to medium brown, with some silt, fine grained sand, slightly moist.
			SP		SAND (SP): medium brown, fine gravel, wet.
			SM		SAND WITH SILT (SM): light to medium brown, fine grained sand, hard, slightly moist.
15					Total Depth - 15 feet bgs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-5

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 12 feet
Borehole Diameter: 4.0"
Initial Water Level: 7.6 feet bgs
Notes: Hand auger to 8.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0"
					Gravelly fill. SB-5-0.5-10
		0.5	SP		SAND (SP): dark brown to black, fine grained sand, some silt, trace gravel.
		0.5	SM		SILTY SAND (SM): very dark brown, fine grained sand, trace angular gravel (0.5"), soft.
		0.3	SP		SAND (SP): very dark brown, fine grained sand, very soft.
		0.4			SAND (SP): as above.
5		0.3			SAND (SP): dark brown, soft, moist.
		0.4			SAND (SP): as above.
		0.5	ML		SANDY SILT (ML): dark brown, very moist. SB-5-6.5-7.0
					SANDY SILT (ML): as above.
		0.0			SANDY SILT (ML): light to medium brown, fine grained sand, wet.
		2.1			SANDY SILT (ML): as above.
10		1.9			SANDY SILT (ML): light to medium brown, fine grained sand, wet.
		1.7	SM		SILTY SAND (SM): light to medium brown, fine grained sand, moist.
					Total Depth - 12 feet bgs
15					

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-6

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 12 feet
Borehole Diameter: 4.0"
Initial Water Level: 7.45 feet bgs
Notes: Hand auger to 8.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0"
					Gravelly fill, brick, ceramics, glass, gravel, sand, some native soil, SB-6-0.5-10
		1.4			SB-6-2.5-3.0
		0.5	SM		SILTY SAND (SM): dark brown, fine grained, soft.
5		0.5	SP		SAND (SP): dark brown, fine grained sand, very soft, moist.
		0.3			SAND (SP): as above.
		0.2			SAND (SP): light brown, fine grained sand, wet. SB-6-7.0-7.5
			SM		SILTY SAND (SM): medium brown.
					[Set groundwater screen at 8.0']
		1.8			SILTY SAND (SM): as above.
10					SILTY SAND (SM): light to medium brown, fine grained sand, soft, wet.
		1.5			SILTY SAND (SM): as above.
					Total Depth - 12 feet bgs
15					

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-7

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/24/2014
Date Completed: 1/24/2014
Total Depth: 15 feet
Borehole Diameter: 4.0"
Initial Water Level: 7.9 feet bgs
Notes: Hand auger to 8.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0"
		0.0			FILL: dark brown, sand, with some silt and gravel, debris (glass), soft, slightly moist. SB-7-0.5-1.0
		0.2	SP		SAND (SP): dark brown, fine grained, soft, slightly moist.
		0.2			SAND (SP): very dark brown, with some silt, crumbly, dry.
		0.1			SAND (SP): as above.
5		0.1			SAND (SP): medium brown, fine gravel, soft, slightly moist.
		0.0			SAND (SP): as above.
		0.0			SAND (SP): medium brown, with traces of black, fine grained sand, very moist. SB-7-7.0-7.5
		0.0			SB-7-7.0-7.5
		0.0	SC		SILTY CLAYEY SAND (SC): light to reddish brown, fine grained sand, slightly moist.
10		0.0	SP		SAND (SP): light to reddish brown, with some silt and clay, slightly moist.
		0.0			SAND (SP): as above.
		0.5			SAND (SP): medium brown, fine grained sand, moist.
		0.0			SAND (SP): as above.
15					SAND (SP): light brown with hint of gray, fine grained sand, very moist.
					Total Depth - 15 feet bgs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-8

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 15 feet
Borehole Diameter: 4.0"
Initial Water Level: 7.18 feet bgs
Notes: Hand auger to 5.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0"
					Gravelly fill. SB-8-0.5-1.0
		8.7	SP		SAND (SP): dark brown, fine grained, soft.
		1.6	ML		SANDY SILT (ML): very dark brown, crumbly, dry.
		1.5			
5		1.3	SP		SAND (SP): dark brown to gray, fine grained sand, slightly moist.
		1.6			SAND (SP): as above. SB-8-6.0-6.5
		1.1	ML		SANDY SILT (ML): with some clay, very soft, moist.
		1.5	SP		SAND (SP): dark brown to black, slightly moist.
10					SAND (SP): medium brown, fine grained sand, moist.
					SAND (SP): medium brown, with some silt, very soft, slightly moist.
		1.2			SAND (SP): medium brown, fine grained sand, moist.
		1.3			SAND (SP): as above.
					SAND (SP): medium brown with traces of black, with some silt and clay, very soft, moist.
		1.1	ML		SANDY SILT (ML): medium brown, fine grained sand, very soft, slightly moist.
15					Total Depth - 15 feet bgs

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-9

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger/Direct Push
Logged By: B. Blosser

Date Started: 1/23/2014
Date Completed: 1/23/2014
Total Depth: 12 feet
Borehole Diameter: 4.0"
Initial Water Level: 6.78 feet bgs
Notes: Hand auger to 8.0'.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 8.0".
					Gravelly fill. SB-9-1.0-1.5
		3.8	SP		GRAVELLY SAND (SP): medium brown, with some silt, crumbly, some black staining, dry.
		18			GRAVELLY SAND (SP): dark gray to black, with some silt, slight staining, slight hydrocarbon odor. SB-9-2.5-3.0
		10.8			GRAVELLY SAND (SP): as above.
5		700	SM		SILTY SAND (SM): black, fine grained, staining, strong hydrocarbon odor.
					SB-9-6.0-6.5
		2044			SILTY SAND (SM): light brown to gray, with hint of blue, very strong hydrocarbon odor, moist.
		1200			SILTY SAND (SM): light brown to gray, fine grained, strong hydrocarbon odor, wet.
10		110	SP		SAND (SP): gray to medium brown, with some silt, wet.
			ML		SANDY CLAYEY SILT (ML): medium brown to gray, fine grained sand, moist.
		228			CLAYEY SILT (ML): medium brown, with sand. SB-9-11.5-12.0
					Total Depth - 12 feet bgs
15					

BOREHOLE TO 15 WC2 - - 2/7/14 11:43 - G:\GINT BORING LOGS\PORT OF OAKLAND - 0231462\PORT OF OAKLAND.GPJ

ERM
1277 Treat Blvd., Suite 500
Walnut Creek, CA 94597
Phone: (925) 946-0455
Fax: (925) 946-9968

LOG OF BOREHOLE: SB-10

Project Number: 0231462.03
Project Name: Port of Oakland
Client Name: Port of Oakland
Location: Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hand Auger
Logged By: B. Blosser

Date Started: 1/24/2014
Date Completed: 1/24/2014
Total Depth: 6.5 feet
Borehole Diameter: 4.0"
Initial Water Level: NA
Notes:

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					Concrete, 6.0"
					Gravelly fill. SB-10-0.5-1.0
		7.7	ML		SANDY SILT (ML): black, fine grained sand, staining, strong hydrocarbon odor, dry.
		0.1 0.0	SP		SAND (SP): medium brown, fine grained sand, slightly moist.
		0.0	CL		SANDY SILTY CLAY (CL): black, fine grained sand, soft, staining, moist.
5		0.1	SP		SAND (SP): black, with some silt and clay, fine grained sand, slightly moist. SAND SP): as above. SB-10-6.0-6.5
					Total Depth - 6.5 feet bgs
10					
15					

Appendix B
Laboratory Reports

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1415

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM - West

Client Project Name: Port of Oakland Phase II

Attention: Bailey Blosser
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Approved for release on 02/03/2014 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Port of Oakland Phase II
Work Order Number: 14-01-1415

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1415 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/24/14. They were assigned to Work Order 14-01-1415.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Return to Contents

Calscience Environmental Laboratories, Inc.

Sample Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
PO Number:
Date/Time Received: 01/24/14 10:30
Number of Containers: 16

Attn: Bailey Blosser

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SB-6-0.5-1.0	14-01-1415-1	01/23/14 08:40	1	Solid
SB-6-2.5-3.0	14-01-1415-2	01/23/14 08:51	1	Solid
SB-6-7.0-7.5	14-01-1415-3	01/23/14 09:07	1	Solid
SB-5-0.5-1.0	14-01-1415-4	01/23/14 10:00	1	Solid
SB-5-6.5-7.0	14-01-1415-5	01/23/14 10:18	1	Solid
SB-2-1.0-1.5	14-01-1415-6	01/23/14 10:48	1	Solid
SB-2-1.5-2.0	14-01-1415-7	01/23/14 10:55	1	Solid
SB-2-5.0-5.5	14-01-1415-8	01/23/14 11:20	1	Solid
SB-2-8.5-9.0	14-01-1415-9	01/23/14 11:35	1	Solid
SB-2-14.0-14.5	14-01-1415-10	01/23/14 12:24	1	Solid
SB-9-1.0-1.5	14-01-1415-11	01/23/14 13:10	1	Solid
SB-9-2.5-3.0	14-01-1415-12	01/23/14 13:20	1	Solid
SB-9-6.0-6.5	14-01-1415-13	01/23/14 13:30	1	Solid
SB-9-11.5-12.0	14-01-1415-14	01/23/14 13:45	1	Solid
SB-8-0.5-1.0	14-01-1415-15	01/23/14 14:22	1	Solid
SB-8-6.0-6.5	14-01-1415-16	01/23/14 14:33	1	Solid

Return to Contents

Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-6-0.5-1.0 (14-01-1415-1)						
Arsenic	4.69		0.758	mg/kg	EPA 6010B	EPA 3050B
Barium	87.1		0.505	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.657		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	30.7		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.34		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	37.3		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	249		0.505	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	1.10		0.253	mg/kg	EPA 6010B	EPA 3050B
Nickel	22.3		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	21.1		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	447		1.01	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.876		0.0795	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	34	HD,SG	24	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	15	HD,SG	4.9	mg/kg	EPA 8015B (M)	EPA 3550B
SB-6-7.0-7.5 (14-01-1415-3)						
Arsenic	1.37		0.725	mg/kg	EPA 6010B	EPA 3050B
Barium	42.8		0.483	mg/kg	EPA 6010B	EPA 3050B
Chromium	37.3		0.242	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.52		0.242	mg/kg	EPA 6010B	EPA 3050B
Copper	6.15		0.483	mg/kg	EPA 6010B	EPA 3050B
Lead	1.77		0.483	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.607		0.242	mg/kg	EPA 6010B	EPA 3050B
Nickel	22.6		0.242	mg/kg	EPA 6010B	EPA 3050B
Vanadium	23.1		0.242	mg/kg	EPA 6010B	EPA 3050B
Zinc	15.5		0.966	mg/kg	EPA 6010B	EPA 3050B

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-5-0.5-1.0 (14-01-1415-4)						
Antimony	33.5		0.773	mg/kg	EPA 6010B	EPA 3050B
Arsenic	15.3		0.773	mg/kg	EPA 6010B	EPA 3050B
Barium	921		0.515	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.267		0.258	mg/kg	EPA 6010B	EPA 3050B
Cadmium	4.89		0.515	mg/kg	EPA 6010B	EPA 3050B
Chromium	50.9		0.258	mg/kg	EPA 6010B	EPA 3050B
Cobalt	13.6		0.258	mg/kg	EPA 6010B	EPA 3050B
Copper	1840		0.515	mg/kg	EPA 6010B	EPA 3050B
Lead	4760		0.515	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	50.1		0.258	mg/kg	EPA 6010B	EPA 3050B
Nickel	73.9		0.258	mg/kg	EPA 6010B	EPA 3050B
Silver	0.448		0.258	mg/kg	EPA 6010B	EPA 3050B
Vanadium	28.5		0.258	mg/kg	EPA 6010B	EPA 3050B
Zinc	3420		1.03	mg/kg	EPA 6010B	EPA 3050B
Mercury	7.14		0.834	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	680	HD,SG	120	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	390	HD,SG	25	mg/kg	EPA 8015B (M)	EPA 3550B
Heptachlor Epoxide	230		50	ug/kg	EPA 8081A	EPA 3545
Aroclor-1254	32000		5000	ug/kg	EPA 8082	EPA 3545
Aroclor-1260	8100		5000	ug/kg	EPA 8082	EPA 3545
SB-5-6.5-7.0 (14-01-1415-5)						
Arsenic	2.03		0.758	mg/kg	EPA 6010B	EPA 3050B
Barium	58.0		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	36.1		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	9.11		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	10.3		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	5.17		0.505	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.361		0.253	mg/kg	EPA 6010B	EPA 3050B
Nickel	28.1		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	27.7		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	20.5		1.01	mg/kg	EPA 6010B	EPA 3050B

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-2-1.5-2.0 (14-01-1415-7)						
Arsenic	3.43		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	120		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.312		0.255	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.661		0.510	mg/kg	EPA 6010B	EPA 3050B
Chromium	22.9		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.99		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	55.8		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	312		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.400		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	23.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.0		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	339		1.02	mg/kg	EPA 6010B	EPA 3050B
Mercury	4.50		0.834	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	370	HD,SG	120	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	170	HD,SG	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Gasoline	3.7	HD	0.50	mg/kg	EPA 8015B (M)	EPA 5030C
Isopropylbenzene	5.2		4.9	ug/kg	EPA 8260B	EPA 5030C
n-Propylbenzene	15		4.9	ug/kg	EPA 8260B	EPA 5030C

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-2-8.5-9.0 (14-01-1415-9)						
Arsenic	0.775		0.732	mg/kg	EPA 6010B	EPA 3050B
Barium	59.7		0.488	mg/kg	EPA 6010B	EPA 3050B
Chromium	43.6		0.244	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.06		0.244	mg/kg	EPA 6010B	EPA 3050B
Copper	8.47		0.488	mg/kg	EPA 6010B	EPA 3050B
Lead	2.48		0.488	mg/kg	EPA 6010B	EPA 3050B
Nickel	33.5		0.244	mg/kg	EPA 6010B	EPA 3050B
Vanadium	27.1		0.244	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.2		0.976	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	65	HD,SG	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	80	HD,SG	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Gasoline	2300		500	mg/kg	EPA 8015B (M)	EPA 5030C
n-Butylbenzene	8100		5000	ug/kg	EPA 8260B	EPA 5030C
Ethylbenzene	54000		5000	ug/kg	EPA 8260B	EPA 5030C
n-Propylbenzene	17000		5000	ug/kg	EPA 8260B	EPA 5030C
Toluene	100000		5000	ug/kg	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	99000		5000	ug/kg	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	32000		5000	ug/kg	EPA 8260B	EPA 5030C
p/m-Xylene	220000		5000	ug/kg	EPA 8260B	EPA 5030C
o-Xylene	81000		5000	ug/kg	EPA 8260B	EPA 5030C
Acenaphthene	1.7		0.50	mg/kg	EPA 8270C	EPA 3545
Anthracene	3.6		0.50	mg/kg	EPA 8270C	EPA 3545
Benzo (a) Anthracene	5.6		0.50	mg/kg	EPA 8270C	EPA 3545
Benzo (a) Pyrene	3.0		0.50	mg/kg	EPA 8270C	EPA 3545
Benzo (b) Fluoranthene	2.2		0.50	mg/kg	EPA 8270C	EPA 3545
Benzo (g,h,i) Perylene	0.79		0.50	mg/kg	EPA 8270C	EPA 3545
Benzo (k) Fluoranthene	2.9		0.50	mg/kg	EPA 8270C	EPA 3545
Chrysene	4.7		0.50	mg/kg	EPA 8270C	EPA 3545
Dibenzofuran	0.92		0.50	mg/kg	EPA 8270C	EPA 3545
Fluoranthene	12		0.50	mg/kg	EPA 8270C	EPA 3545
Fluorene	1.9		0.50	mg/kg	EPA 8270C	EPA 3545
Indeno (1,2,3-c,d) Pyrene	0.94		0.50	mg/kg	EPA 8270C	EPA 3545
2-Methylnaphthalene	7.3		0.50	mg/kg	EPA 8270C	EPA 3545
1-Methylnaphthalene	3.9		0.50	mg/kg	EPA 8270C	EPA 3545
Naphthalene	8.4		0.50	mg/kg	EPA 8270C	EPA 3545
Phenanthrene	13		0.50	mg/kg	EPA 8270C	EPA 3545
Pyrene	13		0.50	mg/kg	EPA 8270C	EPA 3545

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-2-14.0-14.5 (14-01-1415-10)						
Arsenic	2.47		0.773	mg/kg	EPA 6010B	EPA 3050B
Barium	63.8		0.515	mg/kg	EPA 6010B	EPA 3050B
Chromium	39.3		0.258	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.95		0.258	mg/kg	EPA 6010B	EPA 3050B
Copper	8.90		0.515	mg/kg	EPA 6010B	EPA 3050B
Lead	1.94		0.515	mg/kg	EPA 6010B	EPA 3050B
Nickel	33.1		0.258	mg/kg	EPA 6010B	EPA 3050B
Vanadium	27.6		0.258	mg/kg	EPA 6010B	EPA 3050B
Zinc	21.2		1.03	mg/kg	EPA 6010B	EPA 3050B
SB-9-2.5-3.0 (14-01-1415-12)						
Arsenic	5.23		0.743	mg/kg	EPA 6010B	EPA 3050B
Barium	219		0.495	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.518		0.495	mg/kg	EPA 6010B	EPA 3050B
Chromium	35.3		0.248	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.16		0.248	mg/kg	EPA 6010B	EPA 3050B
Copper	130		0.495	mg/kg	EPA 6010B	EPA 3050B
Lead	287		0.495	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	15.3		0.248	mg/kg	EPA 6010B	EPA 3050B
Nickel	44.4		0.248	mg/kg	EPA 6010B	EPA 3050B
Silver	0.776		0.248	mg/kg	EPA 6010B	EPA 3050B
Vanadium	31.3		0.248	mg/kg	EPA 6010B	EPA 3050B
Zinc	256		0.990	mg/kg	EPA 6010B	EPA 3050B
TPH as Diesel	13	HD,SG	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Gasoline	2.5	HD	0.50	mg/kg	EPA 8015B (M)	EPA 5030C
Aroclor-1254	94		50	ug/kg	EPA 8082	EPA 3545
Aroclor-1260	54		50	ug/kg	EPA 8082	EPA 3545
n-Propylbenzene	8.2		5.0	ug/kg	EPA 8260B	EPA 5030C

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-9-6.0-6.5 (14-01-1415-13)						
Arsenic	1.25		0.714	mg/kg	EPA 6010B	EPA 3050B
Barium	51.0		0.476	mg/kg	EPA 6010B	EPA 3050B
Chromium	31.3		0.238	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.53		0.238	mg/kg	EPA 6010B	EPA 3050B
Copper	7.99		0.476	mg/kg	EPA 6010B	EPA 3050B
Lead	2.53		0.476	mg/kg	EPA 6010B	EPA 3050B
Nickel	22.2		0.238	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.3		0.238	mg/kg	EPA 6010B	EPA 3050B
Zinc	17.3		0.952	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	67	HD,SG	24	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	560	HD,SG	4.9	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Gasoline	1600		100	mg/kg	EPA 8015B (M)	EPA 5030C
Benzene	1100		1000	ug/kg	EPA 8260B	EPA 5030C
n-Butylbenzene	17000		1000	ug/kg	EPA 8260B	EPA 5030C
sec-Butylbenzene	5500		1000	ug/kg	EPA 8260B	EPA 5030C
Ethylbenzene	21000		1000	ug/kg	EPA 8260B	EPA 5030C
Isopropylbenzene	8800		1000	ug/kg	EPA 8260B	EPA 5030C
Naphthalene	24000		10000	ug/kg	EPA 8260B	EPA 5030C
n-Propylbenzene	36000		1000	ug/kg	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	2500		1000	ug/kg	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	1000		1000	ug/kg	EPA 8260B	EPA 5030C
p/m-Xylene	1500		1000	ug/kg	EPA 8260B	EPA 5030C
2-Methylnaphthalene	22		5.0	mg/kg	EPA 8270C	EPA 3545
1-Methylnaphthalene	12		5.0	mg/kg	EPA 8270C	EPA 3545
Naphthalene	18		5.0	mg/kg	EPA 8270C	EPA 3545

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-9-11.5-12.0 (14-01-1415-14)						
Arsenic	1.03		0.754	mg/kg	EPA 6010B	EPA 3050B
Barium	74.7		0.503	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.273		0.251	mg/kg	EPA 6010B	EPA 3050B
Chromium	73.4		0.251	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.54		0.251	mg/kg	EPA 6010B	EPA 3050B
Copper	11.8		0.503	mg/kg	EPA 6010B	EPA 3050B
Lead	2.62		0.503	mg/kg	EPA 6010B	EPA 3050B
Nickel	44.9		0.251	mg/kg	EPA 6010B	EPA 3050B
Vanadium	36.1		0.251	mg/kg	EPA 6010B	EPA 3050B
Zinc	24.8		1.01	mg/kg	EPA 6010B	EPA 3050B
TPH as Gasoline	66		20	mg/kg	EPA 8015B (M)	EPA 5030C
Benzene	3100		510	ug/kg	EPA 8260B	EPA 5030C
Ethylbenzene	1900		510	ug/kg	EPA 8260B	EPA 5030C
Toluene	3500		510	ug/kg	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	2800		510	ug/kg	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	850		510	ug/kg	EPA 8260B	EPA 5030C
p/m-Xylene	6800		510	ug/kg	EPA 8260B	EPA 5030C
o-Xylene	2100		510	ug/kg	EPA 8260B	EPA 5030C

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1415
Project Name: Port of Oakland Phase II
Received: 01/24/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-8-0.5-1.0 (14-01-1415-15)						
Antimony	12.0		0.732	mg/kg	EPA 6010B	EPA 3050B
Arsenic	12.7		0.732	mg/kg	EPA 6010B	EPA 3050B
Barium	513		0.488	mg/kg	EPA 6010B	EPA 3050B
Cadmium	7.19		0.488	mg/kg	EPA 6010B	EPA 3050B
Chromium	44.9		0.244	mg/kg	EPA 6010B	EPA 3050B
Cobalt	8.09		0.244	mg/kg	EPA 6010B	EPA 3050B
Copper	3890		0.488	mg/kg	EPA 6010B	EPA 3050B
Lead	2380		0.488	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	6.22		0.244	mg/kg	EPA 6010B	EPA 3050B
Nickel	47.2		0.244	mg/kg	EPA 6010B	EPA 3050B
Silver	1.31		0.244	mg/kg	EPA 6010B	EPA 3050B
Vanadium	26.4		0.244	mg/kg	EPA 6010B	EPA 3050B
Zinc	2800		0.976	mg/kg	EPA 6010B	EPA 3050B
Mercury	8.10		0.877	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	10000	HD,SG	1200	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	9900	HD,SG	50	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Gasoline	1.6	HD	0.50	mg/kg	EPA 8015B (M)	EPA 5030C
Heptachlor Epoxide	70		50	ug/kg	EPA 8081A	EPA 3545
Aroclor-1254	11000		2500	ug/kg	EPA 8082	EPA 3545
Aroclor-1260	3100		500	ug/kg	EPA 8082	EPA 3545
SB-8-6.0-6.5 (14-01-1415-16)						
Arsenic	1.45		0.735	mg/kg	EPA 6010B	EPA 3050B
Barium	57.9		0.490	mg/kg	EPA 6010B	EPA 3050B
Chromium	32.1		0.245	mg/kg	EPA 6010B	EPA 3050B
Cobalt	11.0		0.245	mg/kg	EPA 6010B	EPA 3050B
Copper	11.1		0.490	mg/kg	EPA 6010B	EPA 3050B
Lead	3.88		0.490	mg/kg	EPA 6010B	EPA 3050B
Nickel	27.0		0.245	mg/kg	EPA 6010B	EPA 3050B
Vanadium	25.4		0.245	mg/kg	EPA 6010B	EPA 3050B
Zinc	20.6		0.980	mg/kg	EPA 6010B	EPA 3050B

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 16:50**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	34	24	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	136	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:07**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	24	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:23**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	680	120	5	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	143	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:40**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	24	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	137	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:57**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	370	120	5	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	144	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 18:14**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	65	25	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	137	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:04**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	132	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:21**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	131	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:38**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	67	24	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	138	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:55**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	135	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 46**	**01/27/14**	**01/29/14 19:42**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	10000	1200	50	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	127	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 20:29**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	135	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-775**	**N/A**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 13:37**	**140127B04A**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 16:50**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	15	4.9	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	137	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:07**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	4.9	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	140	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:23**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	390	25	5	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	143	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:40**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	4.9	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	137	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 17:57**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	170	25	5	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	144	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 18:14**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	80	5.0	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	137	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:04**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	132	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:21**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	13	5.0	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	131	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:38**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	560	4.9	1	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	138	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 19:55**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	135	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 20:13**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	9900	50	10	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	145	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 20:29**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	136	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-947**	**N/A**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 13:37**	**140127B03A**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 14:46**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	83	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 15:19**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	82	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 15:52**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	79	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 16:25**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	71	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 21:55**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	3.7	0.50	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	101	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 23:33**	**140125B02**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	2300	500	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	81	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 16:58**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	86	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 21:22**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	2.5	0.50	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	94	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**GC 22**	**01/24/14**	**01/26/14 00:06**	**140125B02**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	1600	100	200	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	111	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 23:01**	**140125B02**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	66	20	40	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	82	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 22**	**01/24/14**	**01/25/14 17:31**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	1.6	0.50	1	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	76	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC 4**	**01/28/14**	**01/28/14 20:01**	**140128B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	70	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-571-1418**	**N/A**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 10:23**	**140125B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	83	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-571-1419**	**N/A**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 11:28**	**140125B02**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	4.0	8	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	76	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-571-1422**	**N/A**	**Solid**	**GC 4**	**01/28/14**	**01/28/14 12:56**	**140128B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	82	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:40**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	4.69	0.758	1.01	
Barium	87.1	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	0.657	0.505	1.01	
Chromium	30.7	0.253	1.01	
Cobalt	4.34	0.253	1.01	
Copper	37.3	0.505	1.01	
Lead	249	0.505	1.01	
Molybdenum	1.10	0.253	1.01	
Nickel	22.3	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	21.1	0.253	1.01	
Zinc	447	1.01	1.01	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:41**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.725	0.966	
Arsenic	1.37	0.725	0.966	
Barium	42.8	0.483	0.966	
Beryllium	ND	0.242	0.966	
Cadmium	ND	0.483	0.966	
Chromium	37.3	0.242	0.966	
Cobalt	3.52	0.242	0.966	
Copper	6.15	0.483	0.966	
Lead	1.77	0.483	0.966	
Molybdenum	0.607	0.242	0.966	
Nickel	22.6	0.242	0.966	
Selenium	ND	0.725	0.966	
Silver	ND	0.242	0.966	
Thallium	ND	0.725	0.966	
Vanadium	23.1	0.242	0.966	
Zinc	15.5	0.966	0.966	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:43**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	33.5	0.773	1.03	
Arsenic	15.3	0.773	1.03	
Barium	921	0.515	1.03	
Beryllium	0.267	0.258	1.03	
Cadmium	4.89	0.515	1.03	
Chromium	50.9	0.258	1.03	
Cobalt	13.6	0.258	1.03	
Copper	1840	0.515	1.03	
Lead	4760	0.515	1.03	
Molybdenum	50.1	0.258	1.03	
Nickel	73.9	0.258	1.03	
Selenium	ND	0.773	1.03	
Silver	0.448	0.258	1.03	
Thallium	ND	0.773	1.03	
Vanadium	28.5	0.258	1.03	
Zinc	3420	1.03	1.03	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:44**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	2.03	0.758	1.01	
Barium	58.0	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	36.1	0.253	1.01	
Cobalt	9.11	0.253	1.01	
Copper	10.3	0.505	1.01	
Lead	5.17	0.505	1.01	
Molybdenum	0.361	0.253	1.01	
Nickel	28.1	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	27.7	0.253	1.01	
Zinc	20.5	1.01	1.01	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:49**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	3.43	0.765	1.02	
Barium	120	0.510	1.02	
Beryllium	0.312	0.255	1.02	
Cadmium	0.661	0.510	1.02	
Chromium	22.9	0.255	1.02	
Cobalt	5.99	0.255	1.02	
Copper	55.8	0.510	1.02	
Lead	312	0.510	1.02	
Molybdenum	0.400	0.255	1.02	
Nickel	23.1	0.255	1.02	
Selenium	ND	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	20.0	0.255	1.02	
Zinc	339	1.02	1.02	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:50**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.732	0.976	
Arsenic	0.775	0.732	0.976	
Barium	59.7	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	ND	0.488	0.976	
Chromium	43.6	0.244	0.976	
Cobalt	7.06	0.244	0.976	
Copper	8.47	0.488	0.976	
Lead	2.48	0.488	0.976	
Molybdenum	ND	0.244	0.976	
Nickel	33.5	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	ND	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	27.1	0.244	0.976	
Zinc	22.2	0.976	0.976	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:51**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.773	1.03	
Arsenic	2.47	0.773	1.03	
Barium	63.8	0.515	1.03	
Beryllium	ND	0.258	1.03	
Cadmium	ND	0.515	1.03	
Chromium	39.3	0.258	1.03	
Cobalt	7.95	0.258	1.03	
Copper	8.90	0.515	1.03	
Lead	1.94	0.515	1.03	
Molybdenum	ND	0.258	1.03	
Nickel	33.1	0.258	1.03	
Selenium	ND	0.773	1.03	
Silver	ND	0.258	1.03	
Thallium	ND	0.773	1.03	
Vanadium	27.6	0.258	1.03	
Zinc	21.2	1.03	1.03	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:52**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.99	
Arsenic	5.23	0.743	0.99	
Barium	219	0.495	0.99	
Beryllium	ND	0.248	0.99	
Cadmium	0.518	0.495	0.99	
Chromium	35.3	0.248	0.99	
Cobalt	7.16	0.248	0.99	
Copper	130	0.495	0.99	
Lead	287	0.495	0.99	
Molybdenum	15.3	0.248	0.99	
Nickel	44.4	0.248	0.99	
Selenium	ND	0.743	0.99	
Silver	0.776	0.248	0.99	
Thallium	ND	0.743	0.99	
Vanadium	31.3	0.248	0.99	
Zinc	256	0.990	0.99	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:53**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.714	0.952	
Arsenic	1.25	0.714	0.952	
Barium	51.0	0.476	0.952	
Beryllium	ND	0.238	0.952	
Cadmium	ND	0.476	0.952	
Chromium	31.3	0.238	0.952	
Cobalt	5.53	0.238	0.952	
Copper	7.99	0.476	0.952	
Lead	2.53	0.476	0.952	
Molybdenum	ND	0.238	0.952	
Nickel	22.2	0.238	0.952	
Selenium	ND	0.714	0.952	
Silver	ND	0.238	0.952	
Thallium	ND	0.714	0.952	
Vanadium	20.3	0.238	0.952	
Zinc	17.3	0.952	0.952	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:54**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.754	1.01	
Arsenic	1.03	0.754	1.01	
Barium	74.7	0.503	1.01	
Beryllium	0.273	0.251	1.01	
Cadmium	ND	0.503	1.01	
Chromium	73.4	0.251	1.01	
Cobalt	7.54	0.251	1.01	
Copper	11.8	0.503	1.01	
Lead	2.62	0.503	1.01	
Molybdenum	ND	0.251	1.01	
Nickel	44.9	0.251	1.01	
Selenium	ND	0.754	1.01	
Silver	ND	0.251	1.01	
Thallium	ND	0.754	1.01	
Vanadium	36.1	0.251	1.01	
Zinc	24.8	1.01	1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:55**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	12.0	0.732	0.976	
Arsenic	12.7	0.732	0.976	
Barium	513	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	7.19	0.488	0.976	
Chromium	44.9	0.244	0.976	
Cobalt	8.09	0.244	0.976	
Copper	3890	0.488	0.976	
Lead	2380	0.488	0.976	
Molybdenum	6.22	0.244	0.976	
Nickel	47.2	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	1.31	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	26.4	0.244	0.976	
Zinc	2800	0.976	0.976	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 12:57**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.735	0.98	
Arsenic	1.45	0.735	0.98	
Barium	57.9	0.490	0.98	
Beryllium	ND	0.245	0.98	
Cadmium	ND	0.490	0.98	
Chromium	32.1	0.245	0.98	
Cobalt	11.0	0.245	0.98	
Copper	11.1	0.490	0.98	
Lead	3.88	0.490	0.98	
Molybdenum	ND	0.245	0.98	
Nickel	27.0	0.245	0.98	
Selenium	ND	0.735	0.98	
Silver	ND	0.245	0.98	
Thallium	ND	0.735	0.98	
Vanadium	25.4	0.245	0.98	
Zinc	20.6	0.980	0.98	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-17953**	**N/A**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 16:50**	**140127L04**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	ND	0.750	1	
Barium	ND	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	ND	0.250	1	
Cobalt	ND	0.250	1	
Copper	ND	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	ND	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	ND	0.250	1	
Zinc	ND	1.00	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:02**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.876	0.0795	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:04**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**Mercury**	**01/27/14**	**01/28/14 12:15**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	7.14	0.834	9.98	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:09**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0805	0.996	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**Mercury**	**01/27/14**	**01/28/14 12:21**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	4.50	0.834	9.98	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:13**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0845	0.992	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:20**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	0.998	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:22**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0875	0.998	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:24**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:26**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0845	0.992	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**Mercury**	**01/27/14**	**01/28/14 12:24**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	8.10	0.877	10.3	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 20:31**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-007-9995**	**N/A**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 18:34**	**140127L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC 44**	**01/24/14**	**01/29/14 16:10**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	104	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 44**	**01/24/14**	**01/29/14 16:24**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	160	24-168	
2,4,5,6-Tetrachloro-m-Xylene	98	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 44**	**01/24/14**	**01/30/14 14:29**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Heptachlor Epoxide	230	50	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	117	24-168	
2,4,5,6-Tetrachloro-m-Xylene	124	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC 44**	**01/24/14**	**01/29/14 17:56**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	90	24-168	
2,4,5,6-Tetrachloro-m-Xylene	88	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC 44**	**01/24/14**	**01/29/14 18:10**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	74	24-168	
2,4,5,6-Tetrachloro-m-Xylene	89	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 44**	**01/24/14**	**01/29/14 17:07**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	125	24-168	
2,4,5,6-Tetrachloro-m-Xylene	93	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 44**	**01/24/14**	**01/30/14 14:43**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Heptachlor Epoxide	70	50	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	109	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-537-1602**	**N/A**	**Solid**	**GC 44**	**01/24/14**	**01/24/14 14:32**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	88	24-168	
2,4,5,6-Tetrachloro-m-Xylene	95	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 14:58**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	114	24-168	
2,4,5,6-Tetrachloro-m-Xylene	112	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 17:03**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	5000	100	
Aroclor-1221	ND	5000	100	
Aroclor-1232	ND	5000	100	
Aroclor-1242	ND	5000	100	
Aroclor-1248	ND	5000	100	
Aroclor-1254	32000	5000	100	
Aroclor-1260	8100	5000	100	
Aroclor-1262	ND	5000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	122	24-168	
2,4,5,6-Tetrachloro-m-Xylene	111	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 16:09**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	106	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 16:27**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	94	50	1	
Aroclor-1260	54	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	24-168	
2,4,5,6-Tetrachloro-m-Xylene	104	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 15:51**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	500	10	
Aroclor-1221	ND	500	10	
Aroclor-1232	ND	500	10	
Aroclor-1242	ND	500	10	
Aroclor-1248	ND	500	10	
Aroclor-1260	3100	500	10	
Aroclor-1262	ND	500	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	108	24-168	
2,4,5,6-Tetrachloro-m-Xylene	89	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC 58**	**01/24/14**	**01/31/14 17:56**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1254	11000	2500	50.1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	122	24-168	
2,4,5,6-Tetrachloro-m-Xylene	86	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-2460**	**N/A**	**Solid**	**GC 58**	**01/24/14**	**01/28/14 11:31**	**140124L19A**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	24-168	
2,4,5,6-Tetrachloro-m-Xylene	109	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 22:30**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	92	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 3 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	96	25-120	
Nitrobenzene-d5	86	33-123	
p-Terphenyl-d14	94	27-159	
Phenol-d6	88	26-122	
2,4,6-Tribromophenol	106	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 20:01**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	84	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 6 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	88	25-120	
Nitrobenzene-d5	90	33-123	
p-Terphenyl-d14	98	27-159	
Phenol-d6	86	26-122	
2,4,6-Tribromophenol	105	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 22:49**	**140124L06**

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	5.0	10	
Acenaphthylene	ND	5.0	10	
Aniline	ND	5.0	10	
Anthracene	ND	5.0	10	
Azobenzene	ND	5.0	10	
Benzidine	ND	100	10	
Benzo (a) Anthracene	ND	5.0	10	
Benzo (a) Pyrene	ND	5.0	10	
Benzo (b) Fluoranthene	ND	5.0	10	
Benzo (g,h,i) Perylene	ND	5.0	10	
Benzo (k) Fluoranthene	ND	5.0	10	
Benzoic Acid	ND	25	10	
Benzyl Alcohol	ND	5.0	10	
Bis(2-Chloroethoxy) Methane	ND	5.0	10	
Bis(2-Chloroethyl) Ether	ND	25	10	
Bis(2-Chloroisopropyl) Ether	ND	5.0	10	
Bis(2-Ethylhexyl) Phthalate	ND	5.0	10	
4-Bromophenyl-Phenyl Ether	ND	5.0	10	
Butyl Benzyl Phthalate	ND	5.0	10	
4-Chloro-3-Methylphenol	ND	5.0	10	
4-Chloroaniline	ND	5.0	10	
2-Chloronaphthalene	ND	5.0	10	
2-Chlorophenol	ND	5.0	10	
4-Chlorophenyl-Phenyl Ether	ND	5.0	10	
Chrysene	ND	5.0	10	
Di-n-Butyl Phthalate	ND	5.0	10	
Di-n-Octyl Phthalate	ND	5.0	10	
Dibenz (a,h) Anthracene	ND	5.0	10	
Dibenzofuran	ND	5.0	10	
1,2-Dichlorobenzene	ND	5.0	10	
1,3-Dichlorobenzene	ND	5.0	10	
1,4-Dichlorobenzene	ND	5.0	10	
3,3'-Dichlorobenzidine	ND	100	10	
2,4-Dichlorophenol	ND	5.0	10	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Diethyl Phthalate	ND	5.0	10	
Dimethyl Phthalate	ND	5.0	10	
2,4-Dimethylphenol	ND	5.0	10	
4,6-Dinitro-2-Methylphenol	ND	25	10	
2,4-Dinitrophenol	ND	25	10	
2,4-Dinitrotoluene	ND	5.0	10	
2,6-Dinitrotoluene	ND	5.0	10	
Fluoranthene	ND	5.0	10	
Fluorene	ND	5.0	10	
Hexachloro-1,3-Butadiene	ND	5.0	10	
Hexachlorobenzene	ND	5.0	10	
Hexachlorocyclopentadiene	ND	25	10	
Hexachloroethane	ND	5.0	10	
Indeno (1,2,3-c,d) Pyrene	ND	5.0	10	
Isophorone	ND	5.0	10	
2-Methylnaphthalene	ND	5.0	10	
1-Methylnaphthalene	ND	5.0	10	
2-Methylphenol	ND	5.0	10	
3/4-Methylphenol	ND	5.0	10	
N-Nitroso-di-n-propylamine	ND	5.0	10	
N-Nitrosodimethylamine	ND	5.0	10	
N-Nitrosodiphenylamine	ND	5.0	10	
Naphthalene	ND	5.0	10	
4-Nitroaniline	ND	5.0	10	
3-Nitroaniline	ND	5.0	10	
2-Nitroaniline	ND	5.0	10	
Nitrobenzene	ND	25	10	
4-Nitrophenol	ND	5.0	10	
2-Nitrophenol	ND	5.0	10	
Pentachlorophenol	ND	25	10	
Phenanthrene	ND	5.0	10	
Phenol	ND	5.0	10	
Pyrene	ND	5.0	10	
Pyridine	ND	5.0	10	
1,2,4-Trichlorobenzene	ND	5.0	10	
2,4,6-Trichlorophenol	ND	5.0	10	
2,4,5-Trichlorophenol	ND	5.0	10	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 9 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	96	27-120	
2-Fluorophenol	88	25-120	
Nitrobenzene-d5	88	33-123	
p-Terphenyl-d14	101	27-159	
Phenol-d6	94	26-122	
2,4,6-Tribromophenol	93	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 20:20**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 12 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	78	25-120	
Nitrobenzene-d5	88	33-123	
p-Terphenyl-d14	93	27-159	
Phenol-d6	82	26-122	
2,4,6-Tribromophenol	92	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 23:07**	**140124L06**

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	2.5	5.01	
Acenaphthylene	ND	2.5	5.01	
Aniline	ND	2.5	5.01	
Anthracene	ND	2.5	5.01	
Azobenzene	ND	2.5	5.01	
Benzidine	ND	50	5.01	
Benzo (a) Anthracene	ND	2.5	5.01	
Benzo (a) Pyrene	ND	2.5	5.01	
Benzo (b) Fluoranthene	ND	2.5	5.01	
Benzo (g,h,i) Perylene	ND	2.5	5.01	
Benzo (k) Fluoranthene	ND	2.5	5.01	
Benzoic Acid	ND	12	5.01	
Benzyl Alcohol	ND	2.5	5.01	
Bis(2-Chloroethoxy) Methane	ND	2.5	5.01	
Bis(2-Chloroethyl) Ether	ND	12	5.01	
Bis(2-Chloroisopropyl) Ether	ND	2.5	5.01	
Bis(2-Ethylhexyl) Phthalate	ND	2.5	5.01	
4-Bromophenyl-Phenyl Ether	ND	2.5	5.01	
Butyl Benzyl Phthalate	ND	2.5	5.01	
4-Chloro-3-Methylphenol	ND	2.5	5.01	
4-Chloroaniline	ND	2.5	5.01	
2-Chloronaphthalene	ND	2.5	5.01	
2-Chlorophenol	ND	2.5	5.01	
4-Chlorophenyl-Phenyl Ether	ND	2.5	5.01	
Chrysene	ND	2.5	5.01	
Di-n-Butyl Phthalate	ND	2.5	5.01	
Di-n-Octyl Phthalate	ND	2.5	5.01	
Dibenz (a,h) Anthracene	ND	2.5	5.01	
Dibenzofuran	ND	2.5	5.01	
1,2-Dichlorobenzene	ND	2.5	5.01	
1,3-Dichlorobenzene	ND	2.5	5.01	
1,4-Dichlorobenzene	ND	2.5	5.01	
3,3'-Dichlorobenzidine	ND	50	5.01	
2,4-Dichlorophenol	ND	2.5	5.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Diethyl Phthalate	ND	2.5	5.01	
Dimethyl Phthalate	ND	2.5	5.01	
2,4-Dimethylphenol	ND	2.5	5.01	
4,6-Dinitro-2-Methylphenol	ND	12	5.01	
2,4-Dinitrophenol	ND	12	5.01	
2,4-Dinitrotoluene	ND	2.5	5.01	
2,6-Dinitrotoluene	ND	2.5	5.01	
Fluoranthene	ND	2.5	5.01	
Fluorene	ND	2.5	5.01	
Hexachloro-1,3-Butadiene	ND	2.5	5.01	
Hexachlorobenzene	ND	2.5	5.01	
Hexachlorocyclopentadiene	ND	12	5.01	
Hexachloroethane	ND	2.5	5.01	
Indeno (1,2,3-c,d) Pyrene	ND	2.5	5.01	
Isophorone	ND	2.5	5.01	
2-Methylnaphthalene	ND	2.5	5.01	
1-Methylnaphthalene	ND	2.5	5.01	
2-Methylphenol	ND	2.5	5.01	
3/4-Methylphenol	ND	2.5	5.01	
N-Nitroso-di-n-propylamine	ND	2.5	5.01	
N-Nitrosodimethylamine	ND	2.5	5.01	
N-Nitrosodiphenylamine	ND	2.5	5.01	
Naphthalene	ND	2.5	5.01	
4-Nitroaniline	ND	2.5	5.01	
3-Nitroaniline	ND	2.5	5.01	
2-Nitroaniline	ND	2.5	5.01	
Nitrobenzene	ND	12	5.01	
4-Nitrophenol	ND	2.5	5.01	
2-Nitrophenol	ND	2.5	5.01	
Pentachlorophenol	ND	12	5.01	
Phenanthrene	ND	2.5	5.01	
Phenol	ND	2.5	5.01	
Pyrene	ND	2.5	5.01	
Pyridine	ND	2.5	5.01	
1,2,4-Trichlorobenzene	ND	2.5	5.01	
2,4,6-Trichlorophenol	ND	2.5	5.01	
2,4,5-Trichlorophenol	ND	2.5	5.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 15 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	93	27-120	
2-Fluorophenol	87	25-120	
Nitrobenzene-d5	89	33-123	
p-Terphenyl-d14	92	27-159	
Phenol-d6	83	26-122	
2,4,6-Tribromophenol	97	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 21:34**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	1.7	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	3.6	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	5.6	0.50	1	
Benzo (a) Pyrene	3.0	0.50	1	
Benzo (b) Fluoranthene	2.2	0.50	1	
Benzo (g,h,i) Perylene	0.79	0.50	1	
Benzo (k) Fluoranthene	2.9	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	4.7	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	0.92	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	12	0.50	1	
Fluorene	1.9	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	0.94	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	7.3	0.50	1	
1-Methylnaphthalene	3.9	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	8.4	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	13	0.50	1	
Phenol	ND	0.50	1	
Pyrene	13	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 18 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	77	25-120	
Nitrobenzene-d5	87	33-123	
p-Terphenyl-d14	101	27-159	
Phenol-d6	71	26-122	
2,4,6-Tribromophenol	106	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 20:38**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 21 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	89	25-120	
Nitrobenzene-d5	80	33-123	
p-Terphenyl-d14	103	27-159	
Phenol-d6	86	26-122	
2,4,6-Tribromophenol	107	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 21:53**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 24 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	86	25-120	
Nitrobenzene-d5	85	33-123	
p-Terphenyl-d14	94	27-159	
Phenol-d6	83	26-122	
2,4,6-Tribromophenol	111	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**GC/MS TT**	**01/24/14**	**01/30/14 14:52**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	5.0	10	
Acenaphthylene	ND	5.0	10	
Aniline	ND	5.0	10	
Anthracene	ND	5.0	10	
Azobenzene	ND	5.0	10	
Benzidine	ND	100	10	
Benzo (a) Anthracene	ND	5.0	10	
Benzo (a) Pyrene	ND	5.0	10	
Benzo (b) Fluoranthene	ND	5.0	10	
Benzo (g,h,i) Perylene	ND	5.0	10	
Benzo (k) Fluoranthene	ND	5.0	10	
Benzoic Acid	ND	25	10	
Benzyl Alcohol	ND	5.0	10	
Bis(2-Chloroethoxy) Methane	ND	5.0	10	
Bis(2-Chloroethyl) Ether	ND	25	10	
Bis(2-Chloroisopropyl) Ether	ND	5.0	10	
Bis(2-Ethylhexyl) Phthalate	ND	5.0	10	
4-Bromophenyl-Phenyl Ether	ND	5.0	10	
Butyl Benzyl Phthalate	ND	5.0	10	
4-Chloro-3-Methylphenol	ND	5.0	10	
4-Chloroaniline	ND	5.0	10	
2-Chloronaphthalene	ND	5.0	10	
2-Chlorophenol	ND	5.0	10	
4-Chlorophenyl-Phenyl Ether	ND	5.0	10	
Chrysene	ND	5.0	10	
Di-n-Butyl Phthalate	ND	5.0	10	
Di-n-Octyl Phthalate	ND	5.0	10	
Dibenz (a,h) Anthracene	ND	5.0	10	
Dibenzofuran	ND	5.0	10	
1,2-Dichlorobenzene	ND	5.0	10	
1,3-Dichlorobenzene	ND	5.0	10	
1,4-Dichlorobenzene	ND	5.0	10	
3,3'-Dichlorobenzidine	ND	100	10	
2,4-Dichlorophenol	ND	5.0	10	
Diethyl Phthalate	ND	5.0	10	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	5.0	10	
2,4-Dimethylphenol	ND	5.0	10	
4,6-Dinitro-2-Methylphenol	ND	25	10	
2,4-Dinitrophenol	ND	25	10	
2,4-Dinitrotoluene	ND	5.0	10	
2,6-Dinitrotoluene	ND	5.0	10	
Fluoranthene	ND	5.0	10	
Fluorene	ND	5.0	10	
Hexachloro-1,3-Butadiene	ND	5.0	10	
Hexachlorobenzene	ND	5.0	10	
Hexachlorocyclopentadiene	ND	25	10	
Hexachloroethane	ND	5.0	10	
Indeno (1,2,3-c,d) Pyrene	ND	5.0	10	
Isophorone	ND	5.0	10	
2-Methylnaphthalene	22	5.0	10	
1-Methylnaphthalene	12	5.0	10	
2-Methylphenol	ND	5.0	10	
3/4-Methylphenol	ND	5.0	10	
N-Nitroso-di-n-propylamine	ND	5.0	10	
N-Nitrosodimethylamine	ND	5.0	10	
N-Nitrosodiphenylamine	ND	5.0	10	
Naphthalene	18	5.0	10	
4-Nitroaniline	ND	5.0	10	
3-Nitroaniline	ND	5.0	10	
2-Nitroaniline	ND	5.0	10	
Nitrobenzene	ND	25	10	
4-Nitrophenol	ND	5.0	10	
2-Nitrophenol	ND	5.0	10	
Pentachlorophenol	ND	25	10	
Phenanthrene	ND	5.0	10	
Phenol	ND	5.0	10	
Pyrene	ND	5.0	10	
Pyridine	ND	5.0	10	
1,2,4-Trichlorobenzene	ND	5.0	10	
2,4,6-Trichlorophenol	ND	5.0	10	
2,4,5-Trichlorophenol	ND	5.0	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	92	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 27 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	87	25-120	
Nitrobenzene-d5	84	33-123	
p-Terphenyl-d14	93	27-159	
Phenol-d6	97	26-122	
2,4,6-Tribromophenol	71	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 20:57**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	72	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 30 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	83	25-120	
Nitrobenzene-d5	80	33-123	
p-Terphenyl-d14	92	27-159	
Phenol-d6	79	26-122	
2,4,6-Tribromophenol	101	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 23:26**	**140124L06**

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	2.5	5.01	
Acenaphthylene	ND	2.5	5.01	
Aniline	ND	2.5	5.01	
Anthracene	ND	2.5	5.01	
Azobenzene	ND	2.5	5.01	
Benzidine	ND	50	5.01	
Benzo (a) Anthracene	ND	2.5	5.01	
Benzo (a) Pyrene	ND	2.5	5.01	
Benzo (b) Fluoranthene	ND	2.5	5.01	
Benzo (g,h,i) Perylene	ND	2.5	5.01	
Benzo (k) Fluoranthene	ND	2.5	5.01	
Benzoic Acid	ND	12	5.01	
Benzyl Alcohol	ND	2.5	5.01	
Bis(2-Chloroethoxy) Methane	ND	2.5	5.01	
Bis(2-Chloroethyl) Ether	ND	12	5.01	
Bis(2-Chloroisopropyl) Ether	ND	2.5	5.01	
Bis(2-Ethylhexyl) Phthalate	ND	2.5	5.01	
4-Bromophenyl-Phenyl Ether	ND	2.5	5.01	
Butyl Benzyl Phthalate	ND	2.5	5.01	
4-Chloro-3-Methylphenol	ND	2.5	5.01	
4-Chloroaniline	ND	2.5	5.01	
2-Chloronaphthalene	ND	2.5	5.01	
2-Chlorophenol	ND	2.5	5.01	
4-Chlorophenyl-Phenyl Ether	ND	2.5	5.01	
Chrysene	ND	2.5	5.01	
Di-n-Butyl Phthalate	ND	2.5	5.01	
Di-n-Octyl Phthalate	ND	2.5	5.01	
Dibenz (a,h) Anthracene	ND	2.5	5.01	
Dibenzofuran	ND	2.5	5.01	
1,2-Dichlorobenzene	ND	2.5	5.01	
1,3-Dichlorobenzene	ND	2.5	5.01	
1,4-Dichlorobenzene	ND	2.5	5.01	
3,3'-Dichlorobenzidine	ND	50	5.01	
2,4-Dichlorophenol	ND	2.5	5.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Diethyl Phthalate	ND	2.5	5.01	
Dimethyl Phthalate	ND	2.5	5.01	
2,4-Dimethylphenol	ND	2.5	5.01	
4,6-Dinitro-2-Methylphenol	ND	12	5.01	
2,4-Dinitrophenol	ND	12	5.01	
2,4-Dinitrotoluene	ND	2.5	5.01	
2,6-Dinitrotoluene	ND	2.5	5.01	
Fluoranthene	ND	2.5	5.01	
Fluorene	ND	2.5	5.01	
Hexachloro-1,3-Butadiene	ND	2.5	5.01	
Hexachlorobenzene	ND	2.5	5.01	
Hexachlorocyclopentadiene	ND	12	5.01	
Hexachloroethane	ND	2.5	5.01	
Indeno (1,2,3-c,d) Pyrene	ND	2.5	5.01	
Isophorone	ND	2.5	5.01	
2-Methylnaphthalene	ND	2.5	5.01	
1-Methylnaphthalene	ND	2.5	5.01	
2-Methylphenol	ND	2.5	5.01	
3/4-Methylphenol	ND	2.5	5.01	
N-Nitroso-di-n-propylamine	ND	2.5	5.01	
N-Nitrosodimethylamine	ND	2.5	5.01	
N-Nitrosodiphenylamine	ND	2.5	5.01	
Naphthalene	ND	2.5	5.01	
4-Nitroaniline	ND	2.5	5.01	
3-Nitroaniline	ND	2.5	5.01	
2-Nitroaniline	ND	2.5	5.01	
Nitrobenzene	ND	12	5.01	
4-Nitrophenol	ND	2.5	5.01	
2-Nitrophenol	ND	2.5	5.01	
Pentachlorophenol	ND	12	5.01	
Phenanthrene	ND	2.5	5.01	
Phenol	ND	2.5	5.01	
Pyrene	ND	2.5	5.01	
Pyridine	ND	2.5	5.01	
1,2,4-Trichlorobenzene	ND	2.5	5.01	
2,4,6-Trichlorophenol	ND	2.5	5.01	
2,4,5-Trichlorophenol	ND	2.5	5.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Port of Oakland Phase II			Page 33 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	89	27-120	
2-Fluorophenol	73	25-120	
Nitrobenzene-d5	85	33-123	
p-Terphenyl-d14	95	27-159	
Phenol-d6	79	26-122	
2,4,6-Tribromophenol	105	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC/MS TT**	**01/24/14**	**01/28/14 21:15**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 36 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	83	25-120	
Nitrobenzene-d5	84	33-123	
p-Terphenyl-d14	92	27-159	
Phenol-d6	80	26-122	
2,4,6-Tribromophenol	100	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-2830**	**N/A**	**Solid**	**GC/MS TT**	**01/24/14**	**01/24/14 17:38**	**140124L06**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	91	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 39 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	91	25-120	
Nitrobenzene-d5	93	33-123	
p-Terphenyl-d14	94	27-159	
Phenol-d6	92	26-122	
2,4,6-Tribromophenol	113	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-0.5-1.0	**14-01-1415-1-A**	**01/23/14 08:40**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 21:32**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1	
Benzene	ND	5.2	1	
Bromobenzene	ND	5.2	1	
Bromochloromethane	ND	5.2	1	
Bromodichloromethane	ND	5.2	1	
Bromoform	ND	5.2	1	
Bromomethane	ND	26	1	
2-Butanone	ND	52	1	
n-Butylbenzene	ND	5.2	1	
sec-Butylbenzene	ND	5.2	1	
tert-Butylbenzene	ND	5.2	1	
Carbon Disulfide	ND	52	1	
Carbon Tetrachloride	ND	5.2	1	
Chlorobenzene	ND	5.2	1	
Chloroethane	ND	5.2	1	
Chloroform	ND	5.2	1	
Chloromethane	ND	26	1	
2-Chlorotoluene	ND	5.2	1	
4-Chlorotoluene	ND	5.2	1	
Dibromochloromethane	ND	5.2	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.2	1	
Dibromomethane	ND	5.2	1	
1,2-Dichlorobenzene	ND	5.2	1	
1,3-Dichlorobenzene	ND	5.2	1	
1,4-Dichlorobenzene	ND	5.2	1	
Dichlorodifluoromethane	ND	5.2	1	
1,1-Dichloroethane	ND	5.2	1	
1,2-Dichloroethane	ND	5.2	1	
1,1-Dichloroethene	ND	5.2	1	
c-1,2-Dichloroethene	ND	5.2	1	
t-1,2-Dichloroethene	ND	5.2	1	
1,2-Dichloropropane	ND	5.2	1	
1,3-Dichloropropane	ND	5.2	1	
2,2-Dichloropropane	ND	5.2	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1	
c-1,3-Dichloropropene	ND	5.2	1	
t-1,3-Dichloropropene	ND	5.2	1	
Ethylbenzene	ND	5.2	1	
2-Hexanone	ND	52	1	
Isopropylbenzene	ND	5.2	1	
p-Isopropyltoluene	ND	5.2	1	
Methylene Chloride	ND	52	1	
4-Methyl-2-Pentanone	ND	52	1	
Naphthalene	ND	52	1	
n-Propylbenzene	ND	5.2	1	
Styrene	ND	5.2	1	
1,1,1,2-Tetrachloroethane	ND	5.2	1	
1,1,2,2-Tetrachloroethane	ND	5.2	1	
Tetrachloroethene	ND	5.2	1	
Toluene	ND	5.2	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.2	1	
1,1,1-Trichloroethane	ND	5.2	1	
1,1,2-Trichloroethane	ND	5.2	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1	
Trichloroethene	ND	5.2	1	
1,2,3-Trichloropropane	ND	5.2	1	
1,2,4-Trimethylbenzene	ND	5.2	1	
Trichlorofluoromethane	ND	52	1	
1,3,5-Trimethylbenzene	ND	5.2	1	
Vinyl Acetate	ND	52	1	
Vinyl Chloride	ND	5.2	1	
p/m-Xylene	ND	5.2	1	
o-Xylene	ND	5.2	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1	
Tert-Butyl Alcohol (TBA)	ND	52	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	260	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 3 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6-7.0-7.5	**14-01-1415-3-A**	**01/23/14 09:07**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 21:59**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	9.9	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	9.9	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	9.9	1	
Ethyl-t-Butyl Ether (ETBE)	ND	9.9	1	
Tert-Amyl-Methyl Ether (TAME)	ND	9.9	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 6 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-0.5-1.0	**14-01-1415-4-A**	**01/23/14 10:00**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 22:26**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1	
Benzene	ND	5.2	1	
Bromobenzene	ND	5.2	1	
Bromochloromethane	ND	5.2	1	
Bromodichloromethane	ND	5.2	1	
Bromoform	ND	5.2	1	
Bromomethane	ND	26	1	
2-Butanone	ND	52	1	
n-Butylbenzene	ND	5.2	1	
sec-Butylbenzene	ND	5.2	1	
tert-Butylbenzene	ND	5.2	1	
Carbon Disulfide	ND	52	1	
Carbon Tetrachloride	ND	5.2	1	
Chlorobenzene	ND	5.2	1	
Chloroethane	ND	5.2	1	
Chloroform	ND	5.2	1	
Chloromethane	ND	26	1	
2-Chlorotoluene	ND	5.2	1	
4-Chlorotoluene	ND	5.2	1	
Dibromochloromethane	ND	5.2	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.2	1	
Dibromomethane	ND	5.2	1	
1,2-Dichlorobenzene	ND	5.2	1	
1,3-Dichlorobenzene	ND	5.2	1	
1,4-Dichlorobenzene	ND	5.2	1	
Dichlorodifluoromethane	ND	5.2	1	
1,1-Dichloroethane	ND	5.2	1	
1,2-Dichloroethane	ND	5.2	1	
1,1-Dichloroethene	ND	5.2	1	
c-1,2-Dichloroethene	ND	5.2	1	
t-1,2-Dichloroethene	ND	5.2	1	
1,2-Dichloropropane	ND	5.2	1	
1,3-Dichloropropane	ND	5.2	1	
2,2-Dichloropropane	ND	5.2	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1	
c-1,3-Dichloropropene	ND	5.2	1	
t-1,3-Dichloropropene	ND	5.2	1	
Ethylbenzene	ND	5.2	1	
2-Hexanone	ND	52	1	
Isopropylbenzene	ND	5.2	1	
p-Isopropyltoluene	ND	5.2	1	
Methylene Chloride	ND	52	1	
4-Methyl-2-Pentanone	ND	52	1	
Naphthalene	ND	52	1	
n-Propylbenzene	ND	5.2	1	
Styrene	ND	5.2	1	
1,1,1,2-Tetrachloroethane	ND	5.2	1	
1,1,2,2-Tetrachloroethane	ND	5.2	1	
Tetrachloroethene	ND	5.2	1	
Toluene	ND	5.2	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.2	1	
1,1,1-Trichloroethane	ND	5.2	1	
1,1,2-Trichloroethane	ND	5.2	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1	
Trichloroethene	ND	5.2	1	
1,2,3-Trichloropropane	ND	5.2	1	
1,2,4-Trimethylbenzene	ND	5.2	1	
Trichlorofluoromethane	ND	52	1	
1,3,5-Trimethylbenzene	ND	5.2	1	
Vinyl Acetate	ND	52	1	
Vinyl Chloride	ND	5.2	1	
p/m-Xylene	ND	5.2	1	
o-Xylene	ND	5.2	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1	
Tert-Butyl Alcohol (TBA)	ND	52	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	260	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 9 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	107	62-146	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 22:53**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	9.9	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	9.9	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	9.9	1	
Ethyl-t-Butyl Ether (ETBE)	ND	9.9	1	
Tert-Amyl-Methyl Ether (TAME)	ND	9.9	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 12 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	108	62-146	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-1.5-2.0	**14-01-1415-7-A**	**01/23/14 10:55**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 23:20**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	4.9	1	
Bromobenzene	ND	4.9	1	
Bromochloromethane	ND	4.9	1	
Bromodichloromethane	ND	4.9	1	
Bromoform	ND	4.9	1	
Bromomethane	ND	24	1	
2-Butanone	ND	49	1	
n-Butylbenzene	ND	4.9	1	
sec-Butylbenzene	ND	4.9	1	
tert-Butylbenzene	ND	4.9	1	
Carbon Disulfide	ND	49	1	
Carbon Tetrachloride	ND	4.9	1	
Chlorobenzene	ND	4.9	1	
Chloroethane	ND	4.9	1	
Chloroform	ND	4.9	1	
Chloromethane	ND	24	1	
2-Chlorotoluene	ND	4.9	1	
4-Chlorotoluene	ND	4.9	1	
Dibromochloromethane	ND	4.9	1	
1,2-Dibromo-3-Chloropropane	ND	9.7	1	
1,2-Dibromoethane	ND	4.9	1	
Dibromomethane	ND	4.9	1	
1,2-Dichlorobenzene	ND	4.9	1	
1,3-Dichlorobenzene	ND	4.9	1	
1,4-Dichlorobenzene	ND	4.9	1	
Dichlorodifluoromethane	ND	4.9	1	
1,1-Dichloroethane	ND	4.9	1	
1,2-Dichloroethane	ND	4.9	1	
1,1-Dichloroethene	ND	4.9	1	
c-1,2-Dichloroethene	ND	4.9	1	
t-1,2-Dichloroethene	ND	4.9	1	
1,2-Dichloropropane	ND	4.9	1	
1,3-Dichloropropane	ND	4.9	1	
2,2-Dichloropropane	ND	4.9	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	4.9	1	
c-1,3-Dichloropropene	ND	4.9	1	
t-1,3-Dichloropropene	ND	4.9	1	
Ethylbenzene	ND	4.9	1	
2-Hexanone	ND	49	1	
Isopropylbenzene	5.2	4.9	1	
p-Isopropyltoluene	ND	4.9	1	
Methylene Chloride	ND	49	1	
4-Methyl-2-Pentanone	ND	49	1	
Naphthalene	ND	49	1	
n-Propylbenzene	15	4.9	1	
Styrene	ND	4.9	1	
1,1,1,2-Tetrachloroethane	ND	4.9	1	
1,1,2,2-Tetrachloroethane	ND	4.9	1	
Tetrachloroethene	ND	4.9	1	
Toluene	ND	4.9	1	
1,2,3-Trichlorobenzene	ND	9.7	1	
1,2,4-Trichlorobenzene	ND	4.9	1	
1,1,1-Trichloroethane	ND	4.9	1	
1,1,2-Trichloroethane	ND	4.9	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	49	1	
Trichloroethene	ND	4.9	1	
1,2,3-Trichloropropane	ND	4.9	1	
1,2,4-Trimethylbenzene	ND	4.9	1	
Trichlorofluoromethane	ND	49	1	
1,3,5-Trimethylbenzene	ND	4.9	1	
Vinyl Acetate	ND	49	1	
Vinyl Chloride	ND	4.9	1	
p/m-Xylene	ND	4.9	1	
o-Xylene	ND	4.9	1	
Methyl-t-Butyl Ether (MTBE)	ND	4.9	1	
Tert-Butyl Alcohol (TBA)	ND	49	1	
Diisopropyl Ether (DIPE)	ND	9.7	1	
Ethyl-t-Butyl Ether (ETBE)	ND	9.7	1	
Tert-Amyl-Methyl Ether (TAME)	ND	9.7	1	
Ethanol	ND	240	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 15 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	108	62-146	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-8.5-9.0	**14-01-1415-9-A**	**01/23/14 11:35**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 23:48**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120000	1000	
Benzene	ND	5000	1000	
Bromobenzene	ND	5000	1000	
Bromochloromethane	ND	5000	1000	
Bromodichloromethane	ND	5000	1000	
Bromoform	ND	5000	1000	
Bromomethane	ND	25000	1000	
2-Butanone	ND	50000	1000	
n-Butylbenzene	8100	5000	1000	
sec-Butylbenzene	ND	5000	1000	
tert-Butylbenzene	ND	5000	1000	
Carbon Disulfide	ND	50000	1000	
Carbon Tetrachloride	ND	5000	1000	
Chlorobenzene	ND	5000	1000	
Chloroethane	ND	5000	1000	
Chloroform	ND	5000	1000	
Chloromethane	ND	25000	1000	
2-Chlorotoluene	ND	5000	1000	
4-Chlorotoluene	ND	5000	1000	
Dibromochloromethane	ND	5000	1000	
1,2-Dibromo-3-Chloropropane	ND	10000	1000	
1,2-Dibromoethane	ND	5000	1000	
Dibromomethane	ND	5000	1000	
1,2-Dichlorobenzene	ND	5000	1000	
1,3-Dichlorobenzene	ND	5000	1000	
1,4-Dichlorobenzene	ND	5000	1000	
Dichlorodifluoromethane	ND	5000	1000	
1,1-Dichloroethane	ND	5000	1000	
1,2-Dichloroethane	ND	5000	1000	
1,1-Dichloroethene	ND	5000	1000	
c-1,2-Dichloroethene	ND	5000	1000	
t-1,2-Dichloroethene	ND	5000	1000	
1,2-Dichloropropane	ND	5000	1000	
1,3-Dichloropropane	ND	5000	1000	
2,2-Dichloropropane	ND	5000	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5000	1000	
c-1,3-Dichloropropene	ND	5000	1000	
t-1,3-Dichloropropene	ND	5000	1000	
Ethylbenzene	54000	5000	1000	
2-Hexanone	ND	50000	1000	
Isopropylbenzene	ND	5000	1000	
p-Isopropyltoluene	ND	5000	1000	
Methylene Chloride	ND	50000	1000	
4-Methyl-2-Pentanone	ND	50000	1000	
Naphthalene	ND	50000	1000	
n-Propylbenzene	17000	5000	1000	
Styrene	ND	5000	1000	
1,1,1,2-Tetrachloroethane	ND	5000	1000	
1,1,2,2-Tetrachloroethane	ND	5000	1000	
Tetrachloroethene	ND	5000	1000	
Toluene	100000	5000	1000	
1,2,3-Trichlorobenzene	ND	10000	1000	
1,2,4-Trichlorobenzene	ND	5000	1000	
1,1,1-Trichloroethane	ND	5000	1000	
1,1,2-Trichloroethane	ND	5000	1000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50000	1000	
Trichloroethene	ND	5000	1000	
1,2,3-Trichloropropane	ND	5000	1000	
1,2,4-Trimethylbenzene	99000	5000	1000	
Trichlorofluoromethane	ND	50000	1000	
1,3,5-Trimethylbenzene	32000	5000	1000	
Vinyl Acetate	ND	50000	1000	
Vinyl Chloride	ND	5000	1000	
p/m-Xylene	220000	5000	1000	
o-Xylene	81000	5000	1000	
Methyl-t-Butyl Ether (MTBE)	ND	5000	1000	
Tert-Butyl Alcohol (TBA)	ND	50000	1000	
Diisopropyl Ether (DIPE)	ND	10000	1000	
Ethyl-t-Butyl Ether (ETBE)	ND	10000	1000	
Tert-Amyl-Methyl Ether (TAME)	ND	10000	1000	
Ethanol	ND	250000	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 18 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	107	62-146	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-14.0-14.5	**14-01-1415-10-A**	**01/23/14 12:24**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 00:15**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1	
Benzene	ND	5.1	1	
Bromobenzene	ND	5.1	1	
Bromochloromethane	ND	5.1	1	
Bromodichloromethane	ND	5.1	1	
Bromoform	ND	5.1	1	
Bromomethane	ND	26	1	
2-Butanone	ND	51	1	
n-Butylbenzene	ND	5.1	1	
sec-Butylbenzene	ND	5.1	1	
tert-Butylbenzene	ND	5.1	1	
Carbon Disulfide	ND	51	1	
Carbon Tetrachloride	ND	5.1	1	
Chlorobenzene	ND	5.1	1	
Chloroethane	ND	5.1	1	
Chloroform	ND	5.1	1	
Chloromethane	ND	26	1	
2-Chlorotoluene	ND	5.1	1	
4-Chlorotoluene	ND	5.1	1	
Dibromochloromethane	ND	5.1	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.1	1	
Dibromomethane	ND	5.1	1	
1,2-Dichlorobenzene	ND	5.1	1	
1,3-Dichlorobenzene	ND	5.1	1	
1,4-Dichlorobenzene	ND	5.1	1	
Dichlorodifluoromethane	ND	5.1	1	
1,1-Dichloroethane	ND	5.1	1	
1,2-Dichloroethane	ND	5.1	1	
1,1-Dichloroethene	ND	5.1	1	
c-1,2-Dichloroethene	ND	5.1	1	
t-1,2-Dichloroethene	ND	5.1	1	
1,2-Dichloropropane	ND	5.1	1	
1,3-Dichloropropane	ND	5.1	1	
2,2-Dichloropropane	ND	5.1	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.1	1	
c-1,3-Dichloropropene	ND	5.1	1	
t-1,3-Dichloropropene	ND	5.1	1	
Ethylbenzene	ND	5.1	1	
2-Hexanone	ND	51	1	
Isopropylbenzene	ND	5.1	1	
p-Isopropyltoluene	ND	5.1	1	
Methylene Chloride	ND	51	1	
4-Methyl-2-Pentanone	ND	51	1	
Naphthalene	ND	51	1	
n-Propylbenzene	ND	5.1	1	
Styrene	ND	5.1	1	
1,1,1,2-Tetrachloroethane	ND	5.1	1	
1,1,2,2-Tetrachloroethane	ND	5.1	1	
Tetrachloroethene	ND	5.1	1	
Toluene	ND	5.1	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.1	1	
1,1,1-Trichloroethane	ND	5.1	1	
1,1,2-Trichloroethane	ND	5.1	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1	
Trichloroethene	ND	5.1	1	
1,2,3-Trichloropropane	ND	5.1	1	
1,2,4-Trimethylbenzene	ND	5.1	1	
Trichlorofluoromethane	ND	51	1	
1,3,5-Trimethylbenzene	ND	5.1	1	
Vinyl Acetate	ND	51	1	
Vinyl Chloride	ND	5.1	1	
p/m-Xylene	ND	5.1	1	
o-Xylene	ND	5.1	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1	
Tert-Butyl Alcohol (TBA)	ND	51	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	260	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 21 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	107	62-146	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-2.5-3.0	**14-01-1415-12-A**	**01/23/14 13:20**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 00:42**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	8.2	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 24 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-6.0-6.5	**14-01-1415-13-A**	**01/23/14 13:30**	**Solid**	**GC/MS Q**	**01/24/14**	**01/25/14 16:13**	**140125L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	25000	200	
Benzene	1100	1000	200	
Bromobenzene	ND	1000	200	
Bromochloromethane	ND	1000	200	
Bromodichloromethane	ND	1000	200	
Bromoform	ND	1000	200	
Bromomethane	ND	5000	200	
2-Butanone	ND	10000	200	
n-Butylbenzene	17000	1000	200	
sec-Butylbenzene	5500	1000	200	
tert-Butylbenzene	ND	1000	200	
Carbon Disulfide	ND	10000	200	
Carbon Tetrachloride	ND	1000	200	
Chlorobenzene	ND	1000	200	
Chloroethane	ND	1000	200	
Chloroform	ND	1000	200	
Chloromethane	ND	5000	200	
2-Chlorotoluene	ND	1000	200	
4-Chlorotoluene	ND	1000	200	
Dibromochloromethane	ND	1000	200	
1,2-Dibromo-3-Chloropropane	ND	2000	200	
1,2-Dibromoethane	ND	1000	200	
Dibromomethane	ND	1000	200	
1,2-Dichlorobenzene	ND	1000	200	
1,3-Dichlorobenzene	ND	1000	200	
1,4-Dichlorobenzene	ND	1000	200	
Dichlorodifluoromethane	ND	1000	200	
1,1-Dichloroethane	ND	1000	200	
1,2-Dichloroethane	ND	1000	200	
1,1-Dichloroethene	ND	1000	200	
c-1,2-Dichloroethene	ND	1000	200	
t-1,2-Dichloroethene	ND	1000	200	
1,2-Dichloropropane	ND	1000	200	
1,3-Dichloropropane	ND	1000	200	
2,2-Dichloropropane	ND	1000	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1000	200	
c-1,3-Dichloropropene	ND	1000	200	
t-1,3-Dichloropropene	ND	1000	200	
Ethylbenzene	21000	1000	200	
2-Hexanone	ND	10000	200	
Isopropylbenzene	8800	1000	200	
p-Isopropyltoluene	ND	1000	200	
Methylene Chloride	ND	10000	200	
4-Methyl-2-Pentanone	ND	10000	200	
Naphthalene	24000	10000	200	
n-Propylbenzene	36000	1000	200	
Styrene	ND	1000	200	
1,1,1,2-Tetrachloroethane	ND	1000	200	
1,1,2,2-Tetrachloroethane	ND	1000	200	
Tetrachloroethene	ND	1000	200	
Toluene	ND	1000	200	
1,2,3-Trichlorobenzene	ND	2000	200	
1,2,4-Trichlorobenzene	ND	1000	200	
1,1,1-Trichloroethane	ND	1000	200	
1,1,2-Trichloroethane	ND	1000	200	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10000	200	
Trichloroethene	ND	1000	200	
1,2,3-Trichloropropane	ND	1000	200	
1,2,4-Trimethylbenzene	2500	1000	200	
Trichlorofluoromethane	ND	10000	200	
1,3,5-Trimethylbenzene	1000	1000	200	
Vinyl Acetate	ND	10000	200	
Vinyl Chloride	ND	1000	200	
p/m-Xylene	1500	1000	200	
o-Xylene	ND	1000	200	
Methyl-t-Butyl Ether (MTBE)	ND	1000	200	
Tert-Butyl Alcohol (TBA)	ND	10000	200	
Diisopropyl Ether (DIPE)	ND	2000	200	
Ethyl-t-Butyl Ether (ETBE)	ND	2000	200	
Tert-Amyl-Methyl Ether (TAME)	ND	2000	200	
Ethanol	ND	50000	200	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	108	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 27 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	95	63-141	
1,2-Dichloroethane-d4	103	62-146	
Toluene-d8	108	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9-11.5-12.0	**14-01-1415-14-A**	**01/23/14 13:45**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 01:37**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	13000	100	
Benzene	3100	510	100	
Bromobenzene	ND	510	100	
Bromochloromethane	ND	510	100	
Bromodichloromethane	ND	510	100	
Bromoform	ND	510	100	
Bromomethane	ND	2600	100	
2-Butanone	ND	5100	100	
n-Butylbenzene	ND	510	100	
sec-Butylbenzene	ND	510	100	
tert-Butylbenzene	ND	510	100	
Carbon Disulfide	ND	5100	100	
Carbon Tetrachloride	ND	510	100	
Chlorobenzene	ND	510	100	
Chloroethane	ND	510	100	
Chloroform	ND	510	100	
Chloromethane	ND	2600	100	
2-Chlorotoluene	ND	510	100	
4-Chlorotoluene	ND	510	100	
Dibromochloromethane	ND	510	100	
1,2-Dibromo-3-Chloropropane	ND	1000	100	
1,2-Dibromoethane	ND	510	100	
Dibromomethane	ND	510	100	
1,2-Dichlorobenzene	ND	510	100	
1,3-Dichlorobenzene	ND	510	100	
1,4-Dichlorobenzene	ND	510	100	
Dichlorodifluoromethane	ND	510	100	
1,1-Dichloroethane	ND	510	100	
1,2-Dichloroethane	ND	510	100	
1,1-Dichloroethene	ND	510	100	
c-1,2-Dichloroethene	ND	510	100	
t-1,2-Dichloroethene	ND	510	100	
1,2-Dichloropropane	ND	510	100	
1,3-Dichloropropane	ND	510	100	
2,2-Dichloropropane	ND	510	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	510	100	
c-1,3-Dichloropropene	ND	510	100	
t-1,3-Dichloropropene	ND	510	100	
Ethylbenzene	1900	510	100	
2-Hexanone	ND	5100	100	
Isopropylbenzene	ND	510	100	
p-Isopropyltoluene	ND	510	100	
Methylene Chloride	ND	5100	100	
4-Methyl-2-Pentanone	ND	5100	100	
Naphthalene	ND	5100	100	
n-Propylbenzene	ND	510	100	
Styrene	ND	510	100	
1,1,1,2-Tetrachloroethane	ND	510	100	
1,1,2,2-Tetrachloroethane	ND	510	100	
Tetrachloroethene	ND	510	100	
Toluene	3500	510	100	
1,2,3-Trichlorobenzene	ND	1000	100	
1,2,4-Trichlorobenzene	ND	510	100	
1,1,1-Trichloroethane	ND	510	100	
1,1,2-Trichloroethane	ND	510	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5100	100	
Trichloroethene	ND	510	100	
1,2,3-Trichloropropane	ND	510	100	
1,2,4-Trimethylbenzene	2800	510	100	
Trichlorofluoromethane	ND	5100	100	
1,3,5-Trimethylbenzene	850	510	100	
Vinyl Acetate	ND	5100	100	
Vinyl Chloride	ND	510	100	
p/m-Xylene	6800	510	100	
o-Xylene	2100	510	100	
Methyl-t-Butyl Ether (MTBE)	ND	510	100	
Tert-Butyl Alcohol (TBA)	ND	5100	100	
Diisopropyl Ether (DIPE)	ND	1000	100	
Ethyl-t-Butyl Ether (ETBE)	ND	1000	100	
Tert-Amyl-Methyl Ether (TAME)	ND	1000	100	
Ethanol	ND	26000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 30 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	93	63-141	
1,2-Dichloroethane-d4	104	62-146	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-0.5-1.0	**14-01-1415-15-A**	**01/23/14 14:22**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 02:04**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	9.9	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	9.9	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	9.9	1	
Ethyl-t-Butyl Ether (ETBE)	ND	9.9	1	
Tert-Amyl-Methyl Ether (TAME)	ND	9.9	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 33 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	63-141	
1,2-Dichloroethane-d4	105	62-146	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 02:31**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1	
Benzene	ND	5.2	1	
Bromobenzene	ND	5.2	1	
Bromochloromethane	ND	5.2	1	
Bromodichloromethane	ND	5.2	1	
Bromoform	ND	5.2	1	
Bromomethane	ND	26	1	
2-Butanone	ND	52	1	
n-Butylbenzene	ND	5.2	1	
sec-Butylbenzene	ND	5.2	1	
tert-Butylbenzene	ND	5.2	1	
Carbon Disulfide	ND	52	1	
Carbon Tetrachloride	ND	5.2	1	
Chlorobenzene	ND	5.2	1	
Chloroethane	ND	5.2	1	
Chloroform	ND	5.2	1	
Chloromethane	ND	26	1	
2-Chlorotoluene	ND	5.2	1	
4-Chlorotoluene	ND	5.2	1	
Dibromochloromethane	ND	5.2	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.2	1	
Dibromomethane	ND	5.2	1	
1,2-Dichlorobenzene	ND	5.2	1	
1,3-Dichlorobenzene	ND	5.2	1	
1,4-Dichlorobenzene	ND	5.2	1	
Dichlorodifluoromethane	ND	5.2	1	
1,1-Dichloroethane	ND	5.2	1	
1,2-Dichloroethane	ND	5.2	1	
1,1-Dichloroethene	ND	5.2	1	
c-1,2-Dichloroethene	ND	5.2	1	
t-1,2-Dichloroethene	ND	5.2	1	
1,2-Dichloropropane	ND	5.2	1	
1,3-Dichloropropane	ND	5.2	1	
2,2-Dichloropropane	ND	5.2	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1	
c-1,3-Dichloropropene	ND	5.2	1	
t-1,3-Dichloropropene	ND	5.2	1	
Ethylbenzene	ND	5.2	1	
2-Hexanone	ND	52	1	
Isopropylbenzene	ND	5.2	1	
p-Isopropyltoluene	ND	5.2	1	
Methylene Chloride	ND	52	1	
4-Methyl-2-Pentanone	ND	52	1	
Naphthalene	ND	52	1	
n-Propylbenzene	ND	5.2	1	
Styrene	ND	5.2	1	
1,1,1,2-Tetrachloroethane	ND	5.2	1	
1,1,2,2-Tetrachloroethane	ND	5.2	1	
Tetrachloroethene	ND	5.2	1	
Toluene	ND	5.2	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.2	1	
1,1,1-Trichloroethane	ND	5.2	1	
1,1,2-Trichloroethane	ND	5.2	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1	
Trichloroethene	ND	5.2	1	
1,2,3-Trichloropropane	ND	5.2	1	
1,2,4-Trimethylbenzene	ND	5.2	1	
Trichlorofluoromethane	ND	52	1	
1,3,5-Trimethylbenzene	ND	5.2	1	
Vinyl Acetate	ND	52	1	
Vinyl Chloride	ND	5.2	1	
p/m-Xylene	ND	5.2	1	
o-Xylene	ND	5.2	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1	
Tert-Butyl Alcohol (TBA)	ND	52	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	260	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 36 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	97	63-141	
1,2-Dichloroethane-d4	103	62-146	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-8085**	**N/A**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 21:05**	**140124L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 39 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	102	63-141	
1,2-Dichloroethane-d4	106	62-146	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-8086**	**N/A**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 20:38**	**140124L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	12000	100	
Benzene	ND	500	100	
Bromobenzene	ND	500	100	
Bromochloromethane	ND	500	100	
Bromodichloromethane	ND	500	100	
Bromoform	ND	500	100	
Bromomethane	ND	2500	100	
2-Butanone	ND	5000	100	
n-Butylbenzene	ND	500	100	
sec-Butylbenzene	ND	500	100	
tert-Butylbenzene	ND	500	100	
Carbon Disulfide	ND	5000	100	
Carbon Tetrachloride	ND	500	100	
Chlorobenzene	ND	500	100	
Chloroethane	ND	500	100	
Chloroform	ND	500	100	
Chloromethane	ND	2500	100	
2-Chlorotoluene	ND	500	100	
4-Chlorotoluene	ND	500	100	
Dibromochloromethane	ND	500	100	
1,2-Dibromo-3-Chloropropane	ND	1000	100	
1,2-Dibromoethane	ND	500	100	
Dibromomethane	ND	500	100	
1,2-Dichlorobenzene	ND	500	100	
1,3-Dichlorobenzene	ND	500	100	
1,4-Dichlorobenzene	ND	500	100	
Dichlorodifluoromethane	ND	500	100	
1,1-Dichloroethane	ND	500	100	
1,2-Dichloroethane	ND	500	100	
1,1-Dichloroethene	ND	500	100	
c-1,2-Dichloroethene	ND	500	100	
t-1,2-Dichloroethene	ND	500	100	
1,2-Dichloropropane	ND	500	100	
1,3-Dichloropropane	ND	500	100	
2,2-Dichloropropane	ND	500	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	500	100	
c-1,3-Dichloropropene	ND	500	100	
t-1,3-Dichloropropene	ND	500	100	
Ethylbenzene	ND	500	100	
2-Hexanone	ND	5000	100	
Isopropylbenzene	ND	500	100	
p-Isopropyltoluene	ND	500	100	
Methylene Chloride	ND	5000	100	
4-Methyl-2-Pentanone	ND	5000	100	
Naphthalene	ND	5000	100	
n-Propylbenzene	ND	500	100	
Styrene	ND	500	100	
1,1,1,2-Tetrachloroethane	ND	500	100	
1,1,2,2-Tetrachloroethane	ND	500	100	
Tetrachloroethene	ND	500	100	
Toluene	ND	500	100	
1,2,3-Trichlorobenzene	ND	1000	100	
1,2,4-Trichlorobenzene	ND	500	100	
1,1,1-Trichloroethane	ND	500	100	
1,1,2-Trichloroethane	ND	500	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	100	
Trichloroethene	ND	500	100	
1,2,3-Trichloropropane	ND	500	100	
1,2,4-Trimethylbenzene	ND	500	100	
Trichlorofluoromethane	ND	5000	100	
1,3,5-Trimethylbenzene	ND	500	100	
Vinyl Acetate	ND	5000	100	
Vinyl Chloride	ND	500	100	
p/m-Xylene	ND	500	100	
o-Xylene	ND	500	100	
Methyl-t-Butyl Ether (MTBE)	ND	500	100	
Tert-Butyl Alcohol (TBA)	ND	5000	100	
Diisopropyl Ether (DIPE)	ND	1000	100	
Ethyl-t-Butyl Ether (ETBE)	ND	1000	100	
Tert-Amyl-Methyl Ether (TAME)	ND	1000	100	
Ethanol	ND	25000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 42 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	101	63-141	
1,2-Dichloroethane-d4	102	62-146	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-8091**	**N/A**	**Solid**	**GC/MS Q**	**01/25/14**	**01/25/14 11:25**	**140125L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	12000	100	
Benzene	ND	500	100	
Bromobenzene	ND	500	100	
Bromochloromethane	ND	500	100	
Bromodichloromethane	ND	500	100	
Bromoform	ND	500	100	
Bromomethane	ND	2500	100	
2-Butanone	ND	5000	100	
n-Butylbenzene	ND	500	100	
sec-Butylbenzene	ND	500	100	
tert-Butylbenzene	ND	500	100	
Carbon Disulfide	ND	5000	100	
Carbon Tetrachloride	ND	500	100	
Chlorobenzene	ND	500	100	
Chloroethane	ND	500	100	
Chloroform	ND	500	100	
Chloromethane	ND	2500	100	
2-Chlorotoluene	ND	500	100	
4-Chlorotoluene	ND	500	100	
Dibromochloromethane	ND	500	100	
1,2-Dibromo-3-Chloropropane	ND	1000	100	
1,2-Dibromoethane	ND	500	100	
Dibromomethane	ND	500	100	
1,2-Dichlorobenzene	ND	500	100	
1,3-Dichlorobenzene	ND	500	100	
1,4-Dichlorobenzene	ND	500	100	
Dichlorodifluoromethane	ND	500	100	
1,1-Dichloroethane	ND	500	100	
1,2-Dichloroethane	ND	500	100	
1,1-Dichloroethene	ND	500	100	
c-1,2-Dichloroethene	ND	500	100	
t-1,2-Dichloroethene	ND	500	100	
1,2-Dichloropropane	ND	500	100	
1,3-Dichloropropane	ND	500	100	
2,2-Dichloropropane	ND	500	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	500	100	
c-1,3-Dichloropropene	ND	500	100	
t-1,3-Dichloropropene	ND	500	100	
Ethylbenzene	ND	500	100	
2-Hexanone	ND	5000	100	
Isopropylbenzene	ND	500	100	
p-Isopropyltoluene	ND	500	100	
Methylene Chloride	ND	5000	100	
4-Methyl-2-Pentanone	ND	5000	100	
Naphthalene	ND	5000	100	
n-Propylbenzene	ND	500	100	
Styrene	ND	500	100	
1,1,1,2-Tetrachloroethane	ND	500	100	
1,1,2,2-Tetrachloroethane	ND	500	100	
Tetrachloroethene	ND	500	100	
Toluene	ND	500	100	
1,2,3-Trichlorobenzene	ND	1000	100	
1,2,4-Trichlorobenzene	ND	500	100	
1,1,1-Trichloroethane	ND	500	100	
1,1,2-Trichloroethane	ND	500	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	100	
Trichloroethene	ND	500	100	
1,2,3-Trichloropropane	ND	500	100	
1,2,4-Trimethylbenzene	ND	500	100	
Trichlorofluoromethane	ND	5000	100	
1,3,5-Trimethylbenzene	ND	500	100	
Vinyl Acetate	ND	5000	100	
Vinyl Chloride	ND	500	100	
p/m-Xylene	ND	500	100	
o-Xylene	ND	500	100	
Methyl-t-Butyl Ether (MTBE)	ND	500	100	
Tert-Butyl Alcohol (TBA)	ND	5000	100	
Diisopropyl Ether (DIPE)	ND	1000	100	
Ethyl-t-Butyl Ether (ETBE)	ND	1000	100	
Tert-Amyl-Methyl Ether (TAME)	ND	1000	100	
Ethanol	ND	25000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/24/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1415
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 45 of 45

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	103	63-141	
1,2-Dichloroethane-d4	114	62-146	
Toluene-d8	103	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3550B
Method: EPA 8015B (M)
Page 1 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1416-3	**Sample**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 16:33**	**140127S04**
14-01-1416-3	**Matrix Spike**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 15:05**	**140127S04**
14-01-1416-3	**Matrix Spike Duplicate**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 15:23**	**140127S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	ND	400.0	311.5	78	306.6	77	64-130	2	0-15	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 2 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1416-3	**Sample**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 16:33**	**140127S03**
14-01-1416-3	**Matrix Spike**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 14:12**	**140127S03**
14-01-1416-3	**Matrix Spike Duplicate**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 14:30**	**140127S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	423.6	106	438.9	110	71-125	4	0-12	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8015B (M)
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1537-1	**Sample**	**Solid**	**GC 4**	**01/27/14**	**01/28/14 14:34**	**140128S01**
14-01-1537-1	**Matrix Spike**	**Solid**	**GC 4**	**01/27/14**	**01/28/14 15:07**	**140128S01**
14-01-1537-1	**Matrix Spike Duplicate**	**Solid**	**GC 4**	**01/27/14**	**01/28/14 15:39**	**140128S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	7.605	76	7.614	76	48-114	0	0-23	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8015B (M)
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1090-3	**Sample**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 12:02**	**140125S01**
14-01-1090-3	**Matrix Spike**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 12:34**	**140125S01**
14-01-1090-3	**Matrix Spike Duplicate**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 13:07**	**140125S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	9.095	91	9.161	92	48-114	1	0-23	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1529-1	**Sample**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 17:15**	**140127S04**
14-01-1529-1	**Matrix Spike**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 17:17**	**140127S04**
14-01-1529-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 17:18**	**140127S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	23.51	94	24.01	96	50-115	2	0-20	
Arsenic	3.621	25.00	31.54	112	32.63	116	75-125	3	0-20	
Barium	24.47	25.00	51.42	108	52.22	111	75-125	2	0-20	
Beryllium	ND	25.00	27.79	111	28.73	115	75-125	3	0-20	
Cadmium	ND	25.00	27.67	111	28.62	114	75-125	3	0-20	
Chromium	2.133	25.00	28.44	105	29.57	110	75-125	4	0-20	
Cobalt	0.3697	25.00	28.89	114	30.21	119	75-125	4	0-20	
Copper	97.97	25.00	130.1	128	130.3	130	75-125	0	0-20	3
Lead	1.140	25.00	29.36	113	30.56	118	75-125	4	0-20	
Molybdenum	1.684	25.00	28.56	107	29.56	111	75-125	3	0-20	
Nickel	2.789	25.00	29.58	107	30.52	111	75-125	3	0-20	
Selenium	0.8996	25.00	27.70	107	29.22	113	75-125	5	0-20	
Silver	ND	12.50	14.24	114	14.66	117	75-125	3	0-20	
Thallium	ND	25.00	25.44	102	26.98	108	75-125	6	0-20	
Vanadium	9.443	25.00	35.50	104	36.48	108	75-125	3	0-20	
Zinc	229.2	25.00	265.0	4X	265.1	4X	75-125	4X	0-20	Q

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 7471A Total
Method: EPA 7471A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1529-1	**Sample**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 19:44**	**140127S05**
14-01-1529-1	**Matrix Spike**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 19:46**	**140127S05**
14-01-1529-1	**Matrix Spike Duplicate**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 19:53**	**140127S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.8265	99	0.8350	100	71-137	1	0-14	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1383-1	**Sample**	**Solid**	**GC 44**	**01/24/14**	**01/24/14 15:01**	**140124S02**
14-01-1383-1	**Matrix Spike**	**Solid**	**GC 44**	**01/24/14**	**01/24/14 15:16**	**140124S02**
14-01-1383-1	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**01/24/14**	**01/24/14 15:30**	**140124S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	25.00	21.80	87	22.56	90	50-135	3	0-25	
Alpha-BHC	ND	25.00	22.71	91	23.77	95	50-135	5	0-25	
Beta-BHC	ND	25.00	18.56	74	19.40	78	50-135	4	0-25	
4,4'-DDD	ND	25.00	21.95	88	22.96	92	50-135	5	0-25	
4,4'-DDE	ND	25.00	21.82	87	22.86	91	50-135	5	0-25	
4,4'-DDT	ND	25.00	20.14	81	20.97	84	50-135	4	0-25	
Delta-BHC	ND	25.00	21.38	86	22.44	90	50-135	5	0-25	
Dieldrin	ND	25.00	22.45	90	23.29	93	50-135	4	0-25	
Endosulfan I	ND	25.00	22.41	90	23.49	94	50-135	5	0-25	
Endosulfan II	ND	25.00	22.69	91	23.65	95	50-135	4	0-25	
Endosulfan Sulfate	ND	25.00	21.49	86	22.43	90	50-135	4	0-25	
Endrin	ND	25.00	22.56	90	23.45	94	50-135	4	0-25	
Endrin Aldehyde	ND	25.00	21.40	86	22.42	90	50-135	5	0-25	
Gamma-BHC	ND	25.00	22.01	88	22.82	91	50-135	4	0-25	
Heptachlor	ND	25.00	21.80	87	22.77	91	50-135	4	0-25	
Heptachlor Epoxide	ND	25.00	21.29	85	22.13	89	50-135	4	0-25	
Methoxychlor	ND	25.00	20.14	81	20.95	84	50-135	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1416-3	**Sample**	**Solid**	**GC 58**	**01/24/14**	**01/28/14 13:01**	**140124S19**
14-01-1416-3	**Matrix Spike**	**Solid**	**GC 58**	**01/24/14**	**01/28/14 11:49**	**140124S19**
14-01-1416-3	**Matrix Spike Duplicate**	**Solid**	**GC 58**	**01/24/14**	**01/28/14 12:07**	**140124S19**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	115.2	115	110.9	111	50-135	4	0-20	
Aroclor-1260	ND	100.0	125.8	126	117.9	118	50-135	7	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1383-1	**Sample**	**Solid**	**GC/MS TT**	**01/24/14**	**01/24/14 18:15**	**140124S06**
14-01-1383-1	**Matrix Spike**	**Solid**	**GC/MS TT**	**01/24/14**	**01/24/14 18:34**	**140124S06**
14-01-1383-1	**Matrix Spike Duplicate**	**Solid**	**GC/MS TT**	**01/24/14**	**01/24/14 18:52**	**140124S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	9.696	97	9.063	91	34-148	7	0-20	
Acenaphthylene	ND	10.00	9.741	97	9.102	91	53-120	7	0-20	
Butyl Benzyl Phthalate	ND	10.00	9.065	91	8.674	87	15-189	4	0-20	
4-Chloro-3-Methylphenol	ND	10.00	10.31	103	9.628	96	32-120	7	0-20	
2-Chlorophenol	ND	10.00	9.688	97	9.140	91	53-120	6	0-20	
1,4-Dichlorobenzene	ND	10.00	9.460	95	8.848	88	43-120	7	0-26	
Dimethyl Phthalate	ND	10.00	9.450	95	8.889	89	44-122	6	0-20	
2,4-Dinitrotoluene	ND	10.00	10.80	108	9.841	98	28-120	9	0-20	
Fluorene	ND	10.00	10.29	103	9.550	96	12-186	7	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	9.165	92	8.620	86	38-140	6	0-20	
Naphthalene	ND	10.00	9.588	96	8.939	89	20-140	7	0-20	
4-Nitrophenol	ND	10.00	9.482	95	8.993	90	14-128	5	0-59	
Pentachlorophenol	ND	10.00	8.274	83	8.190	82	10-124	1	0-20	
Phenol	ND	10.00	9.518	95	8.791	88	22-124	8	0-20	
Pyrene	ND	10.00	9.290	93	9.053	91	31-169	3	0-20	
1,2,4-Trichlorobenzene	ND	10.00	9.787	98	9.171	92	56-120	7	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B

Project: Port of Oakland Phase II

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1469-1	**Sample**	**Solid**	**GC/MS Q**	**01/24/14**	**01/25/14 11:52**	**140125S01**
14-01-1469-1	**Matrix Spike**	**Solid**	**GC/MS Q**	**01/24/14**	**01/25/14 12:18**	**140125S01**
14-01-1469-1	**Matrix Spike Duplicate**	**Solid**	**GC/MS Q**	**01/24/14**	**01/25/14 12:44**	**140125S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	46.63	93	45.04	90	61-127	3	0-20	
Carbon Tetrachloride	ND	50.00	47.13	94	46.99	94	51-135	0	0-29	
Chlorobenzene	ND	50.00	39.92	80	38.73	77	57-123	3	0-20	
1,2-Dibromoethane	ND	50.00	46.60	93	46.10	92	64-124	1	0-20	
1,2-Dichlorobenzene	ND	50.00	34.19	68	34.36	69	35-131	0	0-25	
1,2-Dichloroethane	ND	50.00	49.41	99	49.25	99	80-120	0	0-20	
1,1-Dichloroethene	ND	50.00	48.30	97	47.15	94	47-143	2	0-25	
Ethylbenzene	ND	50.00	44.13	88	43.09	86	57-129	2	0-22	
Toluene	ND	50.00	45.38	91	44.38	89	63-123	2	0-20	
Trichloroethene	ND	50.00	46.67	93	45.52	91	44-158	2	0-20	
Vinyl Chloride	ND	50.00	51.52	103	48.11	96	49-139	7	0-47	
p/m-Xylene	ND	100.0	84.31	84	81.42	81	70-130	3	0-30	
o-Xylene	ND	50.00	40.15	80	37.71	75	70-130	6	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	52.97	106	50.98	102	57-123	4	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	239.6	96	237.2	95	30-168	1	0-34	
Diisopropyl Ether (DIPE)	ND	50.00	53.67	107	52.05	104	57-129	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	53.47	107	52.18	104	55-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	49.76	100	48.16	96	58-124	3	0-20	
Ethanol	ND	500.0	558.2	112	581.6	116	17-167	4	0-47	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-6-0.5-1.0	**Sample**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 21:32**	**140124S01**
SB-6-0.5-1.0	**Matrix Spike**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 02:58**	**140124S01**
SB-6-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**GC/MS BB**	**01/24/14**	**01/25/14 03:25**	**140124S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	39.99	80	39.42	79	61-127	1	0-20	
Carbon Tetrachloride	ND	50.00	41.05	82	39.68	79	51-135	3	0-29	
Chlorobenzene	ND	50.00	36.66	73	36.22	72	57-123	1	0-20	
1,2-Dibromoethane	ND	50.00	41.04	82	40.34	81	64-124	2	0-20	
1,2-Dichlorobenzene	ND	50.00	31.70	63	31.80	64	35-131	0	0-25	
1,2-Dichloroethane	ND	50.00	39.99	80	39.15	78	80-120	2	0-20	3
1,1-Dichloroethene	ND	50.00	40.10	80	39.04	78	47-143	3	0-25	
Ethylbenzene	ND	50.00	40.77	82	40.07	80	57-129	2	0-22	
Toluene	ND	50.00	40.35	81	39.44	79	63-123	2	0-20	
Trichloroethene	ND	50.00	41.78	84	40.74	81	44-158	3	0-20	
Vinyl Chloride	ND	50.00	38.32	77	38.93	78	49-139	2	0-47	
p/m-Xylene	ND	100.0	76.13	76	75.10	75	70-130	1	0-30	
o-Xylene	ND	50.00	37.27	75	36.82	74	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	42.82	86	41.86	84	57-123	2	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	208.1	83	206.6	83	30-168	1	0-34	
Diisopropyl Ether (DIPE)	ND	50.00	42.97	86	42.94	86	57-129	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	42.87	86	42.15	84	55-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	41.28	83	40.94	82	58-124	1	0-20	
Ethanol	ND	500.0	431.2	86	433.3	87	17-167	0	0-47	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 1 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-420-775	**LCS**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 14:48**	**140127B04A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Motor Oil	400.0	366.8	92	75-123	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 2 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-947	**LCS**	**Solid**	**GC 46**	**01/27/14**	**01/28/14 13:55**	**140127B03A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	412.7	103	75-123	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 3 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1422	**LCS**	**Solid**	**GC 4**	**01/28/14**	**01/28/14 13:28**	**140128B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	9.457	95	70-124	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 4 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1418	**LCS**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 10:55**	**140125B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	9.401	94	70-124	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 5 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1419	**LCS**	**Solid**	**GC 22**	**01/25/14**	**01/25/14 10:55**	**140125B02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	9.401	94	70-124	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3050B
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-17953	**LCS**	**Solid**	**ICP 7300**	**01/27/14**	**01/28/14 16:51**	**140127L04**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	25.56	102	80-120	73-127	
Arsenic	25.00	25.94	104	80-120	73-127	
Barium	25.00	25.74	103	80-120	73-127	
Beryllium	25.00	25.29	101	80-120	73-127	
Cadmium	25.00	26.50	106	80-120	73-127	
Chromium	25.00	26.18	105	80-120	73-127	
Cobalt	25.00	28.87	115	80-120	73-127	
Copper	25.00	27.48	110	80-120	73-127	
Lead	25.00	27.69	111	80-120	73-127	
Molybdenum	25.00	25.88	104	80-120	73-127	
Nickel	25.00	27.19	109	80-120	73-127	
Selenium	25.00	25.01	100	80-120	73-127	
Silver	12.50	13.29	106	80-120	73-127	
Thallium	25.00	26.51	106	80-120	73-127	
Vanadium	25.00	25.35	101	80-120	73-127	
Zinc	25.00	27.94	112	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/24/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1415
Walnut Creek, CA 94597-7989		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Port of Oakland Phase II			Page 7 of 13

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-007-9995	**LCS**	**Solid**	**Mercury**	**01/27/14**	**01/27/14 18:39**	**140127L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8017	96	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-537-1602	**LCS**	**Solid**	**GC 44**	**01/24/14**	**01/24/14 14:47**	**140124L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Aldrin	25.00	22.97	92	50-135	36-149	
Alpha-BHC	25.00	23.50	94	50-135	36-149	
Beta-BHC	25.00	20.12	80	50-135	36-149	
4,4'-DDD	25.00	21.58	86	50-135	36-149	
4,4'-DDE	25.00	21.67	87	50-135	36-149	
4,4'-DDT	25.00	20.08	80	50-135	36-149	
Delta-BHC	25.00	21.94	88	50-135	36-149	
Dieldrin	25.00	22.88	92	50-135	36-149	
Endosulfan I	25.00	23.38	94	50-135	36-149	
Endosulfan II	25.00	23.39	94	50-135	36-149	
Endosulfan Sulfate	25.00	21.66	87	50-135	36-149	
Endrin	25.00	22.70	91	50-135	36-149	
Endrin Aldehyde	25.00	21.79	87	50-135	36-149	
Gamma-BHC	25.00	22.64	91	50-135	36-149	
Heptachlor	25.00	22.60	90	50-135	36-149	
Heptachlor Epoxide	25.00	21.03	84	50-135	36-149	
Methoxychlor	25.00	19.29	77	50-135	36-149	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-2460	**LCS**	**Solid**	**GC 58**	**01/24/14**	**01/28/14 11:13**	**140124L19A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	121.2	121	50-135	
Aroclor-1260	100.0	90.72	91	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-549-2830	**LCS**	**Solid**	**GC/MS TT**	**01/24/14**	**01/24/14 17:56**	**140124L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acenaphthene	10.00	9.436	94	51-123	39-135	
Acenaphthylene	10.00	9.533	95	52-120	41-131	
Butyl Benzyl Phthalate	10.00	9.022	90	43-139	27-155	
4-Chloro-3-Methylphenol	10.00	10.42	104	55-121	44-132	
2-Chlorophenol	10.00	9.652	97	58-124	47-135	
1,4-Dichlorobenzene	10.00	9.307	93	42-132	27-147	
Dimethyl Phthalate	10.00	9.495	95	51-123	39-135	
2,4-Dinitrotoluene	10.00	10.68	107	51-129	38-142	
Fluorene	10.00	10.02	100	54-126	42-138	
N-Nitroso-di-n-propylamine	10.00	8.990	90	40-136	24-152	
Naphthalene	10.00	9.248	92	32-146	13-165	
4-Nitrophenol	10.00	10.64	106	24-126	7-143	
Pentachlorophenol	10.00	9.737	97	23-131	5-149	
Phenol	10.00	9.453	95	40-130	25-145	
Pyrene	10.00	9.221	92	47-143	31-159	
1,2,4-Trichlorobenzene	10.00	9.541	95	45-129	31-143	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8091	**LCS**	**Solid**	**GC/MS Q**	**01/25/14**	**01/25/14 10:03**	**140125L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	50.66	101	78-120	71-127	
Carbon Tetrachloride	50.00	52.81	106	49-139	34-154	
Chlorobenzene	50.00	47.26	95	79-120	72-127	
1,2-Dibromoethane	50.00	48.87	98	80-120	73-127	
1,2-Dichlorobenzene	50.00	45.52	91	75-120	68-128	
1,2-Dichloroethane	50.00	52.25	105	80-120	73-127	
1,1-Dichloroethene	50.00	51.03	102	74-122	66-130	
Ethylbenzene	50.00	51.56	103	76-120	69-127	
Toluene	50.00	50.60	101	77-120	70-127	
Trichloroethene	50.00	50.82	102	80-120	73-127	
Vinyl Chloride	50.00	53.11	106	68-122	59-131	
p/m-Xylene	100.0	98.89	99	75-125	67-133	
o-Xylene	50.00	46.51	93	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	52.69	105	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	243.8	98	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	55.34	111	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	54.24	108	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.65	101	75-120	68-128	
Ethanol	500.0	547.4	109	56-140	42-154	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8085	**LCS**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 19:40**	**140124L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	44.43	89	78-120	71-127	
Carbon Tetrachloride	50.00	45.56	91	49-139	34-154	
Chlorobenzene	50.00	44.42	89	79-120	72-127	
1,2-Dibromoethane	50.00	48.36	97	80-120	73-127	
1,2-Dichlorobenzene	50.00	44.35	89	75-120	68-128	
1,2-Dichloroethane	50.00	47.88	96	80-120	73-127	
1,1-Dichloroethene	50.00	44.07	88	74-122	66-130	
Ethylbenzene	50.00	46.80	94	76-120	69-127	
Toluene	50.00	45.16	90	77-120	70-127	
Trichloroethene	50.00	45.96	92	80-120	73-127	
Vinyl Chloride	50.00	45.53	91	68-122	59-131	
p/m-Xylene	100.0	89.86	90	75-125	67-133	
o-Xylene	50.00	44.22	88	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	46.80	94	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	239.9	96	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	46.66	93	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.15	96	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.07	96	75-120	68-128	
Ethanol	500.0	488.8	98	56-140	42-154	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8086	**LCS**	**Solid**	**GC/MS BB**	**01/24/14**	**01/24/14 19:40**	**140124L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	44.43	89	78-120	71-127	
Carbon Tetrachloride	50.00	45.56	91	49-139	34-154	
Chlorobenzene	50.00	44.42	89	79-120	72-127	
1,2-Dibromoethane	50.00	48.36	97	80-120	73-127	
1,2-Dichlorobenzene	50.00	44.35	89	75-120	68-128	
1,2-Dichloroethane	50.00	47.88	96	80-120	73-127	
1,1-Dichloroethene	50.00	44.07	88	74-122	66-130	
Ethylbenzene	50.00	46.80	94	76-120	69-127	
Toluene	50.00	45.16	90	77-120	70-127	
Trichloroethene	50.00	45.96	92	80-120	73-127	
Vinyl Chloride	50.00	45.53	91	68-122	59-131	
p/m-Xylene	100.0	89.86	90	75-125	67-133	
o-Xylene	50.00	44.22	88	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	46.80	94	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	239.9	96	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	46.66	93	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.15	96	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.07	96	75-120	68-128	
Ethanol	500.0	488.8	98	56-140	42-154	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1415 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3050B	469	ICP 7300	1
EPA 7471A	EPA 7471A Total	769	Mercury	1
EPA 8015B (M)	EPA 3550B	847	GC 46	1
EPA 8015B (M)	EPA 5030C	834	GC 4	2
EPA 8015B (M)	EPA 5030C	834	GC 22	2
EPA 8081A	EPA 3545	842	GC 44	1
EPA 8082	EPA 3545	669	GC 58	1
EPA 8260B	EPA 5030C	823	GC/MS BB	2
EPA 8260B	EPA 5030C	900	GC/MS Q	2
EPA 8270C	EPA 3545	449	GC/MS TT	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1415 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

14-01-1415

NO: 07897

1277 Treat Boulevard, Suite 500 • Walnut Creek, CA • 94597 • (925) 946-0455 • FAX (925) 946-9968

Page 1 of 2

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B[signature]

RECEIVING LABORATORY: Calscience

REQUESTED PARAMETERS: TPHg w/ VOCs (8260B) +fuel oxygenates; TPH d/mo (8015M w/ silica gel cleanup); SVOCs (8270C); Organochlorine Pesticides; PCBs (8081A/8082); CA Title 22 Metals (6010/7000 series)

	SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	SOIL	WATER	GAS	TPHg VOCs (8260B)	TPH d/mo (8015M)	SVOCs (8270C)	Organochlorine Pesticides; PCBs	CA Title 22 Metals	Remarks
1	SB-6-0.5-1.0	1/23/14	840		X	~~hand auger~~ slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X	
(*)2	SB-6-2.5-3.0	1/23/14	851		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X	HOLD
3	SB-6-7.0-7.5	1/23/14	907		X	↓	—	Y	2"x6"	1	X			X	X	X	(*)	X	~~HOLD~~ BB
	~~SB-5-0.5-1.0~~	~~1/23/14~~	~~935~~		~~X~~	~~slide hammer~~	~~—~~	~~Y~~	~~2"x6"~~	~~1~~	~~X~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	BB
4	SB-5-0.5-1.0	1/23/14	1000		X	↓	—	Y	2"x6"	1	X			X	X	X	X	X	
5	SB-5-6.5-7.0	1/23/14	1018		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	(*)	X	
(*)6	SB-2-1.0-1.5	1/23/14	1048		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X	HOLD
7	SB-2-1.5-2.0	1/23/14	1055			↓	—	Y	2"x6"	1	X			X	X	X	X	X	
(*)8	SB-2-5.0-5.5	1/23/14	1120		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	HOLD
9	SB-2-8.5-9.0	1/23/14	1135		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey [signature]	1/23/14	1510	Tom O'Malley CEL	1/23/14	1510
Tom O'Malley TO 650	1/23/14	1730	[signature]	1/24/14	1030

FIELD REMARKS:
(*): hold pending shallow analytical results
-Standard TAT

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS

SEND REPORT TO: bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

(THIS) **NO:** 07898

1277 Treat Boulevard, Suite 500 • Walnut Creek, CA • 94597 • (925) 946-0455 • FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B[signature]

RECEIVING LABORATORY: Calscience

REQUESTED PARAMETERS

	SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	SOIL	WATER	GAS	TPHg; VOCs (8260B) full fuel oxygenates	SVOCs (8270C)	TPHd/mo (8015M w/ silica gel cleanup)	Organochlorine Pesticides; PCBs (8081A/8082)	CA Title 22 Metals (6010/7000 series)	
10	SB-2-14.0-14.5	1/23/14	1224		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	
11 (*)	SB-9-1.0-1.5	1/23/14	1310		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	HOLD PENDING SHALLOW RESULTS
12	SB-9-2.5-3.0	1/23/14	1320		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	
13	SB-9-6.0-6.5	1/23/14	1350		X	hand auger	—	Y	2"x6"	1	X			X	X	X	(*)	X	
14	SB-9-11.5-12.0	1/23/14	1345		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	
15	SB-8-0.5-1.0	1/23/14	1422		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	
16	SB-8-6.0-6.5	1/23/14	1433		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	

BB

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey B[signature]	1/23/14	1510	Tom O'Malley CEL	1/23/14	1510
Tom O'Malley to GSO	1/23/14	1730	Preeya [signature]	1/24/14	1030

FIELD REMARKS

(*) = hold pending analytical results of shallow sample.

- Standard TAT

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS

SEND REPORT TO: bailey.blosser@erm.com

WHITE – LABORATORY COPY   CANARY – FIELD COPY   PINK – DATABASE   GOLD – PROJECT FILE

Return to Contents

GSO

WebShip > > > > >

800-322-5555 www.gso.com

1415

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ERM

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523751000

NPS

ORC

A

GARDEN GROVE

D92843A

20490786

Print Date : 01/23/14 16:18 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1414 15

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ERM

DATE: 01/24/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (S|B|P) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 739

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

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Calscience Environmental Laboratories, Inc.

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1415

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM - West

Client Project Name: Port of Oakland Phase II / 0231462.02

Attention: Bailey Blosser
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Approved for release on 02/14/2014 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Port of Oakland Phase II / 0231462.02
Work Order Number: 14-01-1415

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1415 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/24/14. They were assigned to Work Order 14-01-1415.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client:	ERM - West 1277 Treat Boulevard, Suite 500 Walnut Creek, CA 94597-7989	Work Order:	14-01-1415
		Project Name:	Port of Oakland Phase II / 0231462.02
		PO Number:	
		Date/Time Received:	01/24/14 10:30
		Number of Containers:	16
Attn:	Bailey Blosser		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SB-5-6.5-7.0	14-01-1415-5	01/23/14 10:18	1	Solid
SB-8-6.0-6.5	14-01-1415-16	01/23/14 14:33	1	Solid

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 15:50**	**140210L06**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	ET
Alpha-BHC	ND	5.0	1	ET
Beta-BHC	ND	5.0	1	ET
Chlordane	ND	50	1	ET
4,4'-DDD	ND	5.0	1	ET
4,4'-DDE	ND	5.0	1	ET
4,4'-DDT	ND	5.0	1	ET
Delta-BHC	ND	5.0	1	ET
Dieldrin	ND	5.0	1	ET
Endosulfan I	ND	5.0	1	ET
Endosulfan II	ND	5.0	1	ET
Endosulfan Sulfate	ND	5.0	1	ET
Endrin	ND	5.0	1	ET
Endrin Aldehyde	ND	5.0	1	ET
Endrin Ketone	ND	5.0	1	ET
Gamma-BHC	ND	5.0	1	ET
Heptachlor	ND	5.0	1	ET
Heptachlor Epoxide	ND	5.0	1	ET
Methoxychlor	ND	5.0	1	ET
Toxaphene	ND	100	1	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	72	24-168	
2,4,5,6-Tetrachloro-m-Xylene	59	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 16:05**	**140210L06**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	ET
Alpha-BHC	ND	5.0	1	ET
Beta-BHC	ND	5.0	1	ET
Chlordane	ND	50	1	ET
4,4'-DDD	ND	5.0	1	ET
4,4'-DDE	ND	5.0	1	ET
4,4'-DDT	ND	5.0	1	ET
Delta-BHC	ND	5.0	1	ET
Dieldrin	ND	5.0	1	ET
Endosulfan I	ND	5.0	1	ET
Endosulfan II	ND	5.0	1	ET
Endosulfan Sulfate	ND	5.0	1	ET
Endrin	ND	5.0	1	ET
Endrin Aldehyde	ND	5.0	1	ET
Endrin Ketone	ND	5.0	1	ET
Gamma-BHC	ND	5.0	1	ET
Heptachlor	ND	5.0	1	ET
Heptachlor Epoxide	ND	5.0	1	ET
Methoxychlor	ND	5.0	1	ET
Toxaphene	ND	100	1	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	77	24-168	
2,4,5,6-Tetrachloro-m-Xylene	57	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-537-1609**	**N/A**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 14:53**	**140210L06**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	103	24-168	
2,4,5,6-Tetrachloro-m-Xylene	101	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5-6.5-7.0	**14-01-1415-5-A**	**01/23/14 10:18**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 14:51**	**140210L07**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	ET
Aroclor-1221	ND	50	1	ET
Aroclor-1232	ND	50	1	ET
Aroclor-1242	ND	50	1	ET
Aroclor-1248	ND	50	1	ET
Aroclor-1254	ND	50	1	ET
Aroclor-1260	ND	50	1	ET
Aroclor-1262	ND	50	1	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	86	24-168	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8-6.0-6.5	**14-01-1415-16-A**	**01/23/14 14:33**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 15:10**	**140210L07**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	ET
Aroclor-1221	ND	50	1	ET
Aroclor-1232	ND	50	1	ET
Aroclor-1242	ND	50	1	ET
Aroclor-1248	ND	50	1	ET
Aroclor-1254	ND	50	1	ET
Aroclor-1260	ND	50	1	ET
Aroclor-1262	ND	50	1	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	85	24-168	
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-2474**	**N/A**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 11:40**	**140210L07**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	90	24-168	
2,4,5,6-Tetrachloro-m-Xylene	105	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A

Project: Port of Oakland Phase II / 0231462.02

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-02-0509-3	**Sample**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 16:19**	**140210S06**
14-02-0509-3	**Matrix Spike**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 15:22**	**140210S06**
14-02-0509-3	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 15:36**	**140210S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	25.00	22.04	88	20.75	83	50-135	6	0-25	
Alpha-BHC	ND	25.00	22.71	91	21.70	87	50-135	5	0-25	
Beta-BHC	ND	25.00	20.64	83	19.73	79	50-135	5	0-25	
4,4'-DDD	ND	25.00	22.72	91	21.13	85	50-135	7	0-25	
4,4'-DDE	ND	25.00	22.18	89	20.85	83	50-135	6	0-25	
4,4'-DDT	ND	25.00	23.28	93	21.74	87	50-135	7	0-25	
Delta-BHC	ND	25.00	22.12	88	21.20	85	50-135	4	0-25	
Dieldrin	ND	25.00	22.69	91	21.06	84	50-135	7	0-25	
Endosulfan I	ND	25.00	22.36	89	20.73	83	50-135	8	0-25	
Endosulfan II	ND	25.00	23.00	92	21.20	85	50-135	8	0-25	
Endosulfan Sulfate	ND	25.00	21.34	85	19.64	79	50-135	8	0-25	
Endrin	ND	25.00	24.57	98	23.22	93	50-135	6	0-25	
Endrin Aldehyde	ND	25.00	20.14	81	18.71	75	50-135	7	0-25	
Gamma-BHC	ND	25.00	22.15	89	21.03	84	50-135	5	0-25	
Heptachlor	ND	25.00	22.01	88	20.89	84	50-135	5	0-25	
Heptachlor Epoxide	ND	25.00	21.21	85	19.27	77	50-135	10	0-25	
Methoxychlor	ND	25.00	21.10	84	19.32	77	50-135	9	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082

Project: Port of Oakland Phase II / 0231462.02

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-02-0509-13	**Sample**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 12:38**	**140210S07**
14-02-0509-13	**Matrix Spike**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 13:54**	**140210S07**
14-02-0509-13	**Matrix Spike Duplicate**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 14:32**	**140210S07**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	91.22	91	98.14	98	50-135	7	0-20	
Aroclor-1260	ND	100.0	82.36	82	84.36	84	50-135	2	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II / 0231462.02

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-537-1609	**LCS**	**Solid**	**GC 44**	**02/10/14**	**02/11/14 15:07**	**140210L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Aldrin	25.00	22.85	91	50-135	36-149	
Alpha-BHC	25.00	22.91	92	50-135	36-149	
Beta-BHC	25.00	20.79	83	50-135	36-149	
4,4'-DDD	25.00	20.87	83	50-135	36-149	
4,4'-DDE	25.00	21.92	88	50-135	36-149	
4,4'-DDT	25.00	22.42	90	50-135	36-149	
Delta-BHC	25.00	21.13	85	50-135	36-149	
Dieldrin	25.00	23.87	95	50-135	36-149	
Endosulfan I	25.00	24.71	99	50-135	36-149	
Endosulfan II	25.00	24.58	98	50-135	36-149	
Endosulfan Sulfate	25.00	23.34	93	50-135	36-149	
Endrin	25.00	22.64	91	50-135	36-149	
Endrin Aldehyde	25.00	24.75	99	50-135	36-149	
Gamma-BHC	25.00	22.57	90	50-135	36-149	
Heptachlor	25.00	22.89	92	50-135	36-149	
Heptachlor Epoxide	25.00	21.45	86	50-135	36-149	
Methoxychlor	25.00	22.33	89	50-135	36-149	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II / 0231462.02

Date Received: 01/24/14
Work Order: 14-01-1415
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-2474	**LCS**	**Solid**	**GC 31**	**02/10/14**	**02/13/14 11:21**	**140210L07**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	76.08	76	50-135	
Aroclor-1260	100.0	71.89	72	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1415 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8081A	EPA 3545	842	GC 44	1
EPA 8082	EPA 3545	669	GC 31	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1415 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Virendra Patel

From: Bailey Blosser [Bailey.Blosser@erm.com]
Sent: Friday, February 07, 2014 4:24 PM
To: Virendra Patel
Cc: Emma Dennison
Subject: RE: Port of Oakland Phase II / CEL 14-01-1599 - Final PDF and EDD files.

Hi Virendra,
Per our conversation, I would like to run two of the samples we currently have on hold. Please run the following samples for **PCBs and Organochlorine Pesticides only**:

SB-5-6.5-7.0 (1/23/2014) ⟶ 14-01-1415-5
SB-8-6.0-6.5 (1/23/2014) ⟶ 14-01-1415-16

Also per our discussion, we would like to get our draft report to the client by end of next week, so if we could have this data by next Friday2/14 that would be much appreciated. Please let me know if you have any further questions or comments. Thanks and have a nice weekend!

Thanks,
Bailey

bailey.blosser@erm.com | (O) 925.482.3204 | (M) 954.205.4702

From: Virendra Patel [mailto:vpatel@calscience.com]
Sent: Thursday, February 06, 2014 10:10 AM
To: Bailey Blosser
Cc: Emma Dennison
Subject: Port of Oakland Phase II / CEL 14-01-1599 - Final PDF and EDD files.

<<14-01-1599.pdf>> <<14011599.xls>>

Final PDF and EDD files attached for the subject project samples collected on 01/23/2014. **Note, final hard copies of the report will not be mailed to your attention, therefore, we ask that you print the attached files and accept them as final.** Please call with any questions or concerns.

Best Regards,

Virendra Patel
Project Manager

Calscience

7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
www.calscience.com

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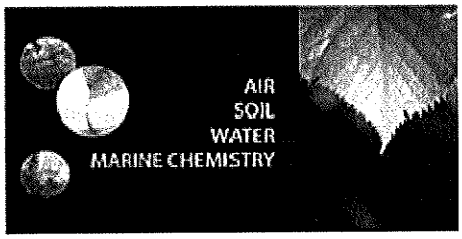

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

14-01-1415

NO: 07897

Page 1 of 2

1277 Treat Boulevard, Suite 500 ● Walnut Creek, CA ● 94597 ● (925) 946-0455 ● FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B

RECEIVING LABORATORY: Calscience

REQUESTED PARAMETERS: TPHg + VOCs (8260B) w/ fuel oxygenates; TPHd/mo (8015M w/ silica gel cleanup); SVOCs (8270C); Organochlorine Pesticides + PCBs (8081A/8082); CA Title 22 Metals (6010/7000 series); BB

	SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	SOIL	WATER	GAS	TPHg + VOCs (8260B)	TPHd/mo (8015M)	SVOCs (8270C)	Organochlorine Pesticides + PCBs (8081A/8082)	CA Title 22 Metals (6010/7000 series)					
1	SB-6-0.5-1.0	1/23/14	840		X	~~auger~~ hand slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X					
(*) 2	SB-6-2.5-3.0	1/23/14	851		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X	H	O	L	D	
3	SB-6-7.0-7.5	1/23/14	907		X	↓	—	Y	2"x6"	1	X			X	X	X	(*)	X	~~HOLD~~ BB				
	~~SB-6-0.5-1.0~~	~~1/23/14~~	~~935~~		~~X~~	~~slide hammer~~	~~—~~	~~Y~~	~~2"x6"~~	~~1~~	~~X~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~					BB
4	SB-5-0.5-1.0	1/23/14	1000		X	↓	—	Y	2"x6"	1	X			X	X	X	X	X					
5	SB-5-6.5-7.0	1/23/14	1018		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	(*)	X					
(*) 6	SB-2-1.0-1.5	1/23/14	1048		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	X	X	H	O	L	D	
7	SB-2-1.5-2.0	1/23/14	1055			↓	—	Y	2"x6"	1	X			X	X	X	X	X					
(*) 8	SB-2-5.0-5.5	1/23/14	1120		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X		H	O	L	D
9	SB-2-8.5-9.0	1/23/14	1135		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X					

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey B	1/23/14	1510	Tom O'Malley CEL	1/23/14	1510
Tom O'Malley TO 6-50	1/23/14	1730	[illegible signature]	1/24/14	1030

FIELD REMARKS:
(*) = hold pending shallow analytical results
-Standard TAT

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO: bailey.blosser@erm.com

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WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

(1415)

NO: 07898

1277 Treat Boulevard, Suite 500 ● Walnut Creek, CA ● 94597 ● (925) 946-0455 ● FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B

RECEIVING LABORATORY: Calscience

	SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	MATRIX: GAS	REQUESTED PARAMETERS: TPHg : VOCs (8260B)	SVOCs (8270C)	TPHd/mo (8015M w silica gel cleanup)	Organochlorine Pesticides + PCBs (8082)	CA Title 22 Metals (6010/7000 Series)	FIELD REMARKS
10	SB-2-14.0-14.5	1/23/14	1224		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	
11	SB-9-1.0-1.5	1/23/14	1310		X	~~then~~ slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	HOLD PENDING SHALLOW RESULTS
12	SB-9-2.5-3.0	1/23/14	1320		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	
13	SB-9-6.0-6.5	1/23/14	1350		X	hand auger	—	Y	2" x6"	1	X			X	X	X	(*)	X	
14	SB-9-11.5-12.0	1/23/14	1345		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	
15	SB-8-0.5-1.0	1/23/14	1422		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X	
16	SB-8-6.0-6.5	1/23/14	1433		X	direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X	

BB

BB

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey B	1/23/14	1510	Tom O'Malley CEC	1/23/14	1510
Tom O'Malley TO 650	1/23/14	1730	Preeya N. CEC	1/24/14	1030

FIELD REMARKS:
(*) = hold pending analytical results of shallow sample.
-Standard TAT

REMARKS ON SAMPLE RECEIPT
☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO:
bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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GSO

WebShip > > > > >

800-322-5555 www.gso.com

1415

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ERM

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523751000

NPS

ORC

A

GARDEN GROVE

D92843A

20490786

Print Date : 01/23/14 16:18 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-[1][4][1][5]

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ERM

DATE: 01/24/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (S|B|P) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 739

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

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Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1599

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM - West

Client Project Name: Port of Oakland Phase II

Attention: Bailey Blosser
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Approved for release on 02/06/2014 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Client Project Name: Port of Oakland Phase II
Work Order Number: 14-01-1599

Calscience Environmental Laboratories, Inc.

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1599 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/28/14. They were assigned to Work Order 14-01-1599.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
PO Number:
Date/Time Received: 01/28/14 10:20
Number of Containers: 89

Attn: Bailey Blosser

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SB-3-0.5-1.0	14-01-1599-1	01/23/14 15:15	1	Solid
SB-3-6.0-6.5	14-01-1599-2	01/23/14 15:20	1	Solid
SB-6	14-01-1599-3	01/23/14 16:00	3	Aqueous
SB-5	14-01-1599-4	01/23/14 16:15	7	Aqueous
SB-9	14-01-1599-5	01/23/14 16:35	9	Aqueous
SB-5	14-01-1599-6	01/24/14 08:38	2	Aqueous
SB-10-0.5-1.0	14-01-1599-7	01/24/14 07:34	1	Solid
SB-4-0.5-1.0	14-01-1599-8	01/24/14 07:58	1	Solid
SB-4-7.0-7.5	14-01-1599-9	01/24/14 08:11	1	Solid
SB-5	14-01-1599-10	01/24/14 08:41	1	Aqueous
SB-7-0.5-1.0	14-01-1599-11	01/24/14 09:00	1	Solid
SB-7-7.0-7.5	14-01-1599-12	01/24/14 09:10	1	Solid
SB-9	14-01-1599-13	01/24/14 09:12	1	Aqueous
SB-6	14-01-1599-14	01/24/14 09:35	4	Aqueous
SB-10-6.0-6.5	14-01-1599-15	01/24/14 09:57	1	Solid
SB-2	14-01-1599-16	01/24/14 10:25	10	Aqueous
SB-2-DUP	14-01-1599-17	01/24/14 10:25	10	Aqueous
SB-3	14-01-1599-18	01/24/14 12:50	10	Aqueous
SB-8	14-01-1599-19	01/24/14 13:45	10	Aqueous
SB-6	14-01-1599-20	01/24/14 14:19	1	Aqueous
SB-7	14-01-1599-21	01/24/14 14:45	8	Aqueous
Waste Soil	14-01-1599-22	01/24/14 15:20	1	Solid
Trip Blank1	14-01-1599-23	01/24/14 16:00	2	Aqueous
Trip Blank2	14-01-1599-24	01/24/14 16:00	2	Aqueous

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-3-0.5-1.0 (14-01-1599-1)						
Arsenic	1.77		0.769	mg/kg	EPA 6010B	EPA 3050B
Barium	61.2		0.513	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.68		0.256	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.33		0.256	mg/kg	EPA 6010B	EPA 3050B
Copper	25.8		0.513	mg/kg	EPA 6010B	EPA 3050B
Lead	5.15		0.513	mg/kg	EPA 6010B	EPA 3050B
Nickel	6.79		0.256	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.6		0.256	mg/kg	EPA 6010B	EPA 3050B
Zinc	66.0		1.03	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.134		0.0820	mg/kg	EPA 7471A	EPA 7471A Total
SB-3-6.0-6.5 (14-01-1599-2)						
Arsenic	0.921		0.773	mg/kg	EPA 6010B	EPA 3050B
Barium	46.4		0.515	mg/kg	EPA 6010B	EPA 3050B
Chromium	28.3		0.258	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.45		0.258	mg/kg	EPA 6010B	EPA 3050B
Copper	9.34		0.515	mg/kg	EPA 6010B	EPA 3050B
Lead	2.16		0.515	mg/kg	EPA 6010B	EPA 3050B
Nickel	13.9		0.258	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.5		0.258	mg/kg	EPA 6010B	EPA 3050B
Zinc	20.1		1.03	mg/kg	EPA 6010B	EPA 3050B
SB-5 (14-01-1599-4)						
TPH as Diesel	53	SG,HD	50	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Gasoline	140		50	ug/L	EPA 8015B (M)	EPA 5030C
Benzene	0.54		0.50	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	2.7		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	5.7		1.0	ug/L	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	4.0		1.0	ug/L	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	1.2		1.0	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	11		1.0	ug/L	EPA 8260B	EPA 5030C
o-Xylene	3.6		1.0	ug/L	EPA 8260B	EPA 5030C

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-9 (14-01-1599-5)						
TPH as Diesel	60000	SG,HD	500	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Gasoline	130000		5000	ug/L	EPA 8015B (M)	EPA 5030C
Benzene	10000		50	ug/L	EPA 8260B	EPA 5030C
n-Butylbenzene	370		100	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	6300		100	ug/L	EPA 8260B	EPA 5030C
Isopropylbenzene	220		100	ug/L	EPA 8260B	EPA 5030C
n-Propylbenzene	810		100	ug/L	EPA 8260B	EPA 5030C
Toluene	38000		250	ug/L	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	6600		100	ug/L	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	1800		100	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	24000		100	ug/L	EPA 8260B	EPA 5030C
o-Xylene	10000		100	ug/L	EPA 8260B	EPA 5030C
Methyl-t-Butyl Ether (MTBE)	160		100	ug/L	EPA 8260B	EPA 5030C
2-Methylnaphthalene	180		49	ug/L	EPA 8270C	EPA 3510C
1-Methylnaphthalene	99		49	ug/L	EPA 8270C	EPA 3510C
2-Methylphenol	76		49	ug/L	EPA 8270C	EPA 3510C
3/4-Methylphenol	130		49	ug/L	EPA 8270C	EPA 3510C
Naphthalene	550		49	ug/L	EPA 8270C	EPA 3510C
SB-10-0.5-1.0 (14-01-1599-7)						
Arsenic	2.51		0.718	mg/kg	EPA 6010B	EPA 3050B
Barium	125		0.478	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.317		0.239	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.95		0.239	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.30		0.239	mg/kg	EPA 6010B	EPA 3050B
Copper	29.1		0.478	mg/kg	EPA 6010B	EPA 3050B
Lead	5.37		0.478	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.61		0.239	mg/kg	EPA 6010B	EPA 3050B
Vanadium	26.6		0.239	mg/kg	EPA 6010B	EPA 3050B
Zinc	86.1		0.957	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.139		0.0845	mg/kg	EPA 7471A	EPA 7471A Total

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-4-0.5-1.0 (14-01-1599-8)						
Antimony	1.16		0.754	mg/kg	EPA 6010B	EPA 3050B
Arsenic	13.3		0.754	mg/kg	EPA 6010B	EPA 3050B
Barium	309		0.503	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.522		0.251	mg/kg	EPA 6010B	EPA 3050B
Cadmium	4.98		0.503	mg/kg	EPA 6010B	EPA 3050B
Chromium	36.2		0.251	mg/kg	EPA 6010B	EPA 3050B
Cobalt	9.65		0.251	mg/kg	EPA 6010B	EPA 3050B
Copper	385		0.503	mg/kg	EPA 6010B	EPA 3050B
Lead	1670		0.503	mg/kg	EPA 6010B	EPA 3050B
Nickel	43.1		0.251	mg/kg	EPA 6010B	EPA 3050B
Vanadium	23.8		0.251	mg/kg	EPA 6010B	EPA 3050B
Zinc	2080		1.01	mg/kg	EPA 6010B	EPA 3050B
Mercury	1.55		0.0835	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	380	SG,HD	250	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	70	SG,HD	50	mg/kg	EPA 8015B (M)	EPA 3550B
4,4'-DDD	26		5.0	ug/kg	EPA 8081A	EPA 3545
4,4'-DDT	28		5.0	ug/kg	EPA 8081A	EPA 3545
Fluoranthene	1.4		0.99	mg/kg	EPA 8270C	EPA 3545
Pyrene	1.4		0.99	mg/kg	EPA 8270C	EPA 3545
SB-4-7.0-7.5 (14-01-1599-9)						
Arsenic	1.48		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	54.7		0.510	mg/kg	EPA 6010B	EPA 3050B
Chromium	34.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.08		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	16.8		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	25.6		0.510	mg/kg	EPA 6010B	EPA 3050B
Nickel	24.9		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	23.6		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	37.5		1.02	mg/kg	EPA 6010B	EPA 3050B
SB-5 (14-01-1599-10)						
Barium	0.159		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Molybdenum	0.0171		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0271		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.

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Calscience Environmental Laboratories, Inc.

Detections Summary

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Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-7-0.5-1.0 (14-01-1599-11)						
Antimony	4.88		0.750	mg/kg	EPA 6010B	EPA 3050B
Arsenic	8.30		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	99.4		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.265		0.250	mg/kg	EPA 6010B	EPA 3050B
Cadmium	1.59		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	42.0		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.79		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	1100		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	1340		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	21.7		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	27.0		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	515		1.00	mg/kg	EPA 6010B	EPA 3050B
Mercury	3.34		0.834	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	58	SG,HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	22	SG,HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
Tetrachloroethene	6.0		5.2	ug/kg	EPA 8260B	EPA 5030C
SB-7-7.0-7.5 (14-01-1599-12)						
Arsenic	1.98		0.735	mg/kg	EPA 6010B	EPA 3050B
Barium	55.4		0.490	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.294		0.245	mg/kg	EPA 6010B	EPA 3050B
Chromium	42.7		0.245	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.28		0.245	mg/kg	EPA 6010B	EPA 3050B
Copper	14.8		0.490	mg/kg	EPA 6010B	EPA 3050B
Lead	13.7		0.490	mg/kg	EPA 6010B	EPA 3050B
Nickel	31.6		0.245	mg/kg	EPA 6010B	EPA 3050B
Vanadium	28.8		0.245	mg/kg	EPA 6010B	EPA 3050B
Zinc	29.1		0.980	mg/kg	EPA 6010B	EPA 3050B
SB-9 (14-01-1599-13)						
Arsenic	0.0248		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Barium	0.179		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Silver	0.00637		0.00500	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0183		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-10-6.0-6.5 (14-01-1599-15)						
Barium	28.5		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	29.4		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	1.90		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	11.1		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	1.32		0.505	mg/kg	EPA 6010B	EPA 3050B
Nickel	9.56		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.4		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	11.6		1.01	mg/kg	EPA 6010B	EPA 3050B

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Detections Summary

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-2 (14-01-1599-16)						
Arsenic	0.0183		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Barium	0.299		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Nickel	0.0167		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Zinc	0.0119		0.0100	mg/L	EPA 6010B	EPA 3010A Total
TPH as Motor Oil	480	SG,HD	250	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Diesel	19000	SG,HD	500	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Gasoline	63000		5000	ug/L	EPA 8015B (M)	EPA 5030C
Benzene	1800		50	ug/L	EPA 8260B	EPA 5030C
n-Butylbenzene	760		100	ug/L	EPA 8260B	EPA 5030C
sec-Butylbenzene	150		100	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	6800		100	ug/L	EPA 8260B	EPA 5030C
Isopropylbenzene	390		100	ug/L	EPA 8260B	EPA 5030C
Naphthalene	1400		1000	ug/L	EPA 8260B	EPA 5030C
n-Propylbenzene	1500		100	ug/L	EPA 8260B	EPA 5030C
Toluene	15000		100	ug/L	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	9900		100	ug/L	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	2900		100	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	26000		100	ug/L	EPA 8260B	EPA 5030C
o-Xylene	10000		100	ug/L	EPA 8260B	EPA 5030C
Anthracene	120		97	ug/L	EPA 8270C	EPA 3510C
Benzo (a) Anthracene	170		97	ug/L	EPA 8270C	EPA 3510C
Benzo (a) Pyrene	100		97	ug/L	EPA 8270C	EPA 3510C
Benzo (k) Fluoranthene	98		97	ug/L	EPA 8270C	EPA 3510C
Chrysene	140		97	ug/L	EPA 8270C	EPA 3510C
Fluoranthene	460		97	ug/L	EPA 8270C	EPA 3510C
2-Methylnaphthalene	390		97	ug/L	EPA 8270C	EPA 3510C
1-Methylnaphthalene	210		97	ug/L	EPA 8270C	EPA 3510C
Naphthalene	780		97	ug/L	EPA 8270C	EPA 3510C
Phenanthrene	520		97	ug/L	EPA 8270C	EPA 3510C
Pyrene	430		97	ug/L	EPA 8270C	EPA 3510C

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Detections Summary

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Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-2-DUP (14-01-1599-17)						
Arsenic	0.0189		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Barium	0.225		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Nickel	0.0157		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Zinc	0.0129		0.0100	mg/L	EPA 6010B	EPA 3010A Total
TPH as Motor Oil	360	SG,HD	250	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Diesel	14000	SG,HD	500	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Gasoline	14000		500	ug/L	EPA 8015B (M)	EPA 5030C
Benzene	1300		5.0	ug/L	EPA 8260B	EPA 5030C
n-Butylbenzene	17		10	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	1300		10	ug/L	EPA 8260B	EPA 5030C
Isopropylbenzene	63		10	ug/L	EPA 8260B	EPA 5030C
n-Propylbenzene	140		10	ug/L	EPA 8260B	EPA 5030C
Toluene	3100		25	ug/L	EPA 8260B	EPA 5030C
1,2,4-Trimethylbenzene	560		10	ug/L	EPA 8260B	EPA 5030C
1,3,5-Trimethylbenzene	160		10	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	3100		10	ug/L	EPA 8260B	EPA 5030C
o-Xylene	1500		10	ug/L	EPA 8260B	EPA 5030C
Methyl-t-Butyl Ether (MTBE)	18		10	ug/L	EPA 8260B	EPA 5030C
2,4-Dimethylphenol	16		9.6	ug/L	EPA 8270C	EPA 3510C
2-Methylnaphthalene	19		9.6	ug/L	EPA 8270C	EPA 3510C
1-Methylnaphthalene	11		9.6	ug/L	EPA 8270C	EPA 3510C
2-Methylphenol	11		9.6	ug/L	EPA 8270C	EPA 3510C
3/4-Methylphenol	17		9.6	ug/L	EPA 8270C	EPA 3510C
Naphthalene	59		9.6	ug/L	EPA 8270C	EPA 3510C
Phenanthrene	12		9.6	ug/L	EPA 8270C	EPA 3510C
Phenol	18		9.6	ug/L	EPA 8270C	EPA 3510C
SB-3 (14-01-1599-18)						
Barium	0.0145		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Chromium	0.0142		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Cobalt	0.457		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Nickel	0.983		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Silver	0.00895		0.00500	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	1.26		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
TPH as Gasoline	120		50	ug/L	EPA 8015B (M)	EPA 5030C

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1599
Project Name: Port of Oakland Phase II
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-8 (14-01-1599-19)						
Barium	0.116		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Molybdenum	0.0240		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Nickel	0.165		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0155		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Ethylbenzene	1.8		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	4.2		1.0	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	4.6		1.0	ug/L	EPA 8260B	EPA 5030C
o-Xylene	1.0		1.0	ug/L	EPA 8260B	EPA 5030C
SB-6 (14-01-1599-20)						
Barium	0.156		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Nickel	0.0117		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0196		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
SB-7 (14-01-1599-21)						
Barium	0.0648		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Molybdenum	0.0134		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0117		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Waste Soil (14-01-1599-22)						
Arsenic	1.55		0.732	mg/kg	EPA 6010B	EPA 3050B
Barium	77.5		0.488	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.523		0.488	mg/kg	EPA 6010B	EPA 3050B
Chromium	26.9		0.244	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.55		0.244	mg/kg	EPA 6010B	EPA 3050B
Copper	73.1		0.488	mg/kg	EPA 6010B	EPA 3050B
Lead	232		0.488	mg/kg	EPA 6010B	EPA 3050B
Nickel	18.9		0.244	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.7		0.244	mg/kg	EPA 6010B	EPA 3050B
Zinc	219		0.976	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.531		0.0835	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	89	SG,HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	58	SG,HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
Aroclor-1254	6700		500	ug/kg	EPA 8082	EPA 3545

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-4-E**	**01/23/14 16:15**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:52**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	95	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-E**	**01/23/14 16:35**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 20:08**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	78	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-14-A**	**01/24/14 09:35**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 20:25**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-E**	**01/24/14 10:25**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 20:41**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	480	250	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-E**	**01/24/14 10:25**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 20:58**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	360	250	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	83	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-F**	**01/24/14 12:50**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:14**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	102	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-E**	**01/24/14 13:45**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:30**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	76	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-E**	**01/24/14 14:45**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:47**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-278-518**	**N/A**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:29**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-4-E**	**01/23/14 16:15**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:52**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	53	50	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	95	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-E**	**01/23/14 16:35**	**Aqueous**	**GC 47**	**01/29/14**	**01/30/14 16:46**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	60000	500	10	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-14-A**	**01/24/14 09:35**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 20:25**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-E**	**01/24/14 10:25**	**Aqueous**	**GC 47**	**01/29/14**	**01/30/14 17:03**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	19000	500	10	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	93	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-E**	**01/24/14 10:25**	**Aqueous**	**GC 47**	**01/29/14**	**01/30/14 17:20**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	14000	500	10	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-F**	**01/24/14 12:50**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:14**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	102	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-E**	**01/24/14 13:45**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:30**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	76	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-E**	**01/24/14 14:45**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 21:47**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-304-589**	**N/A**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:29**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 19:45**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	24	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:03**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	100	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:20**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	93	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 11:29**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	380	250	10	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:38**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	95	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:55**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	58	25	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 21:12**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	92	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 09:44**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 10:01**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	89	25	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	92	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-777**	**N/A**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 16:33**	**140129B05S**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 19:45**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	4.9	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:03**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	100	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:20**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	93	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 11:29**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	70	50	10	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:38**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	95	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 20:55**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	22	5.0	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 21:12**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	92	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 09:44**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC 45**	**01/29/14**	**01/30/14 10:01**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	58	5.0	1	SG,HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	92	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-949**	**N/A**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 16:33**	**140129B04S**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-3-C**	**01/23/14 16:00**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 13:10**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	81	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-4-C**	**01/23/14 16:15**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 14:51**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	140	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-C**	**01/23/14 16:35**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 15:25**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	130000	5000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	89	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-C**	**01/24/14 10:25**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 15:58**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	63000	5000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-C**	**01/24/14 10:25**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 16:32**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	14000	500	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-C**	**01/24/14 12:50**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 17:06**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	120	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	81	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-C**	**01/24/14 13:45**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 17:39**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	83	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-C**	**01/24/14 14:45**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 18:13**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	83	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Trip Blank1	**14-01-1599-23-B**	**01/24/14 16:00**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 18:46**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	85	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Trip Blank2	**14-01-1599-24-B**	**01/24/14 16:00**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 19:20**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	79	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-436-9119**	**N/A**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 12:03**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	82	38-134	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 16:20**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	73	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 16:56**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	75	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 18:07**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	72	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 18:43**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	70	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 19:55**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	72	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 20:31**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	72	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 21:06**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	70	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 21:42**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	73	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 22:18**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	72	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-571-1424**	**N/A**	**Solid**	**GC 1**	**01/29/14**	**01/29/14 10:53**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	74	42-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:13**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.769	1.03	
Arsenic	1.77	0.769	1.03	
Barium	61.2	0.513	1.03	
Beryllium	ND	0.256	1.03	
Cadmium	ND	0.513	1.03	
Chromium	5.68	0.256	1.03	
Cobalt	5.33	0.256	1.03	
Copper	25.8	0.513	1.03	
Lead	5.15	0.513	1.03	
Molybdenum	ND	0.256	1.03	
Nickel	6.79	0.256	1.03	
Selenium	ND	0.769	1.03	
Silver	ND	0.256	1.03	
Thallium	ND	0.769	1.03	
Vanadium	19.6	0.256	1.03	
Zinc	66.0	1.03	1.03	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:15**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.773	1.03	
Arsenic	0.921	0.773	1.03	
Barium	46.4	0.515	1.03	
Beryllium	ND	0.258	1.03	
Cadmium	ND	0.515	1.03	
Chromium	28.3	0.258	1.03	
Cobalt	2.45	0.258	1.03	
Copper	9.34	0.515	1.03	
Lead	2.16	0.515	1.03	
Molybdenum	ND	0.258	1.03	
Nickel	13.9	0.258	1.03	
Selenium	ND	0.773	1.03	
Silver	ND	0.258	1.03	
Thallium	ND	0.773	1.03	
Vanadium	17.5	0.258	1.03	
Zinc	20.1	1.03	1.03	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:16**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.718	0.957	
Arsenic	2.51	0.718	0.957	
Barium	125	0.478	0.957	
Beryllium	0.317	0.239	0.957	
Cadmium	ND	0.478	0.957	
Chromium	7.95	0.239	0.957	
Cobalt	7.30	0.239	0.957	
Copper	29.1	0.478	0.957	
Lead	5.37	0.478	0.957	
Molybdenum	ND	0.239	0.957	
Nickel	8.61	0.239	0.957	
Selenium	ND	0.718	0.957	
Silver	ND	0.239	0.957	
Thallium	ND	0.718	0.957	
Vanadium	26.6	0.239	0.957	
Zinc	86.1	0.957	0.957	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:17**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	1.16	0.754	1.01	
Arsenic	13.3	0.754	1.01	
Barium	309	0.503	1.01	
Beryllium	0.522	0.251	1.01	
Cadmium	4.98	0.503	1.01	
Chromium	36.2	0.251	1.01	
Cobalt	9.65	0.251	1.01	
Copper	385	0.503	1.01	
Lead	1670	0.503	1.01	
Molybdenum	ND	0.251	1.01	
Nickel	43.1	0.251	1.01	
Selenium	ND	0.754	1.01	
Silver	ND	0.251	1.01	
Thallium	ND	0.754	1.01	
Vanadium	23.8	0.251	1.01	
Zinc	2080	1.01	1.01	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:19**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	1.48	0.765	1.02	
Barium	54.7	0.510	1.02	
Beryllium	ND	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	34.1	0.255	1.02	
Cobalt	7.08	0.255	1.02	
Copper	16.8	0.510	1.02	
Lead	25.6	0.510	1.02	
Molybdenum	ND	0.255	1.02	
Nickel	24.9	0.255	1.02	
Selenium	ND	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	23.6	0.255	1.02	
Zinc	37.5	1.02	1.02	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:10**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	4.88	0.750	1	
Arsenic	8.30	0.750	1	
Barium	99.4	0.500	1	
Beryllium	0.265	0.250	1	
Cadmium	1.59	0.500	1	
Chromium	42.0	0.250	1	
Cobalt	3.79	0.250	1	
Copper	1100	0.500	1	
Lead	1340	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	21.7	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	27.0	0.250	1	
Zinc	515	1.00	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:20**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.735	0.98	
Arsenic	1.98	0.735	0.98	
Barium	55.4	0.490	0.98	
Beryllium	0.294	0.245	0.98	
Cadmium	ND	0.490	0.98	
Chromium	42.7	0.245	0.98	
Cobalt	7.28	0.245	0.98	
Copper	14.8	0.490	0.98	
Lead	13.7	0.490	0.98	
Molybdenum	ND	0.245	0.98	
Nickel	31.6	0.245	0.98	
Selenium	ND	0.735	0.98	
Silver	ND	0.245	0.98	
Thallium	ND	0.735	0.98	
Vanadium	28.8	0.245	0.98	
Zinc	29.1	0.980	0.98	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:26**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	ND	0.758	1.01	
Barium	28.5	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	29.4	0.253	1.01	
Cobalt	1.90	0.253	1.01	
Copper	11.1	0.505	1.01	
Lead	1.32	0.505	1.01	
Molybdenum	ND	0.253	1.01	
Nickel	9.56	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	18.4	0.253	1.01	
Zinc	11.6	1.01	1.01	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:28**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.732	0.976	
Arsenic	1.55	0.732	0.976	
Barium	77.5	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	0.523	0.488	0.976	
Chromium	26.9	0.244	0.976	
Cobalt	4.55	0.244	0.976	
Copper	73.1	0.488	0.976	
Lead	232	0.488	0.976	
Molybdenum	ND	0.244	0.976	
Nickel	18.9	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	ND	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	19.7	0.244	0.976	
Zinc	219	0.976	0.976	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-17960**	**N/A**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 13:19**	**140129L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1	
Arsenic	ND	0.750	1	
Barium	ND	0.500	1	
Beryllium	ND	0.250	1	
Cadmium	ND	0.500	1	
Chromium	ND	0.250	1	
Cobalt	ND	0.250	1	
Copper	ND	0.500	1	
Lead	ND	0.500	1	
Molybdenum	ND	0.250	1	
Nickel	ND	0.250	1	
Selenium	ND	0.750	1	
Silver	ND	0.250	1	
Thallium	ND	0.750	1	
Vanadium	ND	0.250	1	
Zinc	ND	1.00	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-D**	**01/24/14 10:25**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:34**	**140129LA5**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	0.0183	0.0100	1	
Barium	0.299	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	0.0167	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0119	0.0100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-D**	**01/24/14 10:25**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:36**	**140129LA5**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	0.0189	0.0100	1	
Barium	0.225	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	0.0157	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0129	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-13985**	**N/A**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:02**	**140129LA5**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	ND	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	ND	0.0100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-10-A**	**01/24/14 08:41**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:49**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.159	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	0.0171	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0271	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-13-A**	**01/24/14 09:12**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:33**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	0.0248	0.0100	1	
Barium	0.179	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	0.00637	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0183	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-D**	**01/24/14 12:50**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:37**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.0145	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	0.0142	0.0100	1	
Cobalt	0.457	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	0.983	0.0100	1	
Selenium	ND	0.0150	1	
Silver	0.00895	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	1.26	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-D**	**01/24/14 13:45**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:39**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.116	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	0.0240	0.0100	1	
Nickel	0.165	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0155	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-20-A**	**01/24/14 14:19**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:41**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.156	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	0.0117	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0196	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-D**	**01/24/14 14:45**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 20:42**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.0648	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	0.0134	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0117	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-13984**	**N/A**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:04**	**140129LA5F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	ND	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	ND	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7470A Total
Method: EPA 7470A
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-D**	**01/24/14 10:25**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:35**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-D**	**01/24/14 10:25**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:37**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-008-6813**	**N/A**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:16**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7470A Filt.
Method: EPA 7470A
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-10-A**	**01/24/14 08:41**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:21**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-13-A**	**01/24/14 09:12**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:23**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-D**	**01/24/14 12:50**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:50**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-D**	**01/24/14 13:45**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:52**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-20-A**	**01/24/14 14:19**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:55**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-D**	**01/24/14 14:45**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 18:01**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-763-264**	**N/A**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:16**	**140129L05F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:42**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.134	0.0820	0.982	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:44**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0805	0.964	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:46**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.139	0.0845	1.01	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:49**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	1.55	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:51**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**Mercury**	**01/30/14**	**01/31/14 16:22**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	3.34	0.834	9.98	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 12:10**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 12:12**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0845	1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 12:15**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.531	0.0835	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-007-10001**	**N/A**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:37**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 12:57**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	24-168	
2,4,5,6-Tetrachloro-m-Xylene	91	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 13:11**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	91	24-168	
2,4,5,6-Tetrachloro-m-Xylene	120	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 13:26**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	26	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	28	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	175	24-168	2,7
2,4,5,6-Tetrachloro-m-Xylene	112	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 13:40**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	107	24-168	
2,4,5,6-Tetrachloro-m-Xylene	104	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 13:54**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	0.996	
Alpha-BHC	ND	5.0	0.996	
Beta-BHC	ND	5.0	0.996	
Chlordane	ND	50	0.996	
4,4'-DDD	ND	5.0	0.996	
4,4'-DDE	ND	5.0	0.996	
4,4'-DDT	ND	5.0	0.996	
Delta-BHC	ND	5.0	0.996	
Dieldrin	ND	5.0	0.996	
Endosulfan I	ND	5.0	0.996	
Endosulfan II	ND	5.0	0.996	
Endosulfan Sulfate	ND	5.0	0.996	
Endrin	ND	5.0	0.996	
Endrin Aldehyde	ND	5.0	0.996	
Endrin Ketone	ND	5.0	0.996	
Gamma-BHC	ND	5.0	0.996	
Heptachlor	ND	5.0	0.996	
Heptachlor Epoxide	ND	5.0	0.996	
Methoxychlor	ND	5.0	0.996	
Toxaphene	ND	100	0.996	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	24-168	
2,4,5,6-Tetrachloro-m-Xylene	96	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-537-1605**	**N/A**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 12:00**	**140129L07**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1	
Alpha-BHC	ND	5.0	1	
Beta-BHC	ND	5.0	1	
Chlordane	ND	50	1	
4,4'-DDD	ND	5.0	1	
4,4'-DDE	ND	5.0	1	
4,4'-DDT	ND	5.0	1	
Delta-BHC	ND	5.0	1	
Dieldrin	ND	5.0	1	
Endosulfan I	ND	5.0	1	
Endosulfan II	ND	5.0	1	
Endosulfan Sulfate	ND	5.0	1	
Endrin	ND	5.0	1	
Endrin Aldehyde	ND	5.0	1	
Endrin Ketone	ND	5.0	1	
Gamma-BHC	ND	5.0	1	
Heptachlor	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1	
Methoxychlor	ND	5.0	1	
Toxaphene	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	24-168	
2,4,5,6-Tetrachloro-m-Xylene	111	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-I**	**01/23/14 16:35**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:50**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.10	1	
Gamma-BHC	ND	0.10	1	
Beta-BHC	ND	0.10	1	
Heptachlor	ND	0.10	1	
Delta-BHC	ND	0.10	1	
Aldrin	ND	0.10	1	
Heptachlor Epoxide	ND	0.10	1	
Endosulfan I	ND	0.10	1	
Dieldrin	ND	0.10	1	
4,4'-DDE	ND	0.10	1	
Endrin	ND	0.10	1	
Endrin Aldehyde	ND	0.10	1	
4,4'-DDD	ND	0.10	1	
Endosulfan II	ND	0.10	1	
4,4'-DDT	ND	0.10	1	
Endosulfan Sulfate	ND	0.10	1	
Methoxychlor	ND	0.10	1	
Chlordane	ND	1.0	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	61	50-135	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-6-A**	**01/24/14 08:38**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 18:05**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.098	1	
Gamma-BHC	ND	0.098	1	
Beta-BHC	ND	0.098	1	
Heptachlor	ND	0.098	1	
Delta-BHC	ND	0.098	1	
Aldrin	ND	0.098	1	
Heptachlor Epoxide	ND	0.098	1	
Endosulfan I	ND	0.098	1	
Dieldrin	ND	0.098	1	
4,4'-DDE	ND	0.098	1	
Endrin	ND	0.098	1	
Endrin Aldehyde	ND	0.098	1	
4,4'-DDD	ND	0.098	1	
Endosulfan II	ND	0.098	1	
4,4'-DDT	ND	0.098	1	
Endosulfan Sulfate	ND	0.098	1	
Methoxychlor	ND	0.098	1	
Chlordane	ND	0.98	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.098	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	53	50-135	
2,4,5,6-Tetrachloro-m-Xylene	94	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-14-D**	**01/24/14 09:35**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 18:19**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.097	1	
Gamma-BHC	ND	0.097	1	
Beta-BHC	ND	0.097	1	
Heptachlor	ND	0.097	1	
Delta-BHC	ND	0.097	1	
Aldrin	ND	0.097	1	
Heptachlor Epoxide	ND	0.097	1	
Endosulfan I	ND	0.097	1	
Dieldrin	ND	0.097	1	
4,4'-DDE	ND	0.097	1	
Endrin	ND	0.097	1	
Endrin Aldehyde	ND	0.097	1	
4,4'-DDD	ND	0.097	1	
Endosulfan II	ND	0.097	1	
4,4'-DDT	ND	0.097	1	
Endosulfan Sulfate	ND	0.097	1	
Methoxychlor	ND	0.097	1	
Chlordane	ND	0.97	1	
Toxaphene	ND	1.9	1	
Endrin Ketone	ND	0.097	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	84	50-135	
2,4,5,6-Tetrachloro-m-Xylene	96	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-I**	**01/24/14 10:25**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 18:34**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.097	1	
Gamma-BHC	ND	0.097	1	
Beta-BHC	ND	0.097	1	
Heptachlor	ND	0.097	1	
Delta-BHC	ND	0.097	1	
Aldrin	ND	0.097	1	
Heptachlor Epoxide	ND	0.097	1	
Endosulfan I	ND	0.097	1	
Dieldrin	ND	0.097	1	
4,4'-DDE	ND	0.097	1	
Endrin	ND	0.097	1	
Endrin Aldehyde	ND	0.097	1	
4,4'-DDD	ND	0.097	1	
Endosulfan II	ND	0.097	1	
4,4'-DDT	ND	0.097	1	
Endosulfan Sulfate	ND	0.097	1	
Methoxychlor	ND	0.097	1	
Chlordane	ND	0.97	1	
Toxaphene	ND	1.9	1	
Endrin Ketone	ND	0.097	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	65	50-135	
2,4,5,6-Tetrachloro-m-Xylene	77	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-I**	**01/24/14 10:25**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 18:48**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.098	1	
Gamma-BHC	ND	0.098	1	
Beta-BHC	ND	0.098	1	
Heptachlor	ND	0.098	1	
Delta-BHC	ND	0.098	1	
Aldrin	ND	0.098	1	
Heptachlor Epoxide	ND	0.098	1	
Endosulfan I	ND	0.098	1	
Dieldrin	ND	0.098	1	
4,4'-DDE	ND	0.098	1	
Endrin	ND	0.098	1	
Endrin Aldehyde	ND	0.098	1	
4,4'-DDD	ND	0.098	1	
Endosulfan II	ND	0.098	1	
4,4'-DDT	ND	0.098	1	
Endosulfan Sulfate	ND	0.098	1	
Methoxychlor	ND	0.098	1	
Chlordane	ND	0.98	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.098	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	72	50-135	
2,4,5,6-Tetrachloro-m-Xylene	81	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-I**	**01/24/14 12:50**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 19:02**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.097	1	
Gamma-BHC	ND	0.097	1	
Beta-BHC	ND	0.097	1	
Heptachlor	ND	0.097	1	
Delta-BHC	ND	0.097	1	
Aldrin	ND	0.097	1	
Heptachlor Epoxide	ND	0.097	1	
Endosulfan I	ND	0.097	1	
Dieldrin	ND	0.097	1	
4,4'-DDE	ND	0.097	1	
Endrin	ND	0.097	1	
Endrin Aldehyde	ND	0.097	1	
4,4'-DDD	ND	0.097	1	
Endosulfan II	ND	0.097	1	
4,4'-DDT	ND	0.097	1	
Endosulfan Sulfate	ND	0.097	1	
Methoxychlor	ND	0.097	1	
Chlordane	ND	0.97	1	
Toxaphene	ND	1.9	1	
Endrin Ketone	ND	0.097	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	50-135	
2,4,5,6-Tetrachloro-m-Xylene	89	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-I**	**01/24/14 13:45**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 19:17**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.098	1	
Gamma-BHC	ND	0.098	1	
Beta-BHC	ND	0.098	1	
Heptachlor	ND	0.098	1	
Delta-BHC	ND	0.098	1	
Aldrin	ND	0.098	1	
Heptachlor Epoxide	ND	0.098	1	
Endosulfan I	ND	0.098	1	
Dieldrin	ND	0.098	1	
4,4'-DDE	ND	0.098	1	
Endrin	ND	0.098	1	
Endrin Aldehyde	ND	0.098	1	
4,4'-DDD	ND	0.098	1	
Endosulfan II	ND	0.098	1	
4,4'-DDT	ND	0.098	1	
Endosulfan Sulfate	ND	0.098	1	
Methoxychlor	ND	0.098	1	
Chlordane	ND	0.98	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.098	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	56	50-135	
2,4,5,6-Tetrachloro-m-Xylene	91	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-H**	**01/24/14 14:45**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 19:31**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.097	1	
Gamma-BHC	ND	0.097	1	
Beta-BHC	ND	0.097	1	
Heptachlor	ND	0.097	1	
Delta-BHC	ND	0.097	1	
Aldrin	ND	0.097	1	
Heptachlor Epoxide	ND	0.097	1	
Endosulfan I	ND	0.097	1	
Dieldrin	ND	0.097	1	
4,4'-DDE	ND	0.097	1	
Endrin	ND	0.097	1	
Endrin Aldehyde	ND	0.097	1	
4,4'-DDD	ND	0.097	1	
Endosulfan II	ND	0.097	1	
4,4'-DDT	ND	0.097	1	
Endosulfan Sulfate	ND	0.097	1	
Methoxychlor	ND	0.097	1	
Chlordane	ND	0.97	1	
Toxaphene	ND	1.9	1	
Endrin Ketone	ND	0.097	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	55	50-135	
2,4,5,6-Tetrachloro-m-Xylene	79	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-529-678**	**N/A**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:07**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.10	1	
Gamma-BHC	ND	0.10	1	
Beta-BHC	ND	0.10	1	
Heptachlor	ND	0.10	1	
Delta-BHC	ND	0.10	1	
Aldrin	ND	0.10	1	
Heptachlor Epoxide	ND	0.10	1	
Endosulfan I	ND	0.10	1	
Dieldrin	ND	0.10	1	
4,4'-DDE	ND	0.10	1	
Endrin	ND	0.10	1	
Endrin Aldehyde	ND	0.10	1	
4,4'-DDD	ND	0.10	1	
Endosulfan II	ND	0.10	1	
4,4'-DDT	ND	0.10	1	
Endosulfan Sulfate	ND	0.10	1	
Methoxychlor	ND	0.10	1	
Chlordane	ND	1.0	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	50-135	
2,4,5,6-Tetrachloro-m-Xylene	97	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC 58**	**01/29/14**	**01/31/14 21:32**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	116	24-168	
2,4,5,6-Tetrachloro-m-Xylene	94	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC 58**	**01/29/14**	**01/31/14 21:50**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	100	24-168	
2,4,5,6-Tetrachloro-m-Xylene	103	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC 58**	**01/29/14**	**02/04/14 15:04**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	148	24-168	
2,4,5,6-Tetrachloro-m-Xylene	113	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 15:44**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	24-168	
2,4,5,6-Tetrachloro-m-Xylene	97	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
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Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC 58**	**01/29/14**	**02/03/14 16:50**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	500	9.96	
Aroclor-1221	ND	500	9.96	
Aroclor-1232	ND	500	9.96	
Aroclor-1242	ND	500	9.96	
Aroclor-1248	ND	500	9.96	
Aroclor-1254	6700	500	9.96	
Aroclor-1260	ND	500	9.96	
Aroclor-1262	ND	500	9.96	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	104	24-168	
2,4,5,6-Tetrachloro-m-Xylene	110	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-2464**	**N/A**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 14:50**	**140129L08**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1	
Aroclor-1221	ND	50	1	
Aroclor-1232	ND	50	1	
Aroclor-1242	ND	50	1	
Aroclor-1248	ND	50	1	
Aroclor-1254	ND	50	1	
Aroclor-1260	ND	50	1	
Aroclor-1262	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	103	24-168	
2,4,5,6-Tetrachloro-m-Xylene	106	25-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-I**	**01/23/14 16:35**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 23:06**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1	
Aroclor-1221	ND	1.0	1	
Aroclor-1232	ND	1.0	1	
Aroclor-1242	ND	1.0	1	
Aroclor-1248	ND	1.0	1	
Aroclor-1254	ND	1.0	1	
Aroclor-1260	ND	1.0	1	
Aroclor-1262	ND	1.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	75	50-135	
2,4,5,6-Tetrachloro-m-Xylene	97	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-6-A**	**01/24/14 08:38**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 23:24**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.98	1	
Aroclor-1221	ND	0.98	1	
Aroclor-1232	ND	0.98	1	
Aroclor-1242	ND	0.98	1	
Aroclor-1248	ND	0.98	1	
Aroclor-1254	ND	0.98	1	
Aroclor-1260	ND	0.98	1	
Aroclor-1262	ND	0.98	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	66	50-135	
2,4,5,6-Tetrachloro-m-Xylene	112	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-14-D**	**01/24/14 09:35**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 23:42**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.97	1	
Aroclor-1221	ND	0.97	1	
Aroclor-1232	ND	0.97	1	
Aroclor-1242	ND	0.97	1	
Aroclor-1248	ND	0.97	1	
Aroclor-1254	ND	0.97	1	
Aroclor-1260	ND	0.97	1	
Aroclor-1262	ND	0.97	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	50-135	
2,4,5,6-Tetrachloro-m-Xylene	111	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-I**	**01/24/14 10:25**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 00:00**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.97	1	
Aroclor-1221	ND	0.97	1	
Aroclor-1232	ND	0.97	1	
Aroclor-1242	ND	0.97	1	
Aroclor-1248	ND	0.97	1	
Aroclor-1254	ND	0.97	1	
Aroclor-1260	ND	0.97	1	
Aroclor-1262	ND	0.97	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	94	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-I**	**01/24/14 10:25**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 00:18**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.98	1	
Aroclor-1221	ND	0.98	1	
Aroclor-1232	ND	0.98	1	
Aroclor-1242	ND	0.98	1	
Aroclor-1248	ND	0.98	1	
Aroclor-1254	ND	0.98	1	
Aroclor-1260	ND	0.98	1	
Aroclor-1262	ND	0.98	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	90	50-135	
2,4,5,6-Tetrachloro-m-Xylene	100	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-I**	**01/24/14 12:50**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 00:36**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.97	1	
Aroclor-1221	ND	0.97	1	
Aroclor-1232	ND	0.97	1	
Aroclor-1242	ND	0.97	1	
Aroclor-1248	ND	0.97	1	
Aroclor-1254	ND	0.97	1	
Aroclor-1260	ND	0.97	1	
Aroclor-1262	ND	0.97	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	110	50-135	
2,4,5,6-Tetrachloro-m-Xylene	106	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-I**	**01/24/14 13:45**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 00:54**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.98	1	
Aroclor-1221	ND	0.98	1	
Aroclor-1232	ND	0.98	1	
Aroclor-1242	ND	0.98	1	
Aroclor-1248	ND	0.98	1	
Aroclor-1254	ND	0.98	1	
Aroclor-1260	ND	0.98	1	
Aroclor-1262	ND	0.98	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	66	50-135	
2,4,5,6-Tetrachloro-m-Xylene	111	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-H**	**01/24/14 14:45**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 01:12**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.97	1	
Aroclor-1221	ND	0.97	1	
Aroclor-1232	ND	0.97	1	
Aroclor-1242	ND	0.97	1	
Aroclor-1248	ND	0.97	1	
Aroclor-1254	ND	0.97	1	
Aroclor-1260	ND	0.97	1	
Aroclor-1262	ND	0.97	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	69	50-135	
2,4,5,6-Tetrachloro-m-Xylene	98	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-533-886**	**N/A**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 09:19**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1	
Aroclor-1221	ND	1.0	1	
Aroclor-1232	ND	1.0	1	
Aroclor-1242	ND	1.0	1	
Aroclor-1248	ND	1.0	1	
Aroclor-1254	ND	1.0	1	
Aroclor-1260	ND	1.0	1	
Aroclor-1262	ND	1.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	113	50-135	
2,4,5,6-Tetrachloro-m-Xylene	107	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
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Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-4-G**	**01/23/14 16:15**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 14:48**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.8	1	
Acenaphthylene	ND	9.8	1	
Aniline	ND	9.8	1	
Anthracene	ND	9.8	1	
Azobenzene	ND	9.8	1	
Benzidine	ND	49	1	
Benzo (a) Anthracene	ND	9.8	1	
Benzo (a) Pyrene	ND	9.8	1	
Benzo (b) Fluoranthene	ND	9.8	1	
Benzo (g,h,i) Perylene	ND	9.8	1	
Benzo (k) Fluoranthene	ND	9.8	1	
Benzoic Acid	ND	49	1	
Benzyl Alcohol	ND	9.8	1	
Bis(2-Chloroethoxy) Methane	ND	9.8	1	
Bis(2-Chloroethyl) Ether	ND	24	1	
Bis(2-Chloroisopropyl) Ether	ND	9.8	1	
Bis(2-Ethylhexyl) Phthalate	ND	9.8	1	
4-Bromophenyl-Phenyl Ether	ND	9.8	1	
Butyl Benzyl Phthalate	ND	9.8	1	
4-Chloro-3-Methylphenol	ND	9.8	1	
4-Chloroaniline	ND	9.8	1	
2-Chloronaphthalene	ND	9.8	1	
2-Chlorophenol	ND	9.8	1	
4-Chlorophenyl-Phenyl Ether	ND	9.8	1	
Chrysene	ND	9.8	1	
Di-n-Butyl Phthalate	ND	9.8	1	
Di-n-Octyl Phthalate	ND	9.8	1	
Dibenz (a,h) Anthracene	ND	9.8	1	
Dibenzofuran	ND	9.8	1	
1,2-Dichlorobenzene	ND	9.8	1	
1,3-Dichlorobenzene	ND	9.8	1	
1,4-Dichlorobenzene	ND	9.8	1	
3,3'-Dichlorobenzidine	ND	24	1	
2,4-Dichlorophenol	ND	9.8	1	
Diethyl Phthalate	ND	9.8	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.8	1	
2,4-Dimethylphenol	ND	9.8	1	
4,6-Dinitro-2-Methylphenol	ND	49	1	
2,4-Dinitrophenol	ND	49	1	
2,4-Dinitrotoluene	ND	9.8	1	
2,6-Dinitrotoluene	ND	9.8	1	
Fluoranthene	ND	9.8	1	
Fluorene	ND	9.8	1	
Hexachloro-1,3-Butadiene	ND	9.8	1	
Hexachlorobenzene	ND	9.8	1	
Hexachlorocyclopentadiene	ND	24	1	
Hexachloroethane	ND	9.8	1	
Indeno (1,2,3-c,d) Pyrene	ND	9.8	1	
Isophorone	ND	9.8	1	
2-Methylnaphthalene	ND	9.8	1	
1-Methylnaphthalene	ND	9.8	1	
2-Methylphenol	ND	9.8	1	
3/4-Methylphenol	ND	9.8	1	
N-Nitroso-di-n-propylamine	ND	9.8	1	
N-Nitrosodimethylamine	ND	9.8	1	
N-Nitrosodiphenylamine	ND	9.8	1	
Naphthalene	ND	9.8	1	
4-Nitroaniline	ND	9.8	1	
3-Nitroaniline	ND	9.8	1	
2-Nitroaniline	ND	9.8	1	
Nitrobenzene	ND	24	1	
4-Nitrophenol	ND	9.8	1	
2-Nitrophenol	ND	9.8	1	
Pentachlorophenol	ND	9.8	1	
Phenanthrene	ND	9.8	1	
Phenol	ND	9.8	1	
Pyrene	ND	9.8	1	
Pyridine	ND	9.8	1	
1,2,4-Trichlorobenzene	ND	9.8	1	
2,4,6-Trichlorophenol	ND	9.8	1	
2,4,5-Trichlorophenol	ND	9.8	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	85	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 3 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	62	24-120	
Nitrobenzene-d5	93	38-120	
p-Terphenyl-d14	91	41-137	
Phenol-d6	44	16-120	
2,4,6-Tribromophenol	94	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-G**	**01/23/14 16:35**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 15:28**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	49	5	
Acenaphthylene	ND	49	5	
Aniline	ND	49	5	
Anthracene	ND	49	5	
Azobenzene	ND	49	5	
Benzidine	ND	240	5	
Benzo (a) Anthracene	ND	49	5	
Benzo (a) Pyrene	ND	49	5	
Benzo (b) Fluoranthene	ND	49	5	
Benzo (g,h,i) Perylene	ND	49	5	
Benzo (k) Fluoranthene	ND	49	5	
Benzoic Acid	ND	240	5	
Benzyl Alcohol	ND	49	5	
Bis(2-Chloroethoxy) Methane	ND	49	5	
Bis(2-Chloroethyl) Ether	ND	120	5	
Bis(2-Chloroisopropyl) Ether	ND	49	5	
Bis(2-Ethylhexyl) Phthalate	ND	49	5	
4-Bromophenyl-Phenyl Ether	ND	49	5	
Butyl Benzyl Phthalate	ND	49	5	
4-Chloro-3-Methylphenol	ND	49	5	
4-Chloroaniline	ND	49	5	
2-Chloronaphthalene	ND	49	5	
2-Chlorophenol	ND	49	5	
4-Chlorophenyl-Phenyl Ether	ND	49	5	
Chrysene	ND	49	5	
Di-n-Butyl Phthalate	ND	49	5	
Di-n-Octyl Phthalate	ND	49	5	
Dibenz (a,h) Anthracene	ND	49	5	
Dibenzofuran	ND	49	5	
1,2-Dichlorobenzene	ND	49	5	
1,3-Dichlorobenzene	ND	49	5	
1,4-Dichlorobenzene	ND	49	5	
3,3'-Dichlorobenzidine	ND	120	5	
2,4-Dichlorophenol	ND	49	5	
Diethyl Phthalate	ND	49	5	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	49	5	
2,4-Dimethylphenol	ND	49	5	
4,6-Dinitro-2-Methylphenol	ND	240	5	
2,4-Dinitrophenol	ND	240	5	
2,4-Dinitrotoluene	ND	49	5	
2,6-Dinitrotoluene	ND	49	5	
Fluoranthene	ND	49	5	
Fluorene	ND	49	5	
Hexachloro-1,3-Butadiene	ND	49	5	
Hexachlorobenzene	ND	49	5	
Hexachlorocyclopentadiene	ND	120	5	
Hexachloroethane	ND	49	5	
Indeno (1,2,3-c,d) Pyrene	ND	49	5	
Isophorone	ND	49	5	
2-Methylnaphthalene	180	49	5	
1-Methylnaphthalene	99	49	5	
2-Methylphenol	76	49	5	
3/4-Methylphenol	130	49	5	
N-Nitroso-di-n-propylamine	ND	49	5	
N-Nitrosodimethylamine	ND	49	5	
N-Nitrosodiphenylamine	ND	49	5	
Naphthalene	550	49	5	
4-Nitroaniline	ND	49	5	
3-Nitroaniline	ND	49	5	
2-Nitroaniline	ND	49	5	
Nitrobenzene	ND	120	5	
4-Nitrophenol	ND	49	5	
2-Nitrophenol	ND	49	5	
Pentachlorophenol	ND	49	5	
Phenanthrene	ND	49	5	
Phenol	ND	49	5	
Pyrene	ND	49	5	
Pyridine	ND	49	5	
1,2,4-Trichlorobenzene	ND	49	5	
2,4,6-Trichlorophenol	ND	49	5	
2,4,5-Trichlorophenol	ND	49	5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 6 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	64	24-120	
Nitrobenzene-d5	84	38-120	
p-Terphenyl-d14	86	41-137	
Phenol-d6	46	16-120	
2,4,6-Tribromophenol	96	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-14-C**	**01/24/14 09:35**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 17:30**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.9	1	
Acenaphthylene	ND	9.9	1	
Aniline	ND	9.9	1	
Anthracene	ND	9.9	1	
Azobenzene	ND	9.9	1	
Benzidine	ND	50	1	
Benzo (a) Anthracene	ND	9.9	1	
Benzo (a) Pyrene	ND	9.9	1	
Benzo (b) Fluoranthene	ND	9.9	1	
Benzo (g,h,i) Perylene	ND	9.9	1	
Benzo (k) Fluoranthene	ND	9.9	1	
Benzoic Acid	ND	50	1	
Benzyl Alcohol	ND	9.9	1	
Bis(2-Chloroethoxy) Methane	ND	9.9	1	
Bis(2-Chloroethyl) Ether	ND	25	1	
Bis(2-Chloroisopropyl) Ether	ND	9.9	1	
Bis(2-Ethylhexyl) Phthalate	ND	9.9	1	
4-Bromophenyl-Phenyl Ether	ND	9.9	1	
Butyl Benzyl Phthalate	ND	9.9	1	
4-Chloro-3-Methylphenol	ND	9.9	1	
4-Chloroaniline	ND	9.9	1	
2-Chloronaphthalene	ND	9.9	1	
2-Chlorophenol	ND	9.9	1	
4-Chlorophenyl-Phenyl Ether	ND	9.9	1	
Chrysene	ND	9.9	1	
Di-n-Butyl Phthalate	ND	9.9	1	
Di-n-Octyl Phthalate	ND	9.9	1	
Dibenz (a,h) Anthracene	ND	9.9	1	
Dibenzofuran	ND	9.9	1	
1,2-Dichlorobenzene	ND	9.9	1	
1,3-Dichlorobenzene	ND	9.9	1	
1,4-Dichlorobenzene	ND	9.9	1	
3,3'-Dichlorobenzidine	ND	25	1	
2,4-Dichlorophenol	ND	9.9	1	
Diethyl Phthalate	ND	9.9	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.9	1	
2,4-Dimethylphenol	ND	9.9	1	
4,6-Dinitro-2-Methylphenol	ND	50	1	
2,4-Dinitrophenol	ND	50	1	
2,4-Dinitrotoluene	ND	9.9	1	
2,6-Dinitrotoluene	ND	9.9	1	
Fluoranthene	ND	9.9	1	
Fluorene	ND	9.9	1	
Hexachloro-1,3-Butadiene	ND	9.9	1	
Hexachlorobenzene	ND	9.9	1	
Hexachlorocyclopentadiene	ND	25	1	
Hexachloroethane	ND	9.9	1	
Indeno (1,2,3-c,d) Pyrene	ND	9.9	1	
Isophorone	ND	9.9	1	
2-Methylnaphthalene	ND	9.9	1	
1-Methylnaphthalene	ND	9.9	1	
2-Methylphenol	ND	9.9	1	
3/4-Methylphenol	ND	9.9	1	
N-Nitroso-di-n-propylamine	ND	9.9	1	
N-Nitrosodimethylamine	ND	9.9	1	
N-Nitrosodiphenylamine	ND	9.9	1	
Naphthalene	ND	9.9	1	
4-Nitroaniline	ND	9.9	1	
3-Nitroaniline	ND	9.9	1	
2-Nitroaniline	ND	9.9	1	
Nitrobenzene	ND	25	1	
4-Nitrophenol	ND	9.9	1	
2-Nitrophenol	ND	9.9	1	
Pentachlorophenol	ND	9.9	1	
Phenanthrene	ND	9.9	1	
Phenol	ND	9.9	1	
Pyrene	ND	9.9	1	
Pyridine	ND	9.9	1	
1,2,4-Trichlorobenzene	ND	9.9	1	
2,4,6-Trichlorophenol	ND	9.9	1	
2,4,5-Trichlorophenol	ND	9.9	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	68	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 9 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	58	24-120	
Nitrobenzene-d5	73	38-120	
p-Terphenyl-d14	71	41-137	
Phenol-d6	44	16-120	
2,4,6-Tribromophenol	77	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-G**	**01/24/14 10:25**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 19:48**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	97	9.99	
Acenaphthylene	ND	97	9.99	
Aniline	ND	97	9.99	
Anthracene	120	97	9.99	
Azobenzene	ND	97	9.99	
Benzidine	ND	480	9.99	
Benzo (a) Anthracene	170	97	9.99	
Benzo (a) Pyrene	100	97	9.99	
Benzo (b) Fluoranthene	ND	97	9.99	
Benzo (g,h,i) Perylene	ND	97	9.99	
Benzo (k) Fluoranthene	98	97	9.99	
Benzoic Acid	ND	480	9.99	
Benzyl Alcohol	ND	97	9.99	
Bis(2-Chloroethoxy) Methane	ND	97	9.99	
Bis(2-Chloroethyl) Ether	ND	240	9.99	
Bis(2-Chloroisopropyl) Ether	ND	97	9.99	
Bis(2-Ethylhexyl) Phthalate	ND	97	9.99	
4-Bromophenyl-Phenyl Ether	ND	97	9.99	
Butyl Benzyl Phthalate	ND	97	9.99	
4-Chloro-3-Methylphenol	ND	97	9.99	
4-Chloroaniline	ND	97	9.99	
2-Chloronaphthalene	ND	97	9.99	
2-Chlorophenol	ND	97	9.99	
4-Chlorophenyl-Phenyl Ether	ND	97	9.99	
Chrysene	140	97	9.99	
Di-n-Butyl Phthalate	ND	97	9.99	
Di-n-Octyl Phthalate	ND	97	9.99	
Dibenz (a,h) Anthracene	ND	97	9.99	
Dibenzofuran	ND	97	9.99	
1,2-Dichlorobenzene	ND	97	9.99	
1,3-Dichlorobenzene	ND	97	9.99	
1,4-Dichlorobenzene	ND	97	9.99	
3,3'-Dichlorobenzidine	ND	240	9.99	
2,4-Dichlorophenol	ND	97	9.99	
Diethyl Phthalate	ND	97	9.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	97	9.99	
2,4-Dimethylphenol	ND	97	9.99	
4,6-Dinitro-2-Methylphenol	ND	480	9.99	
2,4-Dinitrophenol	ND	480	9.99	
2,4-Dinitrotoluene	ND	97	9.99	
2,6-Dinitrotoluene	ND	97	9.99	
Fluoranthene	460	97	9.99	
Fluorene	ND	97	9.99	
Hexachloro-1,3-Butadiene	ND	97	9.99	
Hexachlorobenzene	ND	97	9.99	
Hexachlorocyclopentadiene	ND	240	9.99	
Hexachloroethane	ND	97	9.99	
Indeno (1,2,3-c,d) Pyrene	ND	97	9.99	
Isophorone	ND	97	9.99	
2-Methylnaphthalene	390	97	9.99	
1-Methylnaphthalene	210	97	9.99	
2-Methylphenol	ND	97	9.99	
3/4-Methylphenol	ND	97	9.99	
N-Nitroso-di-n-propylamine	ND	97	9.99	
N-Nitrosodimethylamine	ND	97	9.99	
N-Nitrosodiphenylamine	ND	97	9.99	
Naphthalene	780	97	9.99	
4-Nitroaniline	ND	97	9.99	
3-Nitroaniline	ND	97	9.99	
2-Nitroaniline	ND	97	9.99	
Nitrobenzene	ND	240	9.99	
4-Nitrophenol	ND	97	9.99	
2-Nitrophenol	ND	97	9.99	
Pentachlorophenol	ND	97	9.99	
Phenanthrene	520	97	9.99	
Phenol	ND	97	9.99	
Pyrene	430	97	9.99	
Pyridine	ND	97	9.99	
1,2,4-Trichlorobenzene	ND	97	9.99	
2,4,6-Trichlorophenol	ND	97	9.99	
2,4,5-Trichlorophenol	ND	97	9.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	91	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 12 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	73	24-120	
Nitrobenzene-d5	88	38-120	
p-Terphenyl-d14	93	41-137	
Phenol-d6	58	16-120	
2,4,6-Tribromophenol	95	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-G**	**01/24/14 10:25**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 18:09**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.6	0.998	
Acenaphthylene	ND	9.6	0.998	
Aniline	ND	9.6	0.998	
Anthracene	ND	9.6	0.998	
Azobenzene	ND	9.6	0.998	
Benzidine	ND	48	0.998	
Benzo (a) Anthracene	ND	9.6	0.998	
Benzo (a) Pyrene	ND	9.6	0.998	
Benzo (b) Fluoranthene	ND	9.6	0.998	
Benzo (g,h,i) Perylene	ND	9.6	0.998	
Benzo (k) Fluoranthene	ND	9.6	0.998	
Benzoic Acid	ND	48	0.998	
Benzyl Alcohol	ND	9.6	0.998	
Bis(2-Chloroethoxy) Methane	ND	9.6	0.998	
Bis(2-Chloroethyl) Ether	ND	24	0.998	
Bis(2-Chloroisopropyl) Ether	ND	9.6	0.998	
Bis(2-Ethylhexyl) Phthalate	ND	9.6	0.998	
4-Bromophenyl-Phenyl Ether	ND	9.6	0.998	
Butyl Benzyl Phthalate	ND	9.6	0.998	
4-Chloro-3-Methylphenol	ND	9.6	0.998	
4-Chloroaniline	ND	9.6	0.998	
2-Chloronaphthalene	ND	9.6	0.998	
2-Chlorophenol	ND	9.6	0.998	
4-Chlorophenyl-Phenyl Ether	ND	9.6	0.998	
Chrysene	ND	9.6	0.998	
Di-n-Butyl Phthalate	ND	9.6	0.998	
Di-n-Octyl Phthalate	ND	9.6	0.998	
Dibenz (a,h) Anthracene	ND	9.6	0.998	
Dibenzofuran	ND	9.6	0.998	
1,2-Dichlorobenzene	ND	9.6	0.998	
1,3-Dichlorobenzene	ND	9.6	0.998	
1,4-Dichlorobenzene	ND	9.6	0.998	
3,3'-Dichlorobenzidine	ND	24	0.998	
2,4-Dichlorophenol	ND	9.6	0.998	
Diethyl Phthalate	ND	9.6	0.998	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.6	0.998	
2,4-Dimethylphenol	16	9.6	0.998	
4,6-Dinitro-2-Methylphenol	ND	48	0.998	
2,4-Dinitrophenol	ND	48	0.998	
2,4-Dinitrotoluene	ND	9.6	0.998	
2,6-Dinitrotoluene	ND	9.6	0.998	
Fluoranthene	ND	9.6	0.998	
Fluorene	ND	9.6	0.998	
Hexachloro-1,3-Butadiene	ND	9.6	0.998	
Hexachlorobenzene	ND	9.6	0.998	
Hexachlorocyclopentadiene	ND	24	0.998	
Hexachloroethane	ND	9.6	0.998	
Indeno (1,2,3-c,d) Pyrene	ND	9.6	0.998	
Isophorone	ND	9.6	0.998	
2-Methylnaphthalene	19	9.6	0.998	
1-Methylnaphthalene	11	9.6	0.998	
2-Methylphenol	11	9.6	0.998	
3/4-Methylphenol	17	9.6	0.998	
N-Nitroso-di-n-propylamine	ND	9.6	0.998	
N-Nitrosodimethylamine	ND	9.6	0.998	
N-Nitrosodiphenylamine	ND	9.6	0.998	
Naphthalene	59	9.6	0.998	
4-Nitroaniline	ND	9.6	0.998	
3-Nitroaniline	ND	9.6	0.998	
2-Nitroaniline	ND	9.6	0.998	
Nitrobenzene	ND	24	0.998	
4-Nitrophenol	ND	9.6	0.998	
2-Nitrophenol	ND	9.6	0.998	
Pentachlorophenol	ND	9.6	0.998	
Phenanthrene	12	9.6	0.998	
Phenol	18	9.6	0.998	
Pyrene	ND	9.6	0.998	
Pyridine	ND	9.6	0.998	
1,2,4-Trichlorobenzene	ND	9.6	0.998	
2,4,6-Trichlorophenol	ND	9.6	0.998	
2,4,5-Trichlorophenol	ND	9.6	0.998	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	70	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 15 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	58	24-120	
Nitrobenzene-d5	76	38-120	
p-Terphenyl-d14	77	41-137	
Phenol-d6	40	16-120	
2,4,6-Tribromophenol	88	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-G**	**01/24/14 12:50**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 18:29**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.9	1	
Acenaphthylene	ND	9.9	1	
Aniline	ND	9.9	1	
Anthracene	ND	9.9	1	
Azobenzene	ND	9.9	1	
Benzidine	ND	50	1	
Benzo (a) Anthracene	ND	9.9	1	
Benzo (a) Pyrene	ND	9.9	1	
Benzo (b) Fluoranthene	ND	9.9	1	
Benzo (g,h,i) Perylene	ND	9.9	1	
Benzo (k) Fluoranthene	ND	9.9	1	
Benzoic Acid	ND	50	1	
Benzyl Alcohol	ND	9.9	1	
Bis(2-Chloroethoxy) Methane	ND	9.9	1	
Bis(2-Chloroethyl) Ether	ND	25	1	
Bis(2-Chloroisopropyl) Ether	ND	9.9	1	
Bis(2-Ethylhexyl) Phthalate	ND	9.9	1	
4-Bromophenyl-Phenyl Ether	ND	9.9	1	
Butyl Benzyl Phthalate	ND	9.9	1	
4-Chloro-3-Methylphenol	ND	9.9	1	
4-Chloroaniline	ND	9.9	1	
2-Chloronaphthalene	ND	9.9	1	
2-Chlorophenol	ND	9.9	1	
4-Chlorophenyl-Phenyl Ether	ND	9.9	1	
Chrysene	ND	9.9	1	
Di-n-Butyl Phthalate	ND	9.9	1	
Di-n-Octyl Phthalate	ND	9.9	1	
Dibenz (a,h) Anthracene	ND	9.9	1	
Dibenzofuran	ND	9.9	1	
1,2-Dichlorobenzene	ND	9.9	1	
1,3-Dichlorobenzene	ND	9.9	1	
1,4-Dichlorobenzene	ND	9.9	1	
3,3'-Dichlorobenzidine	ND	25	1	
2,4-Dichlorophenol	ND	9.9	1	
Diethyl Phthalate	ND	9.9	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.9	1	
2,4-Dimethylphenol	ND	9.9	1	
4,6-Dinitro-2-Methylphenol	ND	50	1	
2,4-Dinitrophenol	ND	50	1	
2,4-Dinitrotoluene	ND	9.9	1	
2,6-Dinitrotoluene	ND	9.9	1	
Fluoranthene	ND	9.9	1	
Fluorene	ND	9.9	1	
Hexachloro-1,3-Butadiene	ND	9.9	1	
Hexachlorobenzene	ND	9.9	1	
Hexachlorocyclopentadiene	ND	25	1	
Hexachloroethane	ND	9.9	1	
Indeno (1,2,3-c,d) Pyrene	ND	9.9	1	
Isophorone	ND	9.9	1	
2-Methylnaphthalene	ND	9.9	1	
1-Methylnaphthalene	ND	9.9	1	
2-Methylphenol	ND	9.9	1	
3/4-Methylphenol	ND	9.9	1	
N-Nitroso-di-n-propylamine	ND	9.9	1	
N-Nitrosodimethylamine	ND	9.9	1	
N-Nitrosodiphenylamine	ND	9.9	1	
Naphthalene	ND	9.9	1	
4-Nitroaniline	ND	9.9	1	
3-Nitroaniline	ND	9.9	1	
2-Nitroaniline	ND	9.9	1	
Nitrobenzene	ND	25	1	
4-Nitrophenol	ND	9.9	1	
2-Nitrophenol	ND	9.9	1	
Pentachlorophenol	ND	9.9	1	
Phenanthrene	ND	9.9	1	
Phenol	ND	9.9	1	
Pyrene	ND	9.9	1	
Pyridine	ND	9.9	1	
1,2,4-Trichlorobenzene	ND	9.9	1	
2,4,6-Trichlorophenol	ND	9.9	1	
2,4,5-Trichlorophenol	ND	9.9	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	77	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 18 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	59	24-120	
Nitrobenzene-d5	81	38-120	
p-Terphenyl-d14	82	41-137	
Phenol-d6	44	16-120	
2,4,6-Tribromophenol	85	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-G**	**01/24/14 13:45**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 18:49**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.7	0.999	
Acenaphthylene	ND	9.7	0.999	
Aniline	ND	9.7	0.999	
Anthracene	ND	9.7	0.999	
Azobenzene	ND	9.7	0.999	
Benzidine	ND	48	0.999	
Benzo (a) Anthracene	ND	9.7	0.999	
Benzo (a) Pyrene	ND	9.7	0.999	
Benzo (b) Fluoranthene	ND	9.7	0.999	
Benzo (g,h,i) Perylene	ND	9.7	0.999	
Benzo (k) Fluoranthene	ND	9.7	0.999	
Benzoic Acid	ND	48	0.999	
Benzyl Alcohol	ND	9.7	0.999	
Bis(2-Chloroethoxy) Methane	ND	9.7	0.999	
Bis(2-Chloroethyl) Ether	ND	24	0.999	
Bis(2-Chloroisopropyl) Ether	ND	9.7	0.999	
Bis(2-Ethylhexyl) Phthalate	ND	9.7	0.999	
4-Bromophenyl-Phenyl Ether	ND	9.7	0.999	
Butyl Benzyl Phthalate	ND	9.7	0.999	
4-Chloro-3-Methylphenol	ND	9.7	0.999	
4-Chloroaniline	ND	9.7	0.999	
2-Chloronaphthalene	ND	9.7	0.999	
2-Chlorophenol	ND	9.7	0.999	
4-Chlorophenyl-Phenyl Ether	ND	9.7	0.999	
Chrysene	ND	9.7	0.999	
Di-n-Butyl Phthalate	ND	9.7	0.999	
Di-n-Octyl Phthalate	ND	9.7	0.999	
Dibenz (a,h) Anthracene	ND	9.7	0.999	
Dibenzofuran	ND	9.7	0.999	
1,2-Dichlorobenzene	ND	9.7	0.999	
1,3-Dichlorobenzene	ND	9.7	0.999	
1,4-Dichlorobenzene	ND	9.7	0.999	
3,3'-Dichlorobenzidine	ND	24	0.999	
2,4-Dichlorophenol	ND	9.7	0.999	
Diethyl Phthalate	ND	9.7	0.999	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.7	0.999	
2,4-Dimethylphenol	ND	9.7	0.999	
4,6-Dinitro-2-Methylphenol	ND	48	0.999	
2,4-Dinitrophenol	ND	48	0.999	
2,4-Dinitrotoluene	ND	9.7	0.999	
2,6-Dinitrotoluene	ND	9.7	0.999	
Fluoranthene	ND	9.7	0.999	
Fluorene	ND	9.7	0.999	
Hexachloro-1,3-Butadiene	ND	9.7	0.999	
Hexachlorobenzene	ND	9.7	0.999	
Hexachlorocyclopentadiene	ND	24	0.999	
Hexachloroethane	ND	9.7	0.999	
Indeno (1,2,3-c,d) Pyrene	ND	9.7	0.999	
Isophorone	ND	9.7	0.999	
2-Methylnaphthalene	ND	9.7	0.999	
1-Methylnaphthalene	ND	9.7	0.999	
2-Methylphenol	ND	9.7	0.999	
3/4-Methylphenol	ND	9.7	0.999	
N-Nitroso-di-n-propylamine	ND	9.7	0.999	
N-Nitrosodimethylamine	ND	9.7	0.999	
N-Nitrosodiphenylamine	ND	9.7	0.999	
Naphthalene	ND	9.7	0.999	
4-Nitroaniline	ND	9.7	0.999	
3-Nitroaniline	ND	9.7	0.999	
2-Nitroaniline	ND	9.7	0.999	
Nitrobenzene	ND	24	0.999	
4-Nitrophenol	ND	9.7	0.999	
2-Nitrophenol	ND	9.7	0.999	
Pentachlorophenol	ND	9.7	0.999	
Phenanthrene	ND	9.7	0.999	
Phenol	ND	9.7	0.999	
Pyrene	ND	9.7	0.999	
Pyridine	ND	9.7	0.999	
1,2,4-Trichlorobenzene	ND	9.7	0.999	
2,4,6-Trichlorophenol	ND	9.7	0.999	
2,4,5-Trichlorophenol	ND	9.7	0.999	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 21 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	60	24-120	
Nitrobenzene-d5	74	38-120	
p-Terphenyl-d14	83	41-137	
Phenol-d6	49	16-120	
2,4,6-Tribromophenol	85	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-G**	**01/24/14 14:45**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 19:08**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.8	1	
Acenaphthylene	ND	9.8	1	
Aniline	ND	9.8	1	
Anthracene	ND	9.8	1	
Azobenzene	ND	9.8	1	
Benzidine	ND	49	1	
Benzo (a) Anthracene	ND	9.8	1	
Benzo (a) Pyrene	ND	9.8	1	
Benzo (b) Fluoranthene	ND	9.8	1	
Benzo (g,h,i) Perylene	ND	9.8	1	
Benzo (k) Fluoranthene	ND	9.8	1	
Benzoic Acid	ND	49	1	
Benzyl Alcohol	ND	9.8	1	
Bis(2-Chloroethoxy) Methane	ND	9.8	1	
Bis(2-Chloroethyl) Ether	ND	24	1	
Bis(2-Chloroisopropyl) Ether	ND	9.8	1	
Bis(2-Ethylhexyl) Phthalate	ND	9.8	1	
4-Bromophenyl-Phenyl Ether	ND	9.8	1	
Butyl Benzyl Phthalate	ND	9.8	1	
4-Chloro-3-Methylphenol	ND	9.8	1	
4-Chloroaniline	ND	9.8	1	
2-Chloronaphthalene	ND	9.8	1	
2-Chlorophenol	ND	9.8	1	
4-Chlorophenyl-Phenyl Ether	ND	9.8	1	
Chrysene	ND	9.8	1	
Di-n-Butyl Phthalate	ND	9.8	1	
Di-n-Octyl Phthalate	ND	9.8	1	
Dibenz (a,h) Anthracene	ND	9.8	1	
Dibenzofuran	ND	9.8	1	
1,2-Dichlorobenzene	ND	9.8	1	
1,3-Dichlorobenzene	ND	9.8	1	
1,4-Dichlorobenzene	ND	9.8	1	
3,3'-Dichlorobenzidine	ND	24	1	
2,4-Dichlorophenol	ND	9.8	1	
Diethyl Phthalate	ND	9.8	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.8	1	
2,4-Dimethylphenol	ND	9.8	1	
4,6-Dinitro-2-Methylphenol	ND	49	1	
2,4-Dinitrophenol	ND	49	1	
2,4-Dinitrotoluene	ND	9.8	1	
2,6-Dinitrotoluene	ND	9.8	1	
Fluoranthene	ND	9.8	1	
Fluorene	ND	9.8	1	
Hexachloro-1,3-Butadiene	ND	9.8	1	
Hexachlorobenzene	ND	9.8	1	
Hexachlorocyclopentadiene	ND	24	1	
Hexachloroethane	ND	9.8	1	
Indeno (1,2,3-c,d) Pyrene	ND	9.8	1	
Isophorone	ND	9.8	1	
2-Methylnaphthalene	ND	9.8	1	
1-Methylnaphthalene	ND	9.8	1	
2-Methylphenol	ND	9.8	1	
3/4-Methylphenol	ND	9.8	1	
N-Nitroso-di-n-propylamine	ND	9.8	1	
N-Nitrosodimethylamine	ND	9.8	1	
N-Nitrosodiphenylamine	ND	9.8	1	
Naphthalene	ND	9.8	1	
4-Nitroaniline	ND	9.8	1	
3-Nitroaniline	ND	9.8	1	
2-Nitroaniline	ND	9.8	1	
Nitrobenzene	ND	24	1	
4-Nitrophenol	ND	9.8	1	
2-Nitrophenol	ND	9.8	1	
Pentachlorophenol	ND	9.8	1	
Phenanthrene	ND	9.8	1	
Phenol	ND	9.8	1	
Pyrene	ND	9.8	1	
Pyridine	ND	9.8	1	
1,2,4-Trichlorobenzene	ND	9.8	1	
2,4,6-Trichlorophenol	ND	9.8	1	
2,4,5-Trichlorophenol	ND	9.8	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 24 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	57	24-120	
Nitrobenzene-d5	78	38-120	
p-Terphenyl-d14	80	41-137	
Phenol-d6	41	16-120	
2,4,6-Tribromophenol	85	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-003-3793**	**N/A**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 12:45**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1	
Acenaphthylene	ND	10	1	
Aniline	ND	10	1	
Anthracene	ND	10	1	
Azobenzene	ND	10	1	
Benzidine	ND	50	1	
Benzo (a) Anthracene	ND	10	1	
Benzo (a) Pyrene	ND	10	1	
Benzo (b) Fluoranthene	ND	10	1	
Benzo (g,h,i) Perylene	ND	10	1	
Benzo (k) Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1	
Benzyl Alcohol	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1	
Bis(2-Ethylhexyl) Phthalate	ND	10	1	
4-Bromophenyl-Phenyl Ether	ND	10	1	
Butyl Benzyl Phthalate	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1	
4-Chloroaniline	ND	10	1	
2-Chloronaphthalene	ND	10	1	
2-Chlorophenol	ND	10	1	
4-Chlorophenyl-Phenyl Ether	ND	10	1	
Chrysene	ND	10	1	
Di-n-Butyl Phthalate	ND	10	1	
Di-n-Octyl Phthalate	ND	10	1	
Dibenz (a,h) Anthracene	ND	10	1	
Dibenzofuran	ND	10	1	
1,2-Dichlorobenzene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1	
1,4-Dichlorobenzene	ND	10	1	
3,3'-Dichlorobenzidine	ND	25	1	
2,4-Dichlorophenol	ND	10	1	
Diethyl Phthalate	ND	10	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1	
4,6-Dinitro-2-Methylphenol	ND	50	1	
2,4-Dinitrophenol	ND	50	1	
2,4-Dinitrotoluene	ND	10	1	
2,6-Dinitrotoluene	ND	10	1	
Fluoranthene	ND	10	1	
Fluorene	ND	10	1	
Hexachloro-1,3-Butadiene	ND	10	1	
Hexachlorobenzene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1	
Hexachloroethane	ND	10	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Isophorone	ND	10	1	
2-Methylnaphthalene	ND	10	1	
1-Methylnaphthalene	ND	10	1	
2-Methylphenol	ND	10	1	
3/4-Methylphenol	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1	
N-Nitrosodimethylamine	ND	10	1	
N-Nitrosodiphenylamine	ND	10	1	
Naphthalene	ND	10	1	
4-Nitroaniline	ND	10	1	
3-Nitroaniline	ND	10	1	
2-Nitroaniline	ND	10	1	
Nitrobenzene	ND	25	1	
4-Nitrophenol	ND	10	1	
2-Nitrophenol	ND	10	1	
Pentachlorophenol	ND	10	1	
Phenanthrene	ND	10	1	
Phenol	ND	10	1	
Pyrene	ND	10	1	
Pyridine	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	96	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 27 of 27

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	69	24-120	
Nitrobenzene-d5	93	38-120	
p-Terphenyl-d14	100	41-137	
Phenol-d6	47	16-120	
2,4,6-Tribromophenol	100	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 21:04**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 3 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	78	25-120	
Nitrobenzene-d5	81	33-123	
p-Terphenyl-d14	85	27-159	
Phenol-d6	88	26-122	
2,4,6-Tribromophenol	79	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 21:22**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 6 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	85	25-120	
Nitrobenzene-d5	80	33-123	
p-Terphenyl-d14	77	27-159	
Phenol-d6	94	26-122	
2,4,6-Tribromophenol	82	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC/MS TT**	**01/29/14**	**02/04/14 20:40**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 9 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	77	25-120	
Nitrobenzene-d5	81	33-123	
p-Terphenyl-d14	81	27-159	
Phenol-d6	82	26-122	
2,4,6-Tribromophenol	77	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC/MS TT**	**01/29/14**	**02/04/14 21:35**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.99	2	
Acenaphthylene	ND	0.99	2	
Aniline	ND	0.99	2	
Anthracene	ND	0.99	2	
Azobenzene	ND	0.99	2	
Benzidine	ND	20	2	
Benzo (a) Anthracene	ND	0.99	2	
Benzo (a) Pyrene	ND	0.99	2	
Benzo (b) Fluoranthene	ND	0.99	2	
Benzo (g,h,i) Perylene	ND	0.99	2	
Benzo (k) Fluoranthene	ND	0.99	2	
Benzoic Acid	ND	5.0	2	
Benzyl Alcohol	ND	0.99	2	
Bis(2-Chloroethoxy) Methane	ND	0.99	2	
Bis(2-Chloroethyl) Ether	ND	5.0	2	
Bis(2-Chloroisopropyl) Ether	ND	0.99	2	
Bis(2-Ethylhexyl) Phthalate	ND	0.99	2	
4-Bromophenyl-Phenyl Ether	ND	0.99	2	
Butyl Benzyl Phthalate	ND	0.99	2	
4-Chloro-3-Methylphenol	ND	0.99	2	
4-Chloroaniline	ND	0.99	2	
2-Chloronaphthalene	ND	0.99	2	
2-Chlorophenol	ND	0.99	2	
4-Chlorophenyl-Phenyl Ether	ND	0.99	2	
Chrysene	ND	0.99	2	
Di-n-Butyl Phthalate	ND	0.99	2	
Di-n-Octyl Phthalate	ND	0.99	2	
Dibenz (a,h) Anthracene	ND	0.99	2	
Dibenzofuran	ND	0.99	2	
1,2-Dichlorobenzene	ND	0.99	2	
1,3-Dichlorobenzene	ND	0.99	2	
1,4-Dichlorobenzene	ND	0.99	2	
3,3'-Dichlorobenzidine	ND	20	2	
2,4-Dichlorophenol	ND	0.99	2	
Diethyl Phthalate	ND	0.99	2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.99	2	
2,4-Dimethylphenol	ND	0.99	2	
4,6-Dinitro-2-Methylphenol	ND	5.0	2	
2,4-Dinitrophenol	ND	5.0	2	
2,4-Dinitrotoluene	ND	0.99	2	
2,6-Dinitrotoluene	ND	0.99	2	
Fluoranthene	1.4	0.99	2	
Fluorene	ND	0.99	2	
Hexachloro-1,3-Butadiene	ND	0.99	2	
Hexachlorobenzene	ND	0.99	2	
Hexachlorocyclopentadiene	ND	5.0	2	
Hexachloroethane	ND	0.99	2	
Indeno (1,2,3-c,d) Pyrene	ND	0.99	2	
Isophorone	ND	0.99	2	
2-Methylnaphthalene	ND	0.99	2	
1-Methylnaphthalene	ND	0.99	2	
2-Methylphenol	ND	0.99	2	
3/4-Methylphenol	ND	0.99	2	
N-Nitroso-di-n-propylamine	ND	0.99	2	
N-Nitrosodimethylamine	ND	0.99	2	
N-Nitrosodiphenylamine	ND	0.99	2	
Naphthalene	ND	0.99	2	
4-Nitroaniline	ND	0.99	2	
3-Nitroaniline	ND	0.99	2	
2-Nitroaniline	ND	0.99	2	
Nitrobenzene	ND	5.0	2	
4-Nitrophenol	ND	0.99	2	
2-Nitrophenol	ND	0.99	2	
Pentachlorophenol	ND	5.0	2	
Phenanthrene	ND	0.99	2	
Phenol	ND	0.99	2	
Pyrene	1.4	0.99	2	
Pyridine	ND	0.99	2	
1,2,4-Trichlorobenzene	ND	0.99	2	
2,4,6-Trichlorophenol	ND	0.99	2	
2,4,5-Trichlorophenol	ND	0.99	2	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	96	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 12 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	98	25-120	
Nitrobenzene-d5	102	33-123	
p-Terphenyl-d14	92	27-159	
Phenol-d6	101	26-122	
2,4,6-Tribromophenol	101	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**GC/MS TT**	**01/29/14**	**02/04/14 20:58**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 15 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	81	25-120	
Nitrobenzene-d5	82	33-123	
p-Terphenyl-d14	82	27-159	
Phenol-d6	86	26-122	
2,4,6-Tribromophenol	83	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 18:35**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 18 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	78	25-120	
Nitrobenzene-d5	81	33-123	
p-Terphenyl-d14	83	27-159	
Phenol-d6	86	26-122	
2,4,6-Tribromophenol	78	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 21:41**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	9.9	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	9.9	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 21 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	76	25-120	
Nitrobenzene-d5	76	33-123	
p-Terphenyl-d14	77	27-159	
Phenol-d6	95	26-122	
2,4,6-Tribromophenol	81	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 22:00**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	66	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 24 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	86	25-120	
Nitrobenzene-d5	77	33-123	
p-Terphenyl-d14	78	27-159	
Phenol-d6	91	26-122	
2,4,6-Tribromophenol	81	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC/MS TT**	**01/29/14**	**02/04/14 21:17**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 27 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	83	25-120	
Nitrobenzene-d5	86	33-123	
p-Terphenyl-d14	82	27-159	
Phenol-d6	87	26-122	
2,4,6-Tribromophenol	85	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-2835**	**N/A**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 16:43**	**140129L11A**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1	
Acenaphthylene	ND	0.50	1	
Aniline	ND	0.50	1	
Anthracene	ND	0.50	1	
Azobenzene	ND	0.50	1	
Benzidine	ND	10	1	
Benzo (a) Anthracene	ND	0.50	1	
Benzo (a) Pyrene	ND	0.50	1	
Benzo (b) Fluoranthene	ND	0.50	1	
Benzo (g,h,i) Perylene	ND	0.50	1	
Benzo (k) Fluoranthene	ND	0.50	1	
Benzoic Acid	ND	2.5	1	
Benzyl Alcohol	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Butyl Benzyl Phthalate	ND	0.50	1	
4-Chloro-3-Methylphenol	ND	0.50	1	
4-Chloroaniline	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Chrysene	ND	0.50	1	
Di-n-Butyl Phthalate	ND	0.50	1	
Di-n-Octyl Phthalate	ND	0.50	1	
Dibenz (a,h) Anthracene	ND	0.50	1	
Dibenzofuran	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1	
3,3'-Dichlorobenzidine	ND	10	1	
2,4-Dichlorophenol	ND	0.50	1	
Diethyl Phthalate	ND	0.50	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1	
4,6-Dinitro-2-Methylphenol	ND	2.5	1	
2,4-Dinitrophenol	ND	2.5	1	
2,4-Dinitrotoluene	ND	0.50	1	
2,6-Dinitrotoluene	ND	0.50	1	
Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1	
Hexachlorobenzene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1	
Hexachloroethane	ND	0.50	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Isophorone	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1	
2-Methylphenol	ND	0.50	1	
3/4-Methylphenol	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1	
N-Nitrosodimethylamine	ND	0.50	1	
N-Nitrosodiphenylamine	ND	0.50	1	
Naphthalene	ND	0.50	1	
4-Nitroaniline	ND	0.50	1	
3-Nitroaniline	ND	0.50	1	
2-Nitroaniline	ND	0.50	1	
Nitrobenzene	ND	2.5	1	
4-Nitrophenol	ND	0.50	1	
2-Nitrophenol	ND	0.50	1	
Pentachlorophenol	ND	2.5	1	
Phenanthrene	ND	0.50	1	
Phenol	ND	0.50	1	
Pyrene	ND	0.50	1	
Pyridine	ND	0.50	1	
1,2,4-Trichlorobenzene	ND	0.50	1	
2,4,6-Trichlorophenol	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	109	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Port of Oakland Phase II		Page 30 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	102	25-120	
Nitrobenzene-d5	106	33-123	
p-Terphenyl-d14	103	27-159	
Phenol-d6	107	26-122	
2,4,6-Tribromophenol	100	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-6	**14-01-1599-3-B**	**01/23/14 16:00**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 16:51**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 3 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	105	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	92	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-5	**14-01-1599-4-B**	**01/23/14 16:15**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 22:06**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	0.54	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	2.7	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	5.7	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	4.0	1.0	1	
1,3,5-Trimethylbenzene	1.2	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	11	1.0	1	
o-Xylene	3.6	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 6 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	96	75-135	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-A**	**01/23/14 16:35**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/29/14 01:22**	**140128L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2000	100	
Benzene	10000	50	100	
Bromobenzene	ND	100	100	
Bromochloromethane	ND	100	100	
Bromodichloromethane	ND	100	100	
Bromoform	ND	100	100	
Bromomethane	ND	1000	100	
2-Butanone	ND	1000	100	
n-Butylbenzene	370	100	100	
sec-Butylbenzene	ND	100	100	
tert-Butylbenzene	ND	100	100	
Carbon Disulfide	ND	1000	100	
Carbon Tetrachloride	ND	50	100	
Chlorobenzene	ND	100	100	
Chloroethane	ND	500	100	
Chloroform	ND	100	100	
Chloromethane	ND	1000	100	
2-Chlorotoluene	ND	100	100	
4-Chlorotoluene	ND	100	100	
Dibromochloromethane	ND	100	100	
1,2-Dibromo-3-Chloropropane	ND	500	100	
1,2-Dibromoethane	ND	100	100	
Dibromomethane	ND	100	100	
1,2-Dichlorobenzene	ND	100	100	
1,3-Dichlorobenzene	ND	100	100	
1,4-Dichlorobenzene	ND	100	100	
Dichlorodifluoromethane	ND	100	100	
1,1-Dichloroethane	ND	100	100	
1,2-Dichloroethane	ND	50	100	
1,1-Dichloroethene	ND	100	100	
c-1,2-Dichloroethene	ND	100	100	
t-1,2-Dichloroethene	ND	100	100	
1,2-Dichloropropane	ND	100	100	
1,3-Dichloropropane	ND	100	100	
2,2-Dichloropropane	ND	100	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	100	100	
c-1,3-Dichloropropene	ND	50	100	
t-1,3-Dichloropropene	ND	50	100	
Ethylbenzene	6300	100	100	
2-Hexanone	ND	1000	100	
Isopropylbenzene	220	100	100	
p-Isopropyltoluene	ND	100	100	
Methylene Chloride	ND	1000	100	
4-Methyl-2-Pentanone	ND	1000	100	
Naphthalene	ND	1000	100	
n-Propylbenzene	810	100	100	
Styrene	ND	100	100	
1,1,1,2-Tetrachloroethane	ND	100	100	
1,1,2,2-Tetrachloroethane	ND	100	100	
Tetrachloroethene	ND	100	100	
1,2,3-Trichlorobenzene	ND	100	100	
1,2,4-Trichlorobenzene	ND	100	100	
1,1,1-Trichloroethane	ND	100	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	100	
1,1,2-Trichloroethane	ND	100	100	
Trichloroethene	ND	100	100	
Trichlorofluoromethane	ND	1000	100	
1,2,3-Trichloropropane	ND	500	100	
1,2,4-Trimethylbenzene	6600	100	100	
1,3,5-Trimethylbenzene	1800	100	100	
Vinyl Acetate	ND	1000	100	
Vinyl Chloride	ND	50	100	
p/m-Xylene	24000	100	100	
o-Xylene	10000	100	100	
Methyl-t-Butyl Ether (MTBE)	160	100	100	
Tert-Butyl Alcohol (TBA)	ND	1000	100	
Diisopropyl Ether (DIPE)	ND	200	100	
Ethyl-t-Butyl Ether (ETBE)	ND	200	100	
Tert-Amyl-Methyl Ether (TAME)	ND	200	100	
Ethanol	ND	10000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	108	78-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	75-135	
Toluene-d8	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-9	**14-01-1599-5-B**	**01/23/14 16:35**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 19:14**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Toluene	38000	250	250	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	104	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**14-01-1599-16-A**	**01/24/14 10:25**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/29/14 01:50**	**140128L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2000	100	
Benzene	1800	50	100	
Bromobenzene	ND	100	100	
Bromochloromethane	ND	100	100	
Bromodichloromethane	ND	100	100	
Bromoform	ND	100	100	
Bromomethane	ND	1000	100	
2-Butanone	ND	1000	100	
n-Butylbenzene	760	100	100	
sec-Butylbenzene	150	100	100	
tert-Butylbenzene	ND	100	100	
Carbon Disulfide	ND	1000	100	
Carbon Tetrachloride	ND	50	100	
Chlorobenzene	ND	100	100	
Chloroethane	ND	500	100	
Chloroform	ND	100	100	
Chloromethane	ND	1000	100	
2-Chlorotoluene	ND	100	100	
4-Chlorotoluene	ND	100	100	
Dibromochloromethane	ND	100	100	
1,2-Dibromo-3-Chloropropane	ND	500	100	
1,2-Dibromoethane	ND	100	100	
Dibromomethane	ND	100	100	
1,2-Dichlorobenzene	ND	100	100	
1,3-Dichlorobenzene	ND	100	100	
1,4-Dichlorobenzene	ND	100	100	
Dichlorodifluoromethane	ND	100	100	
1,1-Dichloroethane	ND	100	100	
1,2-Dichloroethane	ND	50	100	
1,1-Dichloroethene	ND	100	100	
c-1,2-Dichloroethene	ND	100	100	
t-1,2-Dichloroethene	ND	100	100	
1,2-Dichloropropane	ND	100	100	
1,3-Dichloropropane	ND	100	100	
2,2-Dichloropropane	ND	100	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	100	100	
c-1,3-Dichloropropene	ND	50	100	
t-1,3-Dichloropropene	ND	50	100	
Ethylbenzene	6800	100	100	
2-Hexanone	ND	1000	100	
Isopropylbenzene	390	100	100	
p-Isopropyltoluene	ND	100	100	
Methylene Chloride	ND	1000	100	
4-Methyl-2-Pentanone	ND	1000	100	
Naphthalene	1400	1000	100	
n-Propylbenzene	1500	100	100	
Styrene	ND	100	100	
1,1,1,2-Tetrachloroethane	ND	100	100	
1,1,2,2-Tetrachloroethane	ND	100	100	
Tetrachloroethene	ND	100	100	
Toluene	15000	100	100	
1,2,3-Trichlorobenzene	ND	100	100	
1,2,4-Trichlorobenzene	ND	100	100	
1,1,1-Trichloroethane	ND	100	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	100	
1,1,2-Trichloroethane	ND	100	100	
Trichloroethene	ND	100	100	
Trichlorofluoromethane	ND	1000	100	
1,2,3-Trichloropropane	ND	500	100	
1,2,4-Trimethylbenzene	9900	100	100	
1,3,5-Trimethylbenzene	2900	100	100	
Vinyl Acetate	ND	1000	100	
Vinyl Chloride	ND	50	100	
p/m-Xylene	26000	100	100	
o-Xylene	10000	100	100	
Methyl-t-Butyl Ether (MTBE)	ND	100	100	
Tert-Butyl Alcohol (TBA)	ND	1000	100	
Diisopropyl Ether (DIPE)	ND	200	100	
Ethyl-t-Butyl Ether (ETBE)	ND	200	100	
Tert-Amyl-Methyl Ether (TAME)	ND	200	100	
Ethanol	ND	10000	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/28/14
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Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 12 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	105	78-126	
1,2-Dichloroethane-d4	104	75-135	
Toluene-d8	107	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-B**	**01/24/14 10:25**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 19:42**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	200	10	
Benzene	1300	5.0	10	
Bromobenzene	ND	10	10	
Bromochloromethane	ND	10	10	
Bromodichloromethane	ND	10	10	
Bromoform	ND	10	10	
Bromomethane	ND	100	10	
2-Butanone	ND	100	10	
n-Butylbenzene	17	10	10	
sec-Butylbenzene	ND	10	10	
tert-Butylbenzene	ND	10	10	
Carbon Disulfide	ND	100	10	
Carbon Tetrachloride	ND	5.0	10	
Chlorobenzene	ND	10	10	
Chloroethane	ND	50	10	
Chloroform	ND	10	10	
Chloromethane	ND	100	10	
2-Chlorotoluene	ND	10	10	
4-Chlorotoluene	ND	10	10	
Dibromochloromethane	ND	10	10	
1,2-Dibromo-3-Chloropropane	ND	50	10	
1,2-Dibromoethane	ND	10	10	
Dibromomethane	ND	10	10	
1,2-Dichlorobenzene	ND	10	10	
1,3-Dichlorobenzene	ND	10	10	
1,4-Dichlorobenzene	ND	10	10	
Dichlorodifluoromethane	ND	10	10	
1,1-Dichloroethane	ND	10	10	
1,2-Dichloroethane	ND	5.0	10	
1,1-Dichloroethene	ND	10	10	
c-1,2-Dichloroethene	ND	10	10	
t-1,2-Dichloroethene	ND	10	10	
1,2-Dichloropropane	ND	10	10	
1,3-Dichloropropane	ND	10	10	
2,2-Dichloropropane	ND	10	10	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	10	10	
c-1,3-Dichloropropene	ND	5.0	10	
t-1,3-Dichloropropene	ND	5.0	10	
Ethylbenzene	1300	10	10	
2-Hexanone	ND	100	10	
Isopropylbenzene	63	10	10	
p-Isopropyltoluene	ND	10	10	
Methylene Chloride	ND	100	10	
4-Methyl-2-Pentanone	ND	100	10	
Naphthalene	ND	100	10	
n-Propylbenzene	140	10	10	
Styrene	ND	10	10	
1,1,1,2-Tetrachloroethane	ND	10	10	
1,1,2,2-Tetrachloroethane	ND	10	10	
Tetrachloroethene	ND	10	10	
1,2,3-Trichlorobenzene	ND	10	10	
1,2,4-Trichlorobenzene	ND	10	10	
1,1,1-Trichloroethane	ND	10	10	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	10	
1,1,2-Trichloroethane	ND	10	10	
Trichloroethene	ND	10	10	
Trichlorofluoromethane	ND	100	10	
1,2,3-Trichloropropane	ND	50	10	
1,2,4-Trimethylbenzene	560	10	10	
1,3,5-Trimethylbenzene	160	10	10	
Vinyl Acetate	ND	100	10	
Vinyl Chloride	ND	5.0	10	
p/m-Xylene	3100	10	10	
o-Xylene	1500	10	10	
Methyl-t-Butyl Ether (MTBE)	18	10	10	
Tert-Butyl Alcohol (TBA)	ND	100	10	
Diisopropyl Ether (DIPE)	ND	20	10	
Ethyl-t-Butyl Ether (ETBE)	ND	20	10	
Tert-Amyl-Methyl Ether (TAME)	ND	20	10	
Ethanol	ND	1000	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	80-120	
Dibromofluoromethane	102	78-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Port of Oakland Phase II			Page 15 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-DUP	**14-01-1599-17-B**	**01/24/14 10:25**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 20:34**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Toluene	3100	25	25	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	80-120	
Dibromofluoromethane	103	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
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Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**14-01-1599-18-A**	**01/24/14 12:50**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 23:03**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West
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Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 18 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	99	75-135	
Toluene-d8	93	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-8	**14-01-1599-19-A**	**01/24/14 13:45**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 23:32**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	1.8	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	4.2	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	4.6	1.0	1	
o-Xylene	1.0	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 21 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	102	78-126	
1,2-Dichloroethane-d4	96	75-135	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7	**14-01-1599-21-A**	**01/24/14 14:45**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/30/14 00:01**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 24 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	105	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	90	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Trip Blank1	**14-01-1599-23-A**	**01/24/14 16:00**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 20:12**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 27 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	102	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	97	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Trip Blank2	**14-01-1599-24-A**	**01/24/14 16:00**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 20:40**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 30 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	107	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-13033**	**N/A**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/28/14 15:42**	**140128L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 33 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	105	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	97	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-13051**	**N/A**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 16:11**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	89	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 36 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	108	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-13084**	**N/A**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 16:35**	**140131L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 39 of 39

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	103	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-0.5-1.0	**14-01-1599-1-A**	**01/23/14 15:15**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 05:07**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 3 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	113	63-141	
1,2-Dichloroethane-d4	111	62-146	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-6.0-6.5	**14-01-1599-2-A**	**01/23/14 15:20**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 07:00**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.02	
Benzene	ND	5.1	1.02	
Bromobenzene	ND	5.1	1.02	
Bromochloromethane	ND	5.1	1.02	
Bromodichloromethane	ND	5.1	1.02	
Bromoform	ND	5.1	1.02	
Bromomethane	ND	26	1.02	
2-Butanone	ND	51	1.02	
n-Butylbenzene	ND	5.1	1.02	
sec-Butylbenzene	ND	5.1	1.02	
tert-Butylbenzene	ND	5.1	1.02	
Carbon Disulfide	ND	51	1.02	
Carbon Tetrachloride	ND	5.1	1.02	
Chlorobenzene	ND	5.1	1.02	
Chloroethane	ND	5.1	1.02	
Chloroform	ND	5.1	1.02	
Chloromethane	ND	26	1.02	
2-Chlorotoluene	ND	5.1	1.02	
4-Chlorotoluene	ND	5.1	1.02	
Dibromochloromethane	ND	5.1	1.02	
1,2-Dibromo-3-Chloropropane	ND	10	1.02	
1,2-Dibromoethane	ND	5.1	1.02	
Dibromomethane	ND	5.1	1.02	
1,2-Dichlorobenzene	ND	5.1	1.02	
1,3-Dichlorobenzene	ND	5.1	1.02	
1,4-Dichlorobenzene	ND	5.1	1.02	
Dichlorodifluoromethane	ND	5.1	1.02	
1,1-Dichloroethane	ND	5.1	1.02	
1,2-Dichloroethane	ND	5.1	1.02	
1,1-Dichloroethene	ND	5.1	1.02	
c-1,2-Dichloroethene	ND	5.1	1.02	
t-1,2-Dichloroethene	ND	5.1	1.02	
1,2-Dichloropropane	ND	5.1	1.02	
1,3-Dichloropropane	ND	5.1	1.02	
2,2-Dichloropropane	ND	5.1	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.1	1.02	
c-1,3-Dichloropropene	ND	5.1	1.02	
t-1,3-Dichloropropene	ND	5.1	1.02	
Ethylbenzene	ND	5.1	1.02	
2-Hexanone	ND	51	1.02	
Isopropylbenzene	ND	5.1	1.02	
p-Isopropyltoluene	ND	5.1	1.02	
Methylene Chloride	ND	51	1.02	
4-Methyl-2-Pentanone	ND	51	1.02	
Naphthalene	ND	51	1.02	
n-Propylbenzene	ND	5.1	1.02	
Styrene	ND	5.1	1.02	
1,1,1,2-Tetrachloroethane	ND	5.1	1.02	
1,1,2,2-Tetrachloroethane	ND	5.1	1.02	
Tetrachloroethene	ND	5.1	1.02	
Toluene	ND	5.1	1.02	
1,2,3-Trichlorobenzene	ND	10	1.02	
1,2,4-Trichlorobenzene	ND	5.1	1.02	
1,1,1-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1.02	
Trichloroethene	ND	5.1	1.02	
1,2,3-Trichloropropane	ND	5.1	1.02	
1,2,4-Trimethylbenzene	ND	5.1	1.02	
Trichlorofluoromethane	ND	51	1.02	
1,3,5-Trimethylbenzene	ND	5.1	1.02	
Vinyl Acetate	ND	51	1.02	
Vinyl Chloride	ND	5.1	1.02	
p/m-Xylene	ND	5.1	1.02	
o-Xylene	ND	5.1	1.02	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1.02	
Tert-Butyl Alcohol (TBA)	ND	51	1.02	
Diisopropyl Ether (DIPE)	ND	10	1.02	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.02	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.02	
Ethanol	ND	260	1.02	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 6 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	113	63-141	
1,2-Dichloroethane-d4	109	62-146	
Toluene-d8	92	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-0.5-1.0	**14-01-1599-7-A**	**01/24/14 07:34**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 07:28**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.02	
Benzene	ND	5.1	1.02	
Bromobenzene	ND	5.1	1.02	
Bromochloromethane	ND	5.1	1.02	
Bromodichloromethane	ND	5.1	1.02	
Bromoform	ND	5.1	1.02	
Bromomethane	ND	26	1.02	
2-Butanone	ND	51	1.02	
n-Butylbenzene	ND	5.1	1.02	
sec-Butylbenzene	ND	5.1	1.02	
tert-Butylbenzene	ND	5.1	1.02	
Carbon Disulfide	ND	51	1.02	
Carbon Tetrachloride	ND	5.1	1.02	
Chlorobenzene	ND	5.1	1.02	
Chloroethane	ND	5.1	1.02	
Chloroform	ND	5.1	1.02	
Chloromethane	ND	26	1.02	
2-Chlorotoluene	ND	5.1	1.02	
4-Chlorotoluene	ND	5.1	1.02	
Dibromochloromethane	ND	5.1	1.02	
1,2-Dibromo-3-Chloropropane	ND	10	1.02	
1,2-Dibromoethane	ND	5.1	1.02	
Dibromomethane	ND	5.1	1.02	
1,2-Dichlorobenzene	ND	5.1	1.02	
1,3-Dichlorobenzene	ND	5.1	1.02	
1,4-Dichlorobenzene	ND	5.1	1.02	
Dichlorodifluoromethane	ND	5.1	1.02	
1,1-Dichloroethane	ND	5.1	1.02	
1,2-Dichloroethane	ND	5.1	1.02	
1,1-Dichloroethene	ND	5.1	1.02	
c-1,2-Dichloroethene	ND	5.1	1.02	
t-1,2-Dichloroethene	ND	5.1	1.02	
1,2-Dichloropropane	ND	5.1	1.02	
1,3-Dichloropropane	ND	5.1	1.02	
2,2-Dichloropropane	ND	5.1	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.1	1.02	
c-1,3-Dichloropropene	ND	5.1	1.02	
t-1,3-Dichloropropene	ND	5.1	1.02	
Ethylbenzene	ND	5.1	1.02	
2-Hexanone	ND	51	1.02	
Isopropylbenzene	ND	5.1	1.02	
p-Isopropyltoluene	ND	5.1	1.02	
Methylene Chloride	ND	51	1.02	
4-Methyl-2-Pentanone	ND	51	1.02	
Naphthalene	ND	51	1.02	
n-Propylbenzene	ND	5.1	1.02	
Styrene	ND	5.1	1.02	
1,1,1,2-Tetrachloroethane	ND	5.1	1.02	
1,1,2,2-Tetrachloroethane	ND	5.1	1.02	
Tetrachloroethene	ND	5.1	1.02	
Toluene	ND	5.1	1.02	
1,2,3-Trichlorobenzene	ND	10	1.02	
1,2,4-Trichlorobenzene	ND	5.1	1.02	
1,1,1-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1.02	
Trichloroethene	ND	5.1	1.02	
1,2,3-Trichloropropane	ND	5.1	1.02	
1,2,4-Trimethylbenzene	ND	5.1	1.02	
Trichlorofluoromethane	ND	51	1.02	
1,3,5-Trimethylbenzene	ND	5.1	1.02	
Vinyl Acetate	ND	51	1.02	
Vinyl Chloride	ND	5.1	1.02	
p/m-Xylene	ND	5.1	1.02	
o-Xylene	ND	5.1	1.02	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1.02	
Tert-Butyl Alcohol (TBA)	ND	51	1.02	
Diisopropyl Ether (DIPE)	ND	10	1.02	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.02	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.02	
Ethanol	ND	260	1.02	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 9 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	113	63-141	
1,2-Dichloroethane-d4	113	62-146	
Toluene-d8	96	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-0.5-1.0	**14-01-1599-8-A**	**01/24/14 07:58**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 07:56**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	0.99	
Benzene	ND	5.0	0.99	
Bromobenzene	ND	5.0	0.99	
Bromochloromethane	ND	5.0	0.99	
Bromodichloromethane	ND	5.0	0.99	
Bromoform	ND	5.0	0.99	
Bromomethane	ND	25	0.99	
2-Butanone	ND	50	0.99	
n-Butylbenzene	ND	5.0	0.99	
sec-Butylbenzene	ND	5.0	0.99	
tert-Butylbenzene	ND	5.0	0.99	
Carbon Disulfide	ND	50	0.99	
Carbon Tetrachloride	ND	5.0	0.99	
Chlorobenzene	ND	5.0	0.99	
Chloroethane	ND	5.0	0.99	
Chloroform	ND	5.0	0.99	
Chloromethane	ND	25	0.99	
2-Chlorotoluene	ND	5.0	0.99	
4-Chlorotoluene	ND	5.0	0.99	
Dibromochloromethane	ND	5.0	0.99	
1,2-Dibromo-3-Chloropropane	ND	9.9	0.99	
1,2-Dibromoethane	ND	5.0	0.99	
Dibromomethane	ND	5.0	0.99	
1,2-Dichlorobenzene	ND	5.0	0.99	
1,3-Dichlorobenzene	ND	5.0	0.99	
1,4-Dichlorobenzene	ND	5.0	0.99	
Dichlorodifluoromethane	ND	5.0	0.99	
1,1-Dichloroethane	ND	5.0	0.99	
1,2-Dichloroethane	ND	5.0	0.99	
1,1-Dichloroethene	ND	5.0	0.99	
c-1,2-Dichloroethene	ND	5.0	0.99	
t-1,2-Dichloroethene	ND	5.0	0.99	
1,2-Dichloropropane	ND	5.0	0.99	
1,3-Dichloropropane	ND	5.0	0.99	
2,2-Dichloropropane	ND	5.0	0.99	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	0.99	
c-1,3-Dichloropropene	ND	5.0	0.99	
t-1,3-Dichloropropene	ND	5.0	0.99	
Ethylbenzene	ND	5.0	0.99	
2-Hexanone	ND	50	0.99	
Isopropylbenzene	ND	5.0	0.99	
p-Isopropyltoluene	ND	5.0	0.99	
Methylene Chloride	ND	50	0.99	
4-Methyl-2-Pentanone	ND	50	0.99	
Naphthalene	ND	50	0.99	
n-Propylbenzene	ND	5.0	0.99	
Styrene	ND	5.0	0.99	
1,1,1,2-Tetrachloroethane	ND	5.0	0.99	
1,1,2,2-Tetrachloroethane	ND	5.0	0.99	
Tetrachloroethene	ND	5.0	0.99	
Toluene	ND	5.0	0.99	
1,2,3-Trichlorobenzene	ND	9.9	0.99	
1,2,4-Trichlorobenzene	ND	5.0	0.99	
1,1,1-Trichloroethane	ND	5.0	0.99	
1,1,2-Trichloroethane	ND	5.0	0.99	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	0.99	
Trichloroethene	ND	5.0	0.99	
1,2,3-Trichloropropane	ND	5.0	0.99	
1,2,4-Trimethylbenzene	ND	5.0	0.99	
Trichlorofluoromethane	ND	50	0.99	
1,3,5-Trimethylbenzene	ND	5.0	0.99	
Vinyl Acetate	ND	50	0.99	
Vinyl Chloride	ND	5.0	0.99	
p/m-Xylene	ND	5.0	0.99	
o-Xylene	ND	5.0	0.99	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	0.99	
Tert-Butyl Alcohol (TBA)	ND	50	0.99	
Diisopropyl Ether (DIPE)	ND	9.9	0.99	
Ethyl-t-Butyl Ether (ETBE)	ND	9.9	0.99	
Tert-Amyl-Methyl Ether (TAME)	ND	9.9	0.99	
Ethanol	ND	250	0.99	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	86	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 12 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	113	63-141	
1,2-Dichloroethane-d4	107	62-146	
Toluene-d8	94	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4-7.0-7.5	**14-01-1599-9-A**	**01/24/14 08:11**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 08:25**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 15 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	112	63-141	
1,2-Dichloroethane-d4	104	62-146	
Toluene-d8	94	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-0.5-1.0	**14-01-1599-11-A**	**01/24/14 09:00**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 08:53**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.05	
Benzene	ND	5.2	1.05	
Bromobenzene	ND	5.2	1.05	
Bromochloromethane	ND	5.2	1.05	
Bromodichloromethane	ND	5.2	1.05	
Bromoform	ND	5.2	1.05	
Bromomethane	ND	26	1.05	
2-Butanone	ND	52	1.05	
n-Butylbenzene	ND	5.2	1.05	
sec-Butylbenzene	ND	5.2	1.05	
tert-Butylbenzene	ND	5.2	1.05	
Carbon Disulfide	ND	52	1.05	
Carbon Tetrachloride	ND	5.2	1.05	
Chlorobenzene	ND	5.2	1.05	
Chloroethane	ND	5.2	1.05	
Chloroform	ND	5.2	1.05	
Chloromethane	ND	26	1.05	
2-Chlorotoluene	ND	5.2	1.05	
4-Chlorotoluene	ND	5.2	1.05	
Dibromochloromethane	ND	5.2	1.05	
1,2-Dibromo-3-Chloropropane	ND	10	1.05	
1,2-Dibromoethane	ND	5.2	1.05	
Dibromomethane	ND	5.2	1.05	
1,2-Dichlorobenzene	ND	5.2	1.05	
1,3-Dichlorobenzene	ND	5.2	1.05	
1,4-Dichlorobenzene	ND	5.2	1.05	
Dichlorodifluoromethane	ND	5.2	1.05	
1,1-Dichloroethane	ND	5.2	1.05	
1,2-Dichloroethane	ND	5.2	1.05	
1,1-Dichloroethene	ND	5.2	1.05	
c-1,2-Dichloroethene	ND	5.2	1.05	
t-1,2-Dichloroethene	ND	5.2	1.05	
1,2-Dichloropropane	ND	5.2	1.05	
1,3-Dichloropropane	ND	5.2	1.05	
2,2-Dichloropropane	ND	5.2	1.05	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1.05	
c-1,3-Dichloropropene	ND	5.2	1.05	
t-1,3-Dichloropropene	ND	5.2	1.05	
Ethylbenzene	ND	5.2	1.05	
2-Hexanone	ND	52	1.05	
Isopropylbenzene	ND	5.2	1.05	
p-Isopropyltoluene	ND	5.2	1.05	
Methylene Chloride	ND	52	1.05	
4-Methyl-2-Pentanone	ND	52	1.05	
Naphthalene	ND	52	1.05	
n-Propylbenzene	ND	5.2	1.05	
Styrene	ND	5.2	1.05	
1,1,1,2-Tetrachloroethane	ND	5.2	1.05	
1,1,2,2-Tetrachloroethane	ND	5.2	1.05	
Tetrachloroethene	6.0	5.2	1.05	
Toluene	ND	5.2	1.05	
1,2,3-Trichlorobenzene	ND	10	1.05	
1,2,4-Trichlorobenzene	ND	5.2	1.05	
1,1,1-Trichloroethane	ND	5.2	1.05	
1,1,2-Trichloroethane	ND	5.2	1.05	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1.05	
Trichloroethene	ND	5.2	1.05	
1,2,3-Trichloropropane	ND	5.2	1.05	
1,2,4-Trimethylbenzene	ND	5.2	1.05	
Trichlorofluoromethane	ND	52	1.05	
1,3,5-Trimethylbenzene	ND	5.2	1.05	
Vinyl Acetate	ND	52	1.05	
Vinyl Chloride	ND	5.2	1.05	
p/m-Xylene	ND	5.2	1.05	
o-Xylene	ND	5.2	1.05	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1.05	
Tert-Butyl Alcohol (TBA)	ND	52	1.05	
Diisopropyl Ether (DIPE)	ND	10	1.05	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.05	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.05	
Ethanol	ND	260	1.05	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 18 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	111	63-141	
1,2-Dichloroethane-d4	107	62-146	
Toluene-d8	93	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-7-7.0-7.5	**14-01-1599-12-A**	**01/24/14 09:10**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 09:21**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.02	
Benzene	ND	5.1	1.02	
Bromobenzene	ND	5.1	1.02	
Bromochloromethane	ND	5.1	1.02	
Bromodichloromethane	ND	5.1	1.02	
Bromoform	ND	5.1	1.02	
Bromomethane	ND	26	1.02	
2-Butanone	ND	51	1.02	
n-Butylbenzene	ND	5.1	1.02	
sec-Butylbenzene	ND	5.1	1.02	
tert-Butylbenzene	ND	5.1	1.02	
Carbon Disulfide	ND	51	1.02	
Carbon Tetrachloride	ND	5.1	1.02	
Chlorobenzene	ND	5.1	1.02	
Chloroethane	ND	5.1	1.02	
Chloroform	ND	5.1	1.02	
Chloromethane	ND	26	1.02	
2-Chlorotoluene	ND	5.1	1.02	
4-Chlorotoluene	ND	5.1	1.02	
Dibromochloromethane	ND	5.1	1.02	
1,2-Dibromo-3-Chloropropane	ND	10	1.02	
1,2-Dibromoethane	ND	5.1	1.02	
Dibromomethane	ND	5.1	1.02	
1,2-Dichlorobenzene	ND	5.1	1.02	
1,3-Dichlorobenzene	ND	5.1	1.02	
1,4-Dichlorobenzene	ND	5.1	1.02	
Dichlorodifluoromethane	ND	5.1	1.02	
1,1-Dichloroethane	ND	5.1	1.02	
1,2-Dichloroethane	ND	5.1	1.02	
1,1-Dichloroethene	ND	5.1	1.02	
c-1,2-Dichloroethene	ND	5.1	1.02	
t-1,2-Dichloroethene	ND	5.1	1.02	
1,2-Dichloropropane	ND	5.1	1.02	
1,3-Dichloropropane	ND	5.1	1.02	
2,2-Dichloropropane	ND	5.1	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.1	1.02	
c-1,3-Dichloropropene	ND	5.1	1.02	
t-1,3-Dichloropropene	ND	5.1	1.02	
Ethylbenzene	ND	5.1	1.02	
2-Hexanone	ND	51	1.02	
Isopropylbenzene	ND	5.1	1.02	
p-Isopropyltoluene	ND	5.1	1.02	
Methylene Chloride	ND	51	1.02	
4-Methyl-2-Pentanone	ND	51	1.02	
Naphthalene	ND	51	1.02	
n-Propylbenzene	ND	5.1	1.02	
Styrene	ND	5.1	1.02	
1,1,1,2-Tetrachloroethane	ND	5.1	1.02	
1,1,2,2-Tetrachloroethane	ND	5.1	1.02	
Tetrachloroethene	ND	5.1	1.02	
Toluene	ND	5.1	1.02	
1,2,3-Trichlorobenzene	ND	10	1.02	
1,2,4-Trichlorobenzene	ND	5.1	1.02	
1,1,1-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloroethane	ND	5.1	1.02	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1.02	
Trichloroethene	ND	5.1	1.02	
1,2,3-Trichloropropane	ND	5.1	1.02	
1,2,4-Trimethylbenzene	ND	5.1	1.02	
Trichlorofluoromethane	ND	51	1.02	
1,3,5-Trimethylbenzene	ND	5.1	1.02	
Vinyl Acetate	ND	51	1.02	
Vinyl Chloride	ND	5.1	1.02	
p/m-Xylene	ND	5.1	1.02	
o-Xylene	ND	5.1	1.02	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1.02	
Tert-Butyl Alcohol (TBA)	ND	51	1.02	
Diisopropyl Ether (DIPE)	ND	10	1.02	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.02	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.02	
Ethanol	ND	260	1.02	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	89	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 21 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	112	63-141	
1,2-Dichloroethane-d4	101	62-146	
Toluene-d8	93	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-10-6.0-6.5	**14-01-1599-15-A**	**01/24/14 09:57**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 09:50**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.03	
Benzene	ND	5.2	1.03	
Bromobenzene	ND	5.2	1.03	
Bromochloromethane	ND	5.2	1.03	
Bromodichloromethane	ND	5.2	1.03	
Bromoform	ND	5.2	1.03	
Bromomethane	ND	26	1.03	
2-Butanone	ND	52	1.03	
n-Butylbenzene	ND	5.2	1.03	
sec-Butylbenzene	ND	5.2	1.03	
tert-Butylbenzene	ND	5.2	1.03	
Carbon Disulfide	ND	52	1.03	
Carbon Tetrachloride	ND	5.2	1.03	
Chlorobenzene	ND	5.2	1.03	
Chloroethane	ND	5.2	1.03	
Chloroform	ND	5.2	1.03	
Chloromethane	ND	26	1.03	
2-Chlorotoluene	ND	5.2	1.03	
4-Chlorotoluene	ND	5.2	1.03	
Dibromochloromethane	ND	5.2	1.03	
1,2-Dibromo-3-Chloropropane	ND	10	1.03	
1,2-Dibromoethane	ND	5.2	1.03	
Dibromomethane	ND	5.2	1.03	
1,2-Dichlorobenzene	ND	5.2	1.03	
1,3-Dichlorobenzene	ND	5.2	1.03	
1,4-Dichlorobenzene	ND	5.2	1.03	
Dichlorodifluoromethane	ND	5.2	1.03	
1,1-Dichloroethane	ND	5.2	1.03	
1,2-Dichloroethane	ND	5.2	1.03	
1,1-Dichloroethene	ND	5.2	1.03	
c-1,2-Dichloroethene	ND	5.2	1.03	
t-1,2-Dichloroethene	ND	5.2	1.03	
1,2-Dichloropropane	ND	5.2	1.03	
1,3-Dichloropropane	ND	5.2	1.03	
2,2-Dichloropropane	ND	5.2	1.03	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1.03	
c-1,3-Dichloropropene	ND	5.2	1.03	
t-1,3-Dichloropropene	ND	5.2	1.03	
Ethylbenzene	ND	5.2	1.03	
2-Hexanone	ND	52	1.03	
Isopropylbenzene	ND	5.2	1.03	
p-Isopropyltoluene	ND	5.2	1.03	
Methylene Chloride	ND	52	1.03	
4-Methyl-2-Pentanone	ND	52	1.03	
Naphthalene	ND	52	1.03	
n-Propylbenzene	ND	5.2	1.03	
Styrene	ND	5.2	1.03	
1,1,1,2-Tetrachloroethane	ND	5.2	1.03	
1,1,2,2-Tetrachloroethane	ND	5.2	1.03	
Tetrachloroethene	ND	5.2	1.03	
Toluene	ND	5.2	1.03	
1,2,3-Trichlorobenzene	ND	10	1.03	
1,2,4-Trichlorobenzene	ND	5.2	1.03	
1,1,1-Trichloroethane	ND	5.2	1.03	
1,1,2-Trichloroethane	ND	5.2	1.03	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1.03	
Trichloroethene	ND	5.2	1.03	
1,2,3-Trichloropropane	ND	5.2	1.03	
1,2,4-Trimethylbenzene	ND	5.2	1.03	
Trichlorofluoromethane	ND	52	1.03	
1,3,5-Trimethylbenzene	ND	5.2	1.03	
Vinyl Acetate	ND	52	1.03	
Vinyl Chloride	ND	5.2	1.03	
p/m-Xylene	ND	5.2	1.03	
o-Xylene	ND	5.2	1.03	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1.03	
Tert-Butyl Alcohol (TBA)	ND	52	1.03	
Diisopropyl Ether (DIPE)	ND	10	1.03	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.03	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.03	
Ethanol	ND	260	1.03	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	88	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 24 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	111	63-141	
1,2-Dichloroethane-d4	109	62-146	
Toluene-d8	91	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Waste Soil	**14-01-1599-22-A**	**01/24/14 15:20**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 10:19**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.04	
Benzene	ND	5.2	1.04	
Bromobenzene	ND	5.2	1.04	
Bromochloromethane	ND	5.2	1.04	
Bromodichloromethane	ND	5.2	1.04	
Bromoform	ND	5.2	1.04	
Bromomethane	ND	26	1.04	
2-Butanone	ND	52	1.04	
n-Butylbenzene	ND	5.2	1.04	
sec-Butylbenzene	ND	5.2	1.04	
tert-Butylbenzene	ND	5.2	1.04	
Carbon Disulfide	ND	52	1.04	
Carbon Tetrachloride	ND	5.2	1.04	
Chlorobenzene	ND	5.2	1.04	
Chloroethane	ND	5.2	1.04	
Chloroform	ND	5.2	1.04	
Chloromethane	ND	26	1.04	
2-Chlorotoluene	ND	5.2	1.04	
4-Chlorotoluene	ND	5.2	1.04	
Dibromochloromethane	ND	5.2	1.04	
1,2-Dibromo-3-Chloropropane	ND	10	1.04	
1,2-Dibromoethane	ND	5.2	1.04	
Dibromomethane	ND	5.2	1.04	
1,2-Dichlorobenzene	ND	5.2	1.04	
1,3-Dichlorobenzene	ND	5.2	1.04	
1,4-Dichlorobenzene	ND	5.2	1.04	
Dichlorodifluoromethane	ND	5.2	1.04	
1,1-Dichloroethane	ND	5.2	1.04	
1,2-Dichloroethane	ND	5.2	1.04	
1,1-Dichloroethene	ND	5.2	1.04	
c-1,2-Dichloroethene	ND	5.2	1.04	
t-1,2-Dichloroethene	ND	5.2	1.04	
1,2-Dichloropropane	ND	5.2	1.04	
1,3-Dichloropropane	ND	5.2	1.04	
2,2-Dichloropropane	ND	5.2	1.04	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.2	1.04	
c-1,3-Dichloropropene	ND	5.2	1.04	
t-1,3-Dichloropropene	ND	5.2	1.04	
Ethylbenzene	ND	5.2	1.04	
2-Hexanone	ND	52	1.04	
Isopropylbenzene	ND	5.2	1.04	
p-Isopropyltoluene	ND	5.2	1.04	
Methylene Chloride	ND	52	1.04	
4-Methyl-2-Pentanone	ND	52	1.04	
Naphthalene	ND	52	1.04	
n-Propylbenzene	ND	5.2	1.04	
Styrene	ND	5.2	1.04	
1,1,1,2-Tetrachloroethane	ND	5.2	1.04	
1,1,2,2-Tetrachloroethane	ND	5.2	1.04	
Tetrachloroethene	ND	5.2	1.04	
Toluene	ND	5.2	1.04	
1,2,3-Trichlorobenzene	ND	10	1.04	
1,2,4-Trichlorobenzene	ND	5.2	1.04	
1,1,1-Trichloroethane	ND	5.2	1.04	
1,1,2-Trichloroethane	ND	5.2	1.04	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	1.04	
Trichloroethene	ND	5.2	1.04	
1,2,3-Trichloropropane	ND	5.2	1.04	
1,2,4-Trimethylbenzene	ND	5.2	1.04	
Trichlorofluoromethane	ND	52	1.04	
1,3,5-Trimethylbenzene	ND	5.2	1.04	
Vinyl Acetate	ND	52	1.04	
Vinyl Chloride	ND	5.2	1.04	
p/m-Xylene	ND	5.2	1.04	
o-Xylene	ND	5.2	1.04	
Methyl-t-Butyl Ether (MTBE)	ND	5.2	1.04	
Tert-Butyl Alcohol (TBA)	ND	52	1.04	
Diisopropyl Ether (DIPE)	ND	10	1.04	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.04	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.04	
Ethanol	ND	260	1.04	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 27 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	111	63-141	
1,2-Dichloroethane-d4	103	62-146	
Toluene-d8	95	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-8108**	**N/A**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 04:39**	**140128L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1	
Benzene	ND	5.0	1	
Bromobenzene	ND	5.0	1	
Bromochloromethane	ND	5.0	1	
Bromodichloromethane	ND	5.0	1	
Bromoform	ND	5.0	1	
Bromomethane	ND	25	1	
2-Butanone	ND	50	1	
n-Butylbenzene	ND	5.0	1	
sec-Butylbenzene	ND	5.0	1	
tert-Butylbenzene	ND	5.0	1	
Carbon Disulfide	ND	50	1	
Carbon Tetrachloride	ND	5.0	1	
Chlorobenzene	ND	5.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	5.0	1	
Chloromethane	ND	25	1	
2-Chlorotoluene	ND	5.0	1	
4-Chlorotoluene	ND	5.0	1	
Dibromochloromethane	ND	5.0	1	
1,2-Dibromo-3-Chloropropane	ND	10	1	
1,2-Dibromoethane	ND	5.0	1	
Dibromomethane	ND	5.0	1	
1,2-Dichlorobenzene	ND	5.0	1	
1,3-Dichlorobenzene	ND	5.0	1	
1,4-Dichlorobenzene	ND	5.0	1	
Dichlorodifluoromethane	ND	5.0	1	
1,1-Dichloroethane	ND	5.0	1	
1,2-Dichloroethane	ND	5.0	1	
1,1-Dichloroethene	ND	5.0	1	
c-1,2-Dichloroethene	ND	5.0	1	
t-1,2-Dichloroethene	ND	5.0	1	
1,2-Dichloropropane	ND	5.0	1	
1,3-Dichloropropane	ND	5.0	1	
2,2-Dichloropropane	ND	5.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1	
c-1,3-Dichloropropene	ND	5.0	1	
t-1,3-Dichloropropene	ND	5.0	1	
Ethylbenzene	ND	5.0	1	
2-Hexanone	ND	50	1	
Isopropylbenzene	ND	5.0	1	
p-Isopropyltoluene	ND	5.0	1	
Methylene Chloride	ND	50	1	
4-Methyl-2-Pentanone	ND	50	1	
Naphthalene	ND	50	1	
n-Propylbenzene	ND	5.0	1	
Styrene	ND	5.0	1	
1,1,1,2-Tetrachloroethane	ND	5.0	1	
1,1,2,2-Tetrachloroethane	ND	5.0	1	
Tetrachloroethene	ND	5.0	1	
Toluene	ND	5.0	1	
1,2,3-Trichlorobenzene	ND	10	1	
1,2,4-Trichlorobenzene	ND	5.0	1	
1,1,1-Trichloroethane	ND	5.0	1	
1,1,2-Trichloroethane	ND	5.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1	
Trichloroethene	ND	5.0	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	5.0	1	
Trichlorofluoromethane	ND	50	1	
1,3,5-Trimethylbenzene	ND	5.0	1	
Vinyl Acetate	ND	50	1	
Vinyl Chloride	ND	5.0	1	
p/m-Xylene	ND	5.0	1	
o-Xylene	ND	5.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	
Tert-Butyl Alcohol (TBA)	ND	50	1	
Diisopropyl Ether (DIPE)	ND	10	1	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1	
Ethanol	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	60-132	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1599
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg
Project: Port of Oakland Phase II		Page 30 of 30

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	112	63-141	
1,2-Dichloroethane-d4	108	62-146	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3550B
Method: EPA 8015B (M)

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1600-1	**Sample**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 18:35**	**140129S05**
14-01-1600-1	**Matrix Spike**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 18:00**	**140129S05**
14-01-1600-1	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 18:17**	**140129S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	ND	400.0	358.3	90	362.9	91	64-130	1	0-15	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 2 of 15

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1600-1	**Sample**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 18:35**	**140129S04**
14-01-1600-1	**Matrix Spike**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 17:26**	**140129S04**
14-01-1600-1	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 17:43**	**140129S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	338.8	85	334.3	84	71-125	1	0-12	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
Page 3 of 15

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-6	**Sample**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 13:10**	**140129S01**
SB-6	**Matrix Spike**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 13:44**	**140129S01**
SB-6	**Matrix Spike Duplicate**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 14:17**	**140129S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	1713	86	1689	84	68-122	1	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8015B (M)
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1649-1	**Sample**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 12:45**	**140129S01**
14-01-1649-1	**Matrix Spike**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 13:21**	**140129S01**
14-01-1649-1	**Matrix Spike Duplicate**	**Solid**	**GC 1**	**01/28/14**	**01/29/14 13:57**	**140129S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	8.539	85	8.495	85	48-114	1	0-23	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B

Project: Port of Oakland Phase II

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:10**	**140129S02**
SB-7-0.5-1.0	**Matrix Spike**	**Solid**	**ICP 7300**	**01/29/14**	**01/31/14 12:30**	**140129S02**
SB-7-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 16:12**	**140129S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	4.876	25.00	29.39	98	30.71	103	50-115	4	0-20	
Arsenic	8.298	25.00	33.14	99	35.10	107	75-125	6	0-20	
Barium	99.44	25.00	127.1	111	129.8	121	75-125	2	0-20	
Beryllium	0.2653	25.00	26.44	105	26.59	105	75-125	1	0-20	
Cadmium	1.590	25.00	27.43	103	27.29	103	75-125	1	0-20	
Chromium	41.99	25.00	53.14	45	54.07	48	75-125	2	0-20	3
Cobalt	3.791	25.00	31.95	113	31.57	111	75-125	1	0-20	
Copper	1097	25.00	1363	4X	1326	4X	75-125	4X	0-20	Q
Lead	1342	25.00	3160	4X	3134	4X	75-125	4X	0-20	Q
Molybdenum	ND	25.00	23.99	96	24.32	97	75-125	1	0-20	
Nickel	21.70	25.00	46.30	98	47.47	103	75-125	2	0-20	
Selenium	ND	25.00	23.74	95	24.20	97	75-125	2	0-20	
Silver	ND	12.50	13.42	107	13.45	108	75-125	0	0-20	
Thallium	ND	25.00	24.59	98	25.30	101	75-125	3	0-20	
Vanadium	27.02	25.00	43.07	64	43.23	65	75-125	0	0-20	3
Zinc	514.8	25.00	444.6	4X	441.6	4X	75-125	4X	0-20	Q

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-5	**Sample**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:49**	**140129SA5**
SB-5	**Matrix Spike**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:51**	**140129SA5**
SB-5	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:57**	**140129SA5**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.5177	104	0.4792	96	72-132	8	0-10	
Arsenic	ND	0.5000	0.5969	119	0.5810	116	80-140	3	0-11	
Barium	0.1590	0.5000	0.6957	107	0.6768	104	87-123	3	0-6	
Beryllium	ND	0.5000	0.5827	117	0.5649	113	89-119	3	0-8	
Cadmium	ND	0.5000	0.5537	111	0.5376	108	82-124	3	0-7	
Chromium	ND	0.5000	0.5761	115	0.5442	109	86-122	6	0-8	
Cobalt	ND	0.5000	0.5850	117	0.5720	114	83-125	2	0-7	
Copper	ND	0.5000	0.5641	113	0.5509	110	78-126	2	0-7	
Lead	ND	0.5000	0.5454	109	0.5323	106	84-120	2	0-7	
Molybdenum	0.01708	0.5000	0.5740	111	0.5621	109	78-126	2	0-7	
Nickel	ND	0.5000	0.5581	112	0.5459	109	84-120	2	0-7	
Selenium	ND	0.5000	0.5711	114	0.5599	112	79-127	2	0-9	
Silver	ND	0.2500	0.2971	119	0.2877	115	86-128	3	0-7	
Thallium	ND	0.5000	0.5733	115	0.5624	112	79-121	2	0-8	
Vanadium	ND	0.5000	0.5574	111	0.5451	109	88-118	2	0-7	
Zinc	0.02709	0.5000	0.6086	116	0.5923	113	89-131	3	0-8	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7470A Filt.
Method: EPA 7470A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-9	**Sample**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:23**	**140129S05**
SB-9	**Matrix Spike**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:25**	**140129S05**
SB-9	**Matrix Spike Duplicate**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:27**	**140129S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.009794	98	0.009854	99	57-141	1	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7471A Total
Method: EPA 7471A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**Mercury**	**01/30/14**	**01/31/14 16:22**	**140130S01**
SB-7-0.5-1.0	**Matrix Spike**	**Solid**	**Mercury**	**01/30/14**	**01/31/14 16:24**	**140130S01**
SB-7-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**Mercury**	**01/30/14**	**01/31/14 16:26**	**140130S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	3.341	0.8350	3.865	4X	3.900	4X	71-137	4X	0-14	Q

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 13:40**	**140129S07**
SB-7-0.5-1.0	**Matrix Spike**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 12:28**	**140129S07**
SB-7-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 12:43**	**140129S07**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	25.00	37.17	149	31.70	127	50-135	16	0-25	3
Alpha-BHC	ND	25.00	20.84	83	20.74	83	50-135	0	0-25	
Beta-BHC	ND	25.00	20.93	84	20.43	82	50-135	2	0-25	
4,4'-DDD	ND	25.00	23.96	96	23.46	94	50-135	2	0-25	
4,4'-DDE	ND	25.00	21.24	85	20.56	82	50-135	3	0-25	
4,4'-DDT	ND	25.00	20.47	82	19.89	80	50-135	3	0-25	
Delta-BHC	ND	25.00	22.52	90	21.51	86	50-135	5	0-25	
Dieldrin	ND	25.00	22.38	90	21.52	86	50-135	4	0-25	
Endosulfan I	ND	25.00	22.13	89	21.50	86	50-135	3	0-25	
Endosulfan II	ND	25.00	22.09	88	21.81	87	50-135	1	0-25	
Endosulfan Sulfate	ND	25.00	21.56	86	21.12	84	50-135	2	0-25	
Endrin	ND	25.00	22.61	90	22.06	88	50-135	2	0-25	
Endrin Aldehyde	ND	25.00	21.90	88	21.54	86	50-135	2	0-25	
Gamma-BHC	ND	25.00	20.72	83	20.13	81	50-135	3	0-25	
Heptachlor	ND	25.00	26.28	105	21.45	86	50-135	20	0-25	
Heptachlor Epoxide	ND	25.00	33.46	134	28.74	115	50-135	15	0-25	
Methoxychlor	ND	25.00	25.44	102	24.64	99	50-135	3	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 15:44**	**140129S08**
SB-7-0.5-1.0	**Matrix Spike**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 16:03**	**140129S08**
SB-7-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 16:21**	**140129S08**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	202.3	202	252.8	253	50-135	22	0-20	3,4
Aroclor-1260	ND	100.0	87.22	87	92.56	93	50-135	6	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 18:35**	**140129S11**
SB-7-0.5-1.0	**Matrix Spike**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 18:54**	**140129S11**
SB-7-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 19:12**	**140129S11**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	9.363	94	9.506	95	34-148	2	0-20	
Acenaphthylene	ND	10.00	9.255	93	9.391	94	53-120	1	0-20	
Butyl Benzyl Phthalate	ND	10.00	8.714	87	8.442	84	15-189	3	0-20	
4-Chloro-3-Methylphenol	ND	10.00	9.708	97	9.606	96	32-120	1	0-20	
2-Chlorophenol	ND	10.00	9.690	97	9.548	95	53-120	1	0-20	
1,4-Dichlorobenzene	ND	10.00	8.177	82	7.905	79	43-120	3	0-26	
Dimethyl Phthalate	ND	10.00	9.218	92	9.343	93	44-122	1	0-20	
2,4-Dinitrotoluene	ND	10.00	10.11	101	10.28	103	28-120	2	0-20	
Fluorene	ND	10.00	9.885	99	9.884	99	12-186	0	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	9.669	97	9.556	96	38-140	1	0-20	
Naphthalene	ND	10.00	9.103	91	9.069	91	20-140	0	0-20	
4-Nitrophenol	ND	10.00	10.19	102	10.60	106	14-128	4	0-59	
Pentachlorophenol	ND	10.00	7.821	78	7.845	78	10-124	0	0-20	
Phenol	ND	10.00	10.28	103	10.05	100	22-124	2	0-20	
Pyrene	ND	10.00	9.282	93	9.044	90	31-169	3	0-20	
1,2,4-Trichlorobenzene	ND	10.00	8.664	87	8.553	86	56-120	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1492-13	**Sample**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/28/14 16:19**	**140128S01**
14-01-1492-13	**Matrix Spike**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/28/14 16:48**	**140128S01**
14-01-1492-13	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/28/14 17:17**	**140128S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	49.36	99	48.72	97	74-122	1	0-21	
Carbon Tetrachloride	ND	50.00	54.95	110	54.16	108	60-144	1	0-21	
Chlorobenzene	ND	50.00	46.23	92	45.82	92	73-120	1	0-22	
1,2-Dibromoethane	ND	50.00	51.95	104	50.68	101	80-122	2	0-20	
1,2-Dichlorobenzene	ND	50.00	46.85	94	46.18	92	70-120	1	0-26	
1,2-Dichloroethane	ND	50.00	53.74	107	51.66	103	64-142	4	0-20	
1,1-Dichloroethene	ND	50.00	45.75	91	47.87	96	52-136	5	0-21	
Ethylbenzene	ND	50.00	55.16	110	54.41	109	77-125	1	0-24	
Toluene	ND	50.00	52.55	105	51.19	102	72-126	3	0-23	
Trichloroethene	ND	50.00	52.64	105	50.50	101	74-128	4	0-22	
Vinyl Chloride	ND	50.00	54.00	108	57.55	115	67-133	6	0-20	
p/m-Xylene	ND	100.0	107.3	107	106.9	107	63-129	0	0-25	
o-Xylene	ND	50.00	53.37	107	52.81	106	62-128	1	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	52.18	104	52.68	105	68-134	1	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	254.5	102	244.9	98	65-143	4	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	53.31	107	52.39	105	61-139	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	53.13	106	52.19	104	64-136	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	55.01	110	54.01	108	67-133	2	0-20	
Ethanol	ND	500.0	416.9	83	430.1	86	34-178	3	0-58	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-6	**Sample**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 16:51**	**140129S01**
SB-6	**Matrix Spike**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 17:20**	**140129S01**
SB-6	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 17:49**	**140129S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	52.60	105	50.38	101	74-122	4	0-21	
Carbon Tetrachloride	ND	50.00	59.26	119	55.98	112	60-144	6	0-21	
Chlorobenzene	ND	50.00	49.48	99	47.07	94	73-120	5	0-22	
1,2-Dibromoethane	ND	50.00	53.48	107	51.21	102	80-122	4	0-20	
1,2-Dichlorobenzene	ND	50.00	49.47	99	47.41	95	70-120	4	0-26	
1,2-Dichloroethane	ND	50.00	57.09	114	55.34	111	64-142	3	0-20	
1,1-Dichloroethene	ND	50.00	47.77	96	46.81	94	52-136	2	0-21	
Ethylbenzene	ND	50.00	60.28	121	56.32	113	77-125	7	0-24	
Toluene	ND	50.00	56.24	112	53.60	107	72-126	5	0-23	
Trichloroethene	ND	50.00	56.08	112	52.77	106	74-128	6	0-22	
Vinyl Chloride	ND	50.00	57.60	115	56.91	114	67-133	1	0-20	
p/m-Xylene	ND	100.0	119.0	119	111.6	112	63-129	6	0-25	
o-Xylene	ND	50.00	56.72	113	54.99	110	62-128	3	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	50.97	102	51.35	103	68-134	1	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	257.9	103	240.5	96	65-143	7	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	52.36	105	52.16	104	61-139	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	52.36	105	51.23	102	64-136	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	55.02	110	54.02	108	67-133	2	0-20	
Ethanol	ND	500.0	466.4	93	490.3	98	34-178	5	0-58	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Project: Port of Oakland Phase II

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1747-1	**Sample**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 17:05**	**140131S01**
14-01-1747-1	**Matrix Spike**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 17:31**	**140131S01**
14-01-1747-1	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 17:57**	**140131S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	48.29	97	48.46	97	74-122	0	0-21	
Carbon Tetrachloride	ND	50.00	50.43	101	50.09	100	60-144	1	0-21	
Chlorobenzene	ND	50.00	45.92	92	45.77	92	73-120	0	0-22	
1,2-Dibromoethane	ND	50.00	49.33	99	48.87	98	80-122	1	0-20	
1,2-Dichlorobenzene	ND	50.00	45.38	91	44.81	90	70-120	1	0-26	
1,2-Dichloroethane	ND	50.00	48.82	98	48.51	97	64-142	1	0-20	
1,1-Dichloroethene	ND	50.00	44.42	89	43.59	87	52-136	2	0-21	
Ethylbenzene	ND	50.00	48.69	97	48.79	98	77-125	0	0-24	
Toluene	ND	50.00	48.74	97	48.84	98	72-126	0	0-23	
Trichloroethene	ND	50.00	46.45	93	46.34	93	74-128	0	0-22	
Vinyl Chloride	ND	50.00	53.02	106	52.77	106	67-133	0	0-20	
p/m-Xylene	ND	100.0	92.81	93	93.04	93	63-129	0	0-25	
o-Xylene	ND	50.00	45.78	92	46.05	92	62-128	1	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	45.57	91	44.89	90	68-134	1	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	253.5	101	249.4	100	65-143	2	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	51.10	102	49.70	99	61-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	45.69	91	45.72	91	64-136	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	45.35	91	46.42	93	67-133	2	0-20	
Ethanol	ND	500.0	561.5	112	549.8	110	34-178	2	0-58	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-3-0.5-1.0	**Sample**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 05:07**	**140128S02**
SB-3-0.5-1.0	**Matrix Spike**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 05:35**	**140128S02**
SB-3-0.5-1.0	**Matrix Spike Duplicate**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 06:04**	**140128S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	44.72	89	42.30	85	61-127	6	0-20	
Carbon Tetrachloride	ND	50.00	53.25	106	51.37	103	51-135	4	0-29	
Chlorobenzene	ND	50.00	41.69	83	41.33	83	57-123	1	0-20	
1,2-Dibromoethane	ND	50.00	42.60	85	42.90	86	64-124	1	0-20	
1,2-Dichlorobenzene	ND	50.00	39.57	79	40.06	80	35-131	1	0-25	
1,2-Dichloroethane	ND	50.00	47.55	95	44.42	89	80-120	7	0-20	
1,1-Dichloroethene	ND	50.00	45.22	90	44.91	90	47-143	1	0-25	
Ethylbenzene	ND	50.00	49.90	100	48.51	97	57-129	3	0-22	
Toluene	ND	50.00	48.44	97	45.79	92	63-123	6	0-20	
Trichloroethene	ND	50.00	53.32	107	49.15	98	44-158	8	0-20	
Vinyl Chloride	ND	50.00	48.48	97	54.25	109	49-139	11	0-47	
p/m-Xylene	ND	100.0	96.91	97	94.35	94	70-130	3	0-30	
o-Xylene	ND	50.00	47.63	95	46.81	94	70-130	2	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	46.58	93	46.60	93	57-123	0	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	205.5	82	203.7	81	30-168	1	0-34	
Diisopropyl Ether (DIPE)	ND	50.00	49.09	98	48.74	97	57-129	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	48.04	96	48.60	97	55-127	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	45.72	91	44.17	88	58-124	3	0-20	
Ethanol	ND	500.0	455.1	91	441.2	88	17-167	3	0-47	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - PDS/PDSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7471A Total
Method: EPA 7471A
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
SB-7-0.5-1.0	**Sample**	**Solid**	**Mercury**	**01/30/14 00:00**	**01/31/14 16:22**	**140130S01**
SB-7-0.5-1.0	**PDS**	**Solid**	**Mercury**	**01/30/14 00:00**	**01/31/14 16:28**	**140130S01**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Mercury	3.341	0.8350	11.35	4X	75-125	Q

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-278-518	**LCS**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:19**	**140129B19**
099-15-278-518	**LCSD**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:36**	**140129B19**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	2000	1872	94	1876	94	75-117	0	0-13	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8015B (M)

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-304-589	**LCS**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:46**	**140129B18**
099-15-304-589	**LCSD**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:03**	**140129B18**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1666	83	1690	84	75-117	1	0-13	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 3 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-420-777	**LCS**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 17:09**	**140129B05S**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Motor Oil	400.0	347.9	87	75-123	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 4 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-949	**LCS**	**Solid**	**GC 45**	**01/29/14**	**01/29/14 16:51**	**140129B04S**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	318.4	80	75-123	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 5 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-436-9119	**LCS**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 12:37**	**140129B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	2000	1918	96	78-120	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 6 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-1424	**LCS**	**Solid**	**GC 1**	**01/29/14**	**01/29/14 12:05**	**140129B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	8.578	86	70-124	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3050B
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-17960	**LCS**	**Solid**	**ICP 7300**	**01/29/14**	**01/30/14 13:21**	**140129L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	24.63	99	80-120	73-127	
Arsenic	25.00	25.19	101	80-120	73-127	
Barium	25.00	25.93	104	80-120	73-127	
Beryllium	25.00	25.05	100	80-120	73-127	
Cadmium	25.00	25.99	104	80-120	73-127	
Chromium	25.00	26.23	105	80-120	73-127	
Cobalt	25.00	28.50	114	80-120	73-127	
Copper	25.00	25.99	104	80-120	73-127	
Lead	25.00	27.01	108	80-120	73-127	
Molybdenum	25.00	25.52	102	80-120	73-127	
Nickel	25.00	27.32	109	80-120	73-127	
Selenium	25.00	23.94	96	80-120	73-127	
Silver	12.50	13.50	108	80-120	73-127	
Thallium	25.00	25.80	103	80-120	73-127	
Vanadium	25.00	25.12	100	80-120	73-127	
Zinc	25.00	27.31	109	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3010A Total
Method: EPA 6010B
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-13985	**LCS**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:09**	**140129LA5**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.5135	103	80-120	73-127	
Arsenic	0.5000	0.5070	101	80-120	73-127	
Barium	0.5000	0.5198	104	80-120	73-127	
Beryllium	0.5000	0.5007	100	80-120	73-127	
Cadmium	0.5000	0.5209	104	80-120	73-127	
Chromium	0.5000	0.5266	105	80-120	73-127	
Cobalt	0.5000	0.5693	114	80-120	73-127	
Copper	0.5000	0.5321	106	80-120	73-127	
Lead	0.5000	0.5236	105	80-120	73-127	
Molybdenum	0.5000	0.5135	103	80-120	73-127	
Nickel	0.5000	0.5516	110	80-120	73-127	
Selenium	0.5000	0.4933	99	80-120	73-127	
Silver	0.2500	0.2690	108	80-120	73-127	
Thallium	0.5000	0.5514	110	80-120	73-127	
Vanadium	0.5000	0.5031	101	80-120	73-127	
Zinc	0.5000	0.5336	107	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3005A Filt.
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-13984	**LCS**	**Aqueous**	**ICP 7300**	**01/29/14**	**01/29/14 18:09**	**140129LA5F**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.5135	103	80-120	73-127	
Arsenic	0.5000	0.5070	101	80-120	73-127	
Barium	0.5000	0.5198	104	80-120	73-127	
Beryllium	0.5000	0.5007	100	80-120	73-127	
Cadmium	0.5000	0.5209	104	80-120	73-127	
Chromium	0.5000	0.5266	105	80-120	73-127	
Cobalt	0.5000	0.5693	114	80-120	73-127	
Copper	0.5000	0.5321	106	80-120	73-127	
Lead	0.5000	0.5236	105	80-120	73-127	
Molybdenum	0.5000	0.5135	103	80-120	73-127	
Nickel	0.5000	0.5516	110	80-120	73-127	
Selenium	0.5000	0.4933	99	80-120	73-127	
Silver	0.2500	0.2690	108	80-120	73-127	
Thallium	0.5000	0.5514	110	80-120	73-127	
Vanadium	0.5000	0.5031	101	80-120	73-127	
Zinc	0.5000	0.5336	107	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 7470A Total
Method: EPA 7470A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-008-6813	**LCS**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:18**	**140129L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.009878	99	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 7470A Filt.
		Method:	EPA 7470A
Project: Port of Oakland Phase II			Page 11 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-763-264	**LCS**	**Aqueous**	**Mercury**	**01/29/14**	**01/29/14 17:18**	**140129L05F**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.009878	99	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1599
Walnut Creek, CA 94597-7989		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Port of Oakland Phase II			Page 12 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-007-10001	**LCS**	**Solid**	**Mercury**	**01/30/14**	**01/30/14 11:40**	**140130L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8766	105	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-537-1605	**LCS**	**Solid**	**GC 51**	**01/29/14**	**01/30/14 12:14**	**140129L07**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Aldrin	25.00	20.76	83	50-135	36-149	
Alpha-BHC	25.00	20.62	82	50-135	36-149	
Beta-BHC	25.00	18.69	75	50-135	36-149	
4,4'-DDD	25.00	20.12	80	50-135	36-149	
4,4'-DDE	25.00	20.53	82	50-135	36-149	
4,4'-DDT	25.00	19.45	78	50-135	36-149	
Delta-BHC	25.00	19.20	77	50-135	36-149	
Dieldrin	25.00	20.00	80	50-135	36-149	
Endosulfan I	25.00	20.89	84	50-135	36-149	
Endosulfan II	25.00	20.36	81	50-135	36-149	
Endosulfan Sulfate	25.00	18.90	76	50-135	36-149	
Endrin	25.00	19.50	78	50-135	36-149	
Endrin Aldehyde	25.00	20.92	84	50-135	36-149	
Gamma-BHC	25.00	20.13	81	50-135	36-149	
Heptachlor	25.00	25.36	101	50-135	36-149	
Heptachlor Epoxide	25.00	21.00	84	50-135	36-149	
Methoxychlor	25.00	19.43	78	50-135	36-149	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8081A

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-678	**LCS**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:22**	**140129L04**
099-12-529-678	**LCSD**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:36**	**140129L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4739	95	0.4648	93	50-135	36-149	2	0-25	
Gamma-BHC	0.5000	0.4624	92	0.4596	92	50-135	36-149	1	0-25	
Beta-BHC	0.5000	0.4302	86	0.4358	87	50-135	36-149	1	0-25	
Heptachlor	0.5000	0.4499	90	0.4296	86	50-135	36-149	5	0-25	
Delta-BHC	0.5000	0.4254	85	0.4289	86	50-135	36-149	1	0-25	
Aldrin	0.5000	0.4266	85	0.3856	77	50-135	36-149	10	0-25	
Heptachlor Epoxide	0.5000	0.4501	90	0.4500	90	50-135	36-149	0	0-25	
Endosulfan I	0.5000	0.4812	96	0.4710	94	50-135	36-149	2	0-25	
Dieldrin	0.5000	0.4586	92	0.4530	91	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.4257	85	0.4521	90	50-135	36-149	6	0-25	
Endrin	0.5000	0.4762	95	0.4857	97	50-135	36-149	2	0-25	
Endrin Aldehyde	0.5000	0.3948	79	0.3477	70	50-135	36-149	13	0-25	
4,4'-DDD	0.5000	0.4083	82	0.4513	90	50-135	36-149	10	0-25	
Endosulfan II	0.5000	0.4651	93	0.4750	95	50-135	36-149	2	0-25	
4,4'-DDT	0.5000	0.4432	89	0.4652	93	50-135	36-149	5	0-25	
Endosulfan Sulfate	0.5000	0.4414	88	0.4489	90	50-135	36-149	2	0-25	
Methoxychlor	0.5000	0.4318	86	0.4567	91	50-135	36-149	6	0-25	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-2464	**LCS**	**Solid**	**GC 58**	**01/29/14**	**01/29/14 15:08**	**140129L08**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	111.5	111	50-135	
Aroclor-1260	100.0	96.10	96	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-533-886	**LCS**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 22:12**	**140129L05**
099-12-533-886	**LCSD**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 22:30**	**140129L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.488	124	2.470	124	50-135	1	0-25	
Aroclor-1260	2.000	2.261	113	2.348	117	50-135	4	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3510C
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-3793	**LCS**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 13:05**	**140129L17**
095-01-003-3793	**LCSD**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 13:25**	**140129L17**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	200.0	187.7	94	191.6	96	61-120	51-130	2	0-20	
Acenaphthylene	200.0	184.9	92	188.8	94	55-120	44-131	2	0-20	
Butyl Benzyl Phthalate	200.0	213.1	107	218.1	109	56-122	45-133	2	0-20	
4-Chloro-3-Methylphenol	200.0	180.7	90	172.5	86	52-120	41-131	5	0-20	
2-Chlorophenol	200.0	204.6	102	196.9	98	47-120	35-132	4	0-20	
1,4-Dichlorobenzene	200.0	181.1	91	182.0	91	36-120	22-134	0	0-20	
Dimethyl Phthalate	200.0	191.3	96	188.1	94	60-120	50-130	2	0-20	
2,4-Dinitrotoluene	200.0	208.5	104	193.6	97	61-121	51-131	7	0-20	
Fluorene	200.0	186.3	93	183.0	92	67-120	58-129	2	0-20	
N-Nitroso-di-n-propylamine	200.0	189.0	95	179.8	90	39-123	25-137	5	0-20	
Naphthalene	200.0	181.5	91	180.9	90	54-120	43-131	0	0-20	
4-Nitrophenol	200.0	77.10	39	69.14	35	14-120	0-138	11	0-20	
Pentachlorophenol	200.0	169.2	85	160.7	80	31-127	15-143	5	0-20	
Phenol	200.0	99.93	50	94.41	47	17-120	0-137	6	0-20	
Pyrene	200.0	187.5	94	201.8	101	58-124	47-135	7	0-20	
1,2,4-Trichlorobenzene	200.0	173.0	87	173.1	87	49-120	37-132	0	0-20	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-549-2835	**LCS**	**Solid**	**GC/MS TT**	**01/29/14**	**01/30/14 17:02**	**140129L11A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acenaphthene	10.00	9.973	100	51-123	39-135	
Acenaphthylene	10.00	9.760	98	52-120	41-131	
Butyl Benzyl Phthalate	10.00	9.159	92	43-139	27-155	
4-Chloro-3-Methylphenol	10.00	9.782	98	55-121	44-132	
2-Chlorophenol	10.00	9.387	94	58-124	47-135	
1,4-Dichlorobenzene	10.00	8.780	88	42-132	27-147	
Dimethyl Phthalate	10.00	10.04	100	51-123	39-135	
2,4-Dinitrotoluene	10.00	10.67	107	51-129	38-142	
Fluorene	10.00	10.63	106	54-126	42-138	
N-Nitroso-di-n-propylamine	10.00	9.628	96	40-136	24-152	
Naphthalene	10.00	9.466	95	32-146	13-165	
4-Nitrophenol	10.00	10.13	101	24-126	7-143	
Pentachlorophenol	10.00	6.574	66	23-131	5-149	
Phenol	10.00	9.990	100	40-130	25-145	
Pyrene	10.00	9.836	98	47-143	31-159	
1,2,4-Trichlorobenzene	10.00	8.886	89	45-129	31-143	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-13033	**LCS**	**Aqueous**	**GC/MS T**	**01/28/14**	**01/28/14 14:41**	**140128L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	50.00	100	80-120	73-127	
Carbon Tetrachloride	50.00	53.30	107	67-139	55-151	
Chlorobenzene	50.00	46.33	93	78-120	71-127	
1,2-Dibromoethane	50.00	52.40	105	80-120	73-127	
1,2-Dichlorobenzene	50.00	48.48	97	63-129	52-140	
1,2-Dichloroethane	50.00	55.05	110	70-130	60-140	
1,1-Dichloroethene	50.00	46.12	92	66-126	56-136	
Ethylbenzene	50.00	55.42	111	80-123	73-130	
Toluene	50.00	54.00	108	80-120	73-127	
Trichloroethene	50.00	55.83	112	80-122	73-129	
Vinyl Chloride	50.00	54.18	108	70-130	60-140	
p/m-Xylene	100.0	109.8	110	75-123	67-131	
o-Xylene	50.00	53.58	107	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	52.63	105	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	233.8	94	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	51.76	104	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	53.66	107	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	57.03	114	67-133	56-144	
Ethanol	500.0	453.7	91	42-168	21-189	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-13051	**LCS**	**Aqueous**	**GC/MS T**	**01/29/14**	**01/29/14 15:11**	**140129L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	52.24	104	80-120	73-127	
Carbon Tetrachloride	50.00	59.43	119	67-139	55-151	
Chlorobenzene	50.00	47.77	96	78-120	71-127	
1,2-Dibromoethane	50.00	51.25	103	80-120	73-127	
1,2-Dichlorobenzene	50.00	48.28	97	63-129	52-140	
1,2-Dichloroethane	50.00	54.59	109	70-130	60-140	
1,1-Dichloroethene	50.00	48.95	98	66-126	56-136	
Ethylbenzene	50.00	58.49	117	80-123	73-130	
Toluene	50.00	54.84	110	80-120	73-127	
Trichloroethene	50.00	54.36	109	80-122	73-129	
Vinyl Chloride	50.00	58.71	117	70-130	60-140	
p/m-Xylene	100.0	115.2	115	75-123	67-131	
o-Xylene	50.00	54.92	110	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	52.31	105	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	233.3	93	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	53.70	107	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	55.03	110	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.17	110	67-133	56-144	
Ethanol	500.0	456.8	91	42-168	21-189	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-13084	**LCS**	**Aqueous**	**GC/MS PP**	**01/31/14**	**01/31/14 15:07**	**140131L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	46.80	94	80-120	73-127	
Carbon Tetrachloride	50.00	49.86	100	67-139	55-151	
Chlorobenzene	50.00	44.38	89	78-120	71-127	
1,2-Dibromoethane	50.00	48.28	97	80-120	73-127	
1,2-Dichlorobenzene	50.00	44.01	88	63-129	52-140	
1,2-Dichloroethane	50.00	47.27	95	70-130	60-140	
1,1-Dichloroethene	50.00	42.83	86	66-126	56-136	
Ethylbenzene	50.00	47.27	95	80-123	73-130	
Toluene	50.00	46.68	93	80-120	73-127	
Trichloroethene	50.00	46.20	92	80-122	73-129	
Vinyl Chloride	50.00	52.83	106	70-130	60-140	
p/m-Xylene	100.0	90.64	91	75-123	67-131	
o-Xylene	50.00	44.17	88	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	46.21	92	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	251.0	100	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	48.17	96	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.38	93	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	45.94	92	67-133	56-144	
Ethanol	500.0	562.9	113	42-168	21-189	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1599
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8108	**LCS**	**Solid**	**GC/MS T**	**01/28/14**	**01/29/14 03:14**	**140128L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	49.59	99	78-120	71-127	
Carbon Tetrachloride	50.00	55.81	112	49-139	34-154	
Chlorobenzene	50.00	46.91	94	79-120	72-127	
1,2-Dibromoethane	50.00	51.49	103	80-120	73-127	
1,2-Dichlorobenzene	50.00	47.75	95	75-120	68-128	
1,2-Dichloroethane	50.00	53.53	107	80-120	73-127	
1,1-Dichloroethene	50.00	48.90	98	74-122	66-130	
Ethylbenzene	50.00	55.52	111	76-120	69-127	
Toluene	50.00	53.65	107	77-120	70-127	
Trichloroethene	50.00	55.43	111	80-120	73-127	
Vinyl Chloride	50.00	59.61	119	68-122	59-131	
p/m-Xylene	100.0	108.4	108	75-125	67-133	
o-Xylene	50.00	53.95	108	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	55.21	110	77-120	70-127	
Tert-Butyl Alcohol (TBA)	250.0	243.3	97	68-122	59-131	
Diisopropyl Ether (DIPE)	50.00	56.03	112	78-120	71-127	
Ethyl-t-Butyl Ether (ETBE)	50.00	55.70	111	78-120	71-127	
Tert-Amyl-Methyl Ether (TAME)	50.00	54.24	108	75-120	68-128	
Ethanol	500.0	498.3	100	56-140	42-154	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1599 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3005A Filt.	469	ICP 7300	1
EPA 6010B	EPA 3010A Total	469	ICP 7300	1
EPA 6010B	EPA 3050B	469	ICP 7300	1
EPA 7470A	EPA 7470A Filt.	769	Mercury	1
EPA 7470A	EPA 7470A Total	769	Mercury	1
EPA 7471A	EPA 7471A Total	769	Mercury	1
EPA 8015B (M)	EPA 3510C	682	GC 47	1
EPA 8015B (M)	EPA 3550B	682	GC 45	1
EPA 8015B (M)	EPA 5030C	797	GC 25	2
EPA 8015B (M)	EPA 5030C	902	GC 1	2
EPA 8081A	EPA 3545	500	GC 51	1
EPA 8081A	EPA 3510C	842	GC 44	1
EPA 8082	EPA 3545	669	GC 58	1
EPA 8082	EPA 3545	783	GC 58	1
EPA 8082	EPA 3510C	669	GC 58	1
EPA 8260B	EPA 5030C	849	GC/MS T	2
EPA 8260B	EPA 5030C	849	GC/MS PP	2
EPA 8270C	EPA 3545	449	GC/MS TT	1
EPA 8270C	EPA 3510C	449	GC/MS SS	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1599 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

14-01-1599

NO: 07899

1277 Treat Boulevard, Suite 500 • Walnut Creek, CA • 94597 • (925) 946-0455 • FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey Bl

RECEIVING LABORATORY

Calscience

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	MATRIX: GAS	REQUESTED PARAMETERS: TPHg; VOCs + fuel oxygenates (8260B)	REQUESTED PARAMETERS: TPHd/mo (8015M) + silica gel cleanup	REQUESTED PARAMETERS: SVOCs (8270C)	REQUESTED PARAMETERS: Organochlorine Pesticides; PCBs (608 HA (608.2))	REQUESTED PARAMETERS: Metals (6010/7000 series)										FIELD REMARKS
SB-3-05-1.0	1/23/14	1515		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X											1
SB-3-6.0-6.5	1/23/14	1520		X	~~Slide~~ direct push	—	Y	2"x6"	1	X			X	X	X	(*)	X												2
SB-6	1/23/14	1600		X	low flow peri pump	HCl	Y	3x40mL	3		X		X	~~X~~	~~X~~	~~X~~	X	BB											3
SB-5	1/23/14	1615		X	low flow peri pump	HCl	Y	40mL	3		X		X	~~X~~	~~X~~	~~X~~	~~X~~	BB											
SB-5	1/23/14	1615		X	↓	—	Y	1L	2		X			X														4
SB-5	1/23/14	1615		X	↓	—	Y	1L	2		X				X													
SB-9	1/23/14	1635		X	low flow peri pump	HCl	Y	40mL	3		X		X															
SB-9	1/23/14	1635		X	↓	—	Y	1L	2		X			X														5
SB-9	1/23/14	1635		X	low flow peri pump	—	Y	1L	2		X				X													
SB-5	1/24/14	0838		X	↓	—	Y	1L	2		X						X											6

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey R	1/24/14	1715	CEL	1/24/14	1715
to GSO	1/27/14	1730		1/28/14	1020

FIELD REMARKS

- Standard TAT
- (*) = hold pending analysis of shallow sample

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS

SEND REPORT TO:

bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

1599

NO: 07892

1277 Treat Boulevard, Suite 500 ● Walnut Creek, CA ● 94597 ● (925) 946-0455 ● FAX (925) 946-9968

PROJECT #: 0231462

PROJECT NAME: Port of Oakland Phase II

SAMPLER: (PRINT NAME) Bailey Blosser

(SIGNATURE) Bailey Blosser

RECEIVING LABORATORY: Calscience

REQUESTED PARAMETERS: TPHg/VOCs/fuel oxygenates (8260B); TPHd/mo (8015M w/ silica gel cleanup); SVOCs (8270C); Metals (CA Title 22) (6010/7000 series); Organochlorine Pesticides & PCBs (8081A/8082)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	SOIL	WATER	GAS	TPHg/VOCs/fuel oxygenates (8260B)	TPHd/mo (8015M w/ silica gel cleanup)	SVOCs (8270C)	Metals (CA Title 22) (6010/7000 series)	Organochlorine Pesticides & PCBs (8081A/8082)						
SB-10-0.5-1.0	1/24/14	0734		X	~~hand~~ slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X			7			
SB-4-0.5-1.0	1/24/14	0758		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X			8			
SB-4-7.0-7.5	1/24/14	0811		X	slide hammer	—	Y	2"x6"	1	X			X	X	X	X	(*)			9			
SB-5	1/24/14	0841		X	low flow peri pump	HNO_3	Y	250mL	1		X					X☆				10			
SB-7-0.5-1.0	1/24/14	0900		X	slide hammer	—	Y	2.5"x6"	1	X			X	X	X	X	X			11			
SB-7-7.0-7.5	1/24/14	0910		X	↓	—	Y	2"x6"	1	X			X	X	X	X	(*)			12			
SB-9	1/24/14	0912		X	low flow peri pump	HNO_3	Y	250mL	1		X					X☆				13			
SB-9	1/24/14	1635		X	↓	—	Y	1L	2		X						X			5			
SB-6	1/24/14	0935		X	low flow peri pump	—	Y	1L	1		X				X					}14			
SB-6	1/24/14	0935		X	↓	—	Y	1L	2		X			X									

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey B.	1/24/14	1715	[signature] CEL	1/24/14	1715
[signature] to GSO	1/27/14	1730	[signature]	1/28/14	1020

FIELD REMARKS:
- Standard TAT
- (*) hold pending analytical results of shallow sample
- ☆ = field filtered

REMARKS ON SAMPLE RECEIPT:
☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO: bailey.blosser@erm.com

Environmental Resources Management

CHAIN OF CUSTODY RECORD

1599

NO: 07900

1277 Treat Boulevard, Suite 500 • Walnut Creek, CA • 94597 • (925) 946-0455 • FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B

RECEIVING LABORATORY: Calscience.

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	MATRIX: GAS	REQUESTED PARAMETERS: TPHg / VOCs / fuel oxygenates 8260B	REQUESTED PARAMETERS: TPHd / mo 8015 M w/ silica gel cleanup	REQUESTED PARAMETERS: SVOCs 8270 C	REQUESTED PARAMETERS: CA Title 22 Metals 6010 / 7000	REQUESTED PARAMETERS: Organochlorine Pesticides PCBs 8081A 8082	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:	REQUESTED PARAMETERS:
SB-10-60-65	1/24/14	0957		X	Slide hammer	—	Y	2"x6"	1	X			X	X	X	X	(*)											15
SB-2	1/24/14	1025		X	low flow peristaltic pump	HCl / HNO3	Y	40mL / 1L 250mL	10		X		X	X	X	X	X											16
SB-2-DUP	1/24/14	1025		X	↓	HCl / HNO3	Y	40mL / 250mL 1L	10		X		X	X	X	X	X											17
SB-3	1/24/14	1250		X	low flow peristaltic pump	HCl	Y	40mL	3		X		X															18
SB-3	1/24/14	1250		X	↓	—	Y	1L	2		X			X														
SB-3	1/24/14	1250		X		—	Y	1L	2		X				X													
SB-3	1/24/14	1250		X		—	Y	1L	2		X						X											
SB-3	1/24/14	1250		X		HNO3	Y	250mL	1		X					X*												
SB-8	1/24/14	1345		X		HCl	Y	40mL	3		X		X															19
SB-8	1/24/14	1345		X	↓	HNO3	Y	250mL	1							X*												

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey R	1/24/14	1715	CEL	1/24/14	1715
to GSO	1/27/14	1730		1/28/14	1020

FIELD REMARKS:
- standard TAT
- (*) = hold pending shallow analytical results
- * = field filtered

REMARKS ON SAMPLE RECEIPT
- ☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
- ☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO: bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

(1599)

NO: 07895

1277 Treat Boulevard, Suite 500 ● Walnut Creek, CA ● 94597 ● (925) 946-0455 ● FAX (925) 946-9968

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey B

RECEIVING LABORATORY: Calscience

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	SOIL	WATER	GAS	TPHg/VOCs/Fuel oxygenates 8260B	TPH d/mo 8015M w/ silica gel cleanup	SVOCs 8270C	CA Title 22 Metals 6010/7000 series	Organochlorine Pesticides/PCBs 8081A/8082						
SB-8	1/24/14	1345		X	low flow peri pump	—	y	1L	6		X			X	X	[illegible] *	X			19			
SB-6	1/24/14	1419		X	↓	HNO_3	y	250mL	1		X					X *				20			
SB-6	1/24/14	0935		X	↓	—	y	1L	1		X						X			14			
SB-7	1/24/14	1445		X	↓	HCl	y	40mL	3		X		X							21			
SB-7	1/24/14	1445		X	↓	HNO_3	y	250mL	1		X					X *				21			
SB-7	1/24/14	1445		X	↓	—	y	1L	4		X			X	X		X			21			
Waste Soil	1/24/14	1520	X	~~X~~	grab	—	y	2.5"x6"	1	X			X	X	X	X	X			22			
Trip Blank 1	1/24/14	1600	LAB PREPARED			HCl	y	40mL	2		X		X							23			
Trip Blank 2	1/24/14	1600	LAB PREPARED			HCl	y	40mL	2		X		X							24			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Bailey B	1/24/14	1715	[signature] CEL	1/24/14	1715
[signature] to GSO	1/27/14	1730	[signature]	1/28/14	1020

FIELD REMARKS:
- Standard TAT
- * = field filtered

REMARKS ON SAMPLE RECEIPT:
- ☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED
- ☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO: bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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GSO

WebShip > > > > >

800-322-5555 www.gso.com

T599

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ERM

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523771487

NPS

ORC

A

GARDEN GROVE

D92843A

20571326

Print Date : 01/27/14 15:53 PM

Package 1 of 4

Tracking #: 523771490

NPS

ORC

A

GARDEN GROVE

D92843A

20571329

Print Date : 01/27/14 15:53 PM

Package 4 of 4

Tracking #: 523771488

ORC

GARDEN GROVE

D92843A

20571327

Tracking #: 523771489

ORC

GARDEN GROVE

D92843A

20571328

Print D

Pac

Package 2 of 4

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1599

SAMPLE RECEIPT FORM

Cooler 1 of 4

CLIENT: ERM

DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.1 °C - 0.3 °C (CF) = 1.8 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 15

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** 15

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Collection date/time, matrix*(-19), and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (5/B)** ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☑VOA**h**[3] ☐VOA**na**$_2$ ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na**$_2$ ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na**$_2$ ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 140109A **Labeled/Checked by:** 659

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 846

Preservative: **h:** HCL **n:** HNO_3 **na**$_2$:$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 846

*(-19) matrix is water.

** (-1), (-7), (-8), (-11), (-22)

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1599

SAMPLE RECEIPT FORM

Cooler 2 of 4

CLIENT: ERM DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.5 °C - 0.3 °C (CF) = 2.2 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Checked by: 15

CUSTODY SEALS INTACT:

☑ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 15

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Checked by: 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☒ 659 1/28/14	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☑250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☑250PBn ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** 140109A Labeled/Checked by: 659

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 836

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered Scanned by: 836

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1599

SAMPLE RECEIPT FORM

Cooler 3 of 4

CLIENT: ERM

DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.9 °C - 0.3 °C (CF) = 2.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 15

CUSTODY SEALS INTACT:

☑ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 15

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Checked by: 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☑250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ Labeled/Checked by: 659

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 836

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered Scanned by: 836

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1599

SAMPLE RECEIPT FORM

Cooler 4 of 4

CLIENT: ERM

DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.0 °C - 0.3 °C (CF) = 1.7 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 15

CUSTODY SEALS INTACT:

☑ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 15

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Checked by: 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ Labeled/Checked by: 659

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 836

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered Scanned by: 836

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1599

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

- ☐ **Sample(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☑ **Sample label(s) do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☑ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
- ☐ **Sample container(s) not labeled**
- ☐ **Air sample container(s) compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

Comments:

(-6) 1 of 2 containers collection time per label is 16:15

PER BAILEY BLOSSER'S EMAIL DATED 01/29/14 @ 10:03AM COLLECTION TIME OF 08:38 WILL BE USED.

– VIRENDRA 01/29/14

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: _____

*Transferred at Client's request.

Initial / Date: 659 01/28/14

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1601

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM - West

Client Project Name: Port of Oakland Phase II

Attention: Bailey Blosser
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Approved for release on 02/05/2014 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Port of Oakland Phase II
Work Order Number: 14-01-1601

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1601 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/28/14. They were assigned to Work Order 14-01-1601.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client:	ERM - West 1277 Treat Boulevard, Suite 500 Walnut Creek, CA 94597-7989	Work Order:	14-01-1601
		Project Name:	Port of Oakland Phase II
		PO Number:	
		Date/Time Received:	01/28/14 10:20
		Number of Containers:	7
Attn:	Bailey Blosser		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SB-4	14-01-1601-1	01/27/14 08:40	7	Aqueous

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client:	ERM - West	Work Order:	14-01-1601
	1277 Treat Boulevard, Suite 500	Project Name:	Port of Oakland Phase II
	Walnut Creek, CA 94597-7989	Received:	01/28/14
Attn:	Bailey Blosser		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SB-4 (14-01-1601-1)						
Barium	0.0361		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.
Zinc	0.0210		0.0100	mg/L	EPA 6010B	EPA 3005A Filt.

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-D**	**01/27/14 08:40**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 22:04**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	91	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-278-518**	**N/A**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:29**	**140129B19**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	250	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-D**	**01/27/14 08:40**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 22:04**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	91	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-304-589**	**N/A**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:29**	**140129B18**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-C**	**01/27/14 08:40**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 20:27**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	79	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-436-9119**	**N/A**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 12:03**	**140129B01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	50	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	82	38-134	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-G**	**01/27/14 08:40**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:53**	**140128LA4F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	0.0361	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	0.0210	0.0100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: mg/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-13979**	**N/A**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:39**	**140128LA4F**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1	
Arsenic	ND	0.0100	1	
Barium	ND	0.0100	1	
Beryllium	ND	0.0100	1	
Cadmium	ND	0.0100	1	
Chromium	ND	0.0100	1	
Cobalt	ND	0.0100	1	
Copper	ND	0.0100	1	
Lead	ND	0.0100	1	
Molybdenum	ND	0.0100	1	
Nickel	ND	0.0100	1	
Selenium	ND	0.0150	1	
Silver	ND	0.00500	1	
Thallium	ND	0.0150	1	
Vanadium	ND	0.0100	1	
Zinc	ND	0.0100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 7470A Filt.
Method: EPA 7470A
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-G**	**01/27/14 08:40**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:58**	**140128L01F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-763-261**	**N/A**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:31**	**140128L01F**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-F**	**01/27/14 08:40**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 19:45**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.098	1	
Gamma-BHC	ND	0.098	1	
Beta-BHC	ND	0.098	1	
Heptachlor	ND	0.098	1	
Delta-BHC	ND	0.098	1	
Aldrin	ND	0.098	1	
Heptachlor Epoxide	ND	0.098	1	
Endosulfan I	ND	0.098	1	
Dieldrin	ND	0.098	1	
4,4'-DDE	ND	0.098	1	
Endrin	ND	0.098	1	
Endrin Aldehyde	ND	0.098	1	
4,4'-DDD	ND	0.098	1	
Endosulfan II	ND	0.098	1	
4,4'-DDT	ND	0.098	1	
Endosulfan Sulfate	ND	0.098	1	
Methoxychlor	ND	0.098	1	
Chlordane	ND	0.98	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.098	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	75	50-135	
2,4,5,6-Tetrachloro-m-Xylene	94	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-529-678**	**N/A**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:07**	**140129L04**

Parameter	Result	RL	DF	Qualifiers
Alpha-BHC	ND	0.10	1	
Gamma-BHC	ND	0.10	1	
Beta-BHC	ND	0.10	1	
Heptachlor	ND	0.10	1	
Delta-BHC	ND	0.10	1	
Aldrin	ND	0.10	1	
Heptachlor Epoxide	ND	0.10	1	
Endosulfan I	ND	0.10	1	
Dieldrin	ND	0.10	1	
4,4'-DDE	ND	0.10	1	
Endrin	ND	0.10	1	
Endrin Aldehyde	ND	0.10	1	
4,4'-DDD	ND	0.10	1	
Endosulfan II	ND	0.10	1	
4,4'-DDT	ND	0.10	1	
Endosulfan Sulfate	ND	0.10	1	
Methoxychlor	ND	0.10	1	
Chlordane	ND	1.0	1	
Toxaphene	ND	2.0	1	
Endrin Ketone	ND	0.10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	50-135	
2,4,5,6-Tetrachloro-m-Xylene	97	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-F**	**01/27/14 08:40**	**Aqueous**	**GC 58**	**01/29/14**	**02/04/14 03:36**	**140129L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.98	1	
Aroclor-1221	ND	0.98	1	
Aroclor-1232	ND	0.98	1	
Aroclor-1242	ND	0.98	1	
Aroclor-1248	ND	0.98	1	
Aroclor-1254	ND	0.98	1	
Aroclor-1260	ND	0.98	1	
Aroclor-1262	ND	0.98	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	93	50-135	
2,4,5,6-Tetrachloro-m-Xylene	117	50-135	

Method Blank	099-12-533-886	N/A	Aqueous	GC 58	01/29/14	02/04/14 09:19	140129L05

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1	
Aroclor-1221	ND	1.0	1	
Aroclor-1232	ND	1.0	1	
Aroclor-1242	ND	1.0	1	
Aroclor-1248	ND	1.0	1	
Aroclor-1254	ND	1.0	1	
Aroclor-1260	ND	1.0	1	
Aroclor-1262	ND	1.0	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	113	50-135	
2,4,5,6-Tetrachloro-m-Xylene	107	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-E**	**01/27/14 08:40**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/04/14 01:54**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	9.5	0.998	
Acenaphthylene	ND	9.5	0.998	
Aniline	ND	9.5	0.998	
Anthracene	ND	9.5	0.998	
Azobenzene	ND	9.5	0.998	
Benzidine	ND	48	0.998	
Benzo (a) Anthracene	ND	9.5	0.998	
Benzo (a) Pyrene	ND	9.5	0.998	
Benzo (b) Fluoranthene	ND	9.5	0.998	
Benzo (g,h,i) Perylene	ND	9.5	0.998	
Benzo (k) Fluoranthene	ND	9.5	0.998	
Benzoic Acid	ND	48	0.998	
Benzyl Alcohol	ND	9.5	0.998	
Bis(2-Chloroethoxy) Methane	ND	9.5	0.998	
Bis(2-Chloroethyl) Ether	ND	24	0.998	
Bis(2-Chloroisopropyl) Ether	ND	9.5	0.998	
Bis(2-Ethylhexyl) Phthalate	ND	9.5	0.998	
4-Bromophenyl-Phenyl Ether	ND	9.5	0.998	
Butyl Benzyl Phthalate	ND	9.5	0.998	
4-Chloro-3-Methylphenol	ND	9.5	0.998	
4-Chloroaniline	ND	9.5	0.998	
2-Chloronaphthalene	ND	9.5	0.998	
2-Chlorophenol	ND	9.5	0.998	
4-Chlorophenyl-Phenyl Ether	ND	9.5	0.998	
Chrysene	ND	9.5	0.998	
Di-n-Butyl Phthalate	ND	9.5	0.998	
Di-n-Octyl Phthalate	ND	9.5	0.998	
Dibenz (a,h) Anthracene	ND	9.5	0.998	
Dibenzofuran	ND	9.5	0.998	
1,2-Dichlorobenzene	ND	9.5	0.998	
1,3-Dichlorobenzene	ND	9.5	0.998	
1,4-Dichlorobenzene	ND	9.5	0.998	
3,3'-Dichlorobenzidine	ND	24	0.998	
2,4-Dichlorophenol	ND	9.5	0.998	
Diethyl Phthalate	ND	9.5	0.998	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	9.5	0.998	
2,4-Dimethylphenol	ND	9.5	0.998	
4,6-Dinitro-2-Methylphenol	ND	48	0.998	
2,4-Dinitrophenol	ND	48	0.998	
2,4-Dinitrotoluene	ND	9.5	0.998	
2,6-Dinitrotoluene	ND	9.5	0.998	
Fluoranthene	ND	9.5	0.998	
Fluorene	ND	9.5	0.998	
Hexachloro-1,3-Butadiene	ND	9.5	0.998	
Hexachlorobenzene	ND	9.5	0.998	
Hexachlorocyclopentadiene	ND	24	0.998	
Hexachloroethane	ND	9.5	0.998	
Indeno (1,2,3-c,d) Pyrene	ND	9.5	0.998	
Isophorone	ND	9.5	0.998	
2-Methylnaphthalene	ND	9.5	0.998	
1-Methylnaphthalene	ND	9.5	0.998	
2-Methylphenol	ND	9.5	0.998	
3/4-Methylphenol	ND	9.5	0.998	
N-Nitroso-di-n-propylamine	ND	9.5	0.998	
N-Nitrosodimethylamine	ND	9.5	0.998	
N-Nitrosodiphenylamine	ND	9.5	0.998	
Naphthalene	ND	9.5	0.998	
4-Nitroaniline	ND	9.5	0.998	
3-Nitroaniline	ND	9.5	0.998	
2-Nitroaniline	ND	9.5	0.998	
Nitrobenzene	ND	24	0.998	
4-Nitrophenol	ND	9.5	0.998	
2-Nitrophenol	ND	9.5	0.998	
Pentachlorophenol	ND	9.5	0.998	
Phenanthrene	ND	9.5	0.998	
Phenol	ND	9.5	0.998	
Pyrene	ND	9.5	0.998	
Pyridine	ND	9.5	0.998	
1,2,4-Trichlorobenzene	ND	9.5	0.998	
2,4,6-Trichlorophenol	ND	9.5	0.998	
2,4,5-Trichlorophenol	ND	9.5	0.998	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	84	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1601
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	61	24-120	
Nitrobenzene-d5	90	38-120	
p-Terphenyl-d14	105	41-137	
Phenol-d6	41	16-120	
2,4,6-Tribromophenol	100	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-003-3793**	**N/A**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 12:45**	**140129L17**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1	
Acenaphthylene	ND	10	1	
Aniline	ND	10	1	
Anthracene	ND	10	1	
Azobenzene	ND	10	1	
Benzidine	ND	50	1	
Benzo (a) Anthracene	ND	10	1	
Benzo (a) Pyrene	ND	10	1	
Benzo (b) Fluoranthene	ND	10	1	
Benzo (g,h,i) Perylene	ND	10	1	
Benzo (k) Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1	
Benzyl Alcohol	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1	
Bis(2-Ethylhexyl) Phthalate	ND	10	1	
4-Bromophenyl-Phenyl Ether	ND	10	1	
Butyl Benzyl Phthalate	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1	
4-Chloroaniline	ND	10	1	
2-Chloronaphthalene	ND	10	1	
2-Chlorophenol	ND	10	1	
4-Chlorophenyl-Phenyl Ether	ND	10	1	
Chrysene	ND	10	1	
Di-n-Butyl Phthalate	ND	10	1	
Di-n-Octyl Phthalate	ND	10	1	
Dibenz (a,h) Anthracene	ND	10	1	
Dibenzofuran	ND	10	1	
1,2-Dichlorobenzene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1	
1,4-Dichlorobenzene	ND	10	1	
3,3'-Dichlorobenzidine	ND	25	1	
2,4-Dichlorophenol	ND	10	1	
Diethyl Phthalate	ND	10	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1	
4,6-Dinitro-2-Methylphenol	ND	50	1	
2,4-Dinitrophenol	ND	50	1	
2,4-Dinitrotoluene	ND	10	1	
2,6-Dinitrotoluene	ND	10	1	
Fluoranthene	ND	10	1	
Fluorene	ND	10	1	
Hexachloro-1,3-Butadiene	ND	10	1	
Hexachlorobenzene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1	
Hexachloroethane	ND	10	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Isophorone	ND	10	1	
2-Methylnaphthalene	ND	10	1	
1-Methylnaphthalene	ND	10	1	
2-Methylphenol	ND	10	1	
3/4-Methylphenol	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1	
N-Nitrosodimethylamine	ND	10	1	
N-Nitrosodiphenylamine	ND	10	1	
Naphthalene	ND	10	1	
4-Nitroaniline	ND	10	1	
3-Nitroaniline	ND	10	1	
2-Nitroaniline	ND	10	1	
Nitrobenzene	ND	25	1	
4-Nitrophenol	ND	10	1	
2-Nitrophenol	ND	10	1	
Pentachlorophenol	ND	10	1	
Phenanthrene	ND	10	1	
Phenol	ND	10	1	
Pyrene	ND	10	1	
Pyridine	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	96	33-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1601
Walnut Creek, CA 94597-7989	Preparation:	EPA 3510C
	Method:	EPA 8270C
	Units:	ug/L
Project: Port of Oakland Phase II		Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorophenol	69	24-120	
Nitrobenzene-d5	93	38-120	
p-Terphenyl-d14	100	41-137	
Phenol-d6	47	16-120	
2,4,6-Tribromophenol	100	27-159	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-4	**14-01-1601-1-B**	**01/27/14 08:40**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 18:08**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1601
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 3 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	99	78-126	
1,2-Dichloroethane-d4	100	75-135	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-13064**	**N/A**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 14:45**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1	
Benzene	ND	0.50	1	
Bromobenzene	ND	1.0	1	
Bromochloromethane	ND	1.0	1	
Bromodichloromethane	ND	1.0	1	
Bromoform	ND	1.0	1	
Bromomethane	ND	10	1	
2-Butanone	ND	10	1	
n-Butylbenzene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1	
tert-Butylbenzene	ND	1.0	1	
Carbon Disulfide	ND	10	1	
Carbon Tetrachloride	ND	0.50	1	
Chlorobenzene	ND	1.0	1	
Chloroethane	ND	5.0	1	
Chloroform	ND	1.0	1	
Chloromethane	ND	10	1	
2-Chlorotoluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1	
1,2-Dibromoethane	ND	1.0	1	
Dibromomethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1	
1,4-Dichlorobenzene	ND	1.0	1	
Dichlorodifluoromethane	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1	
1,1-Dichloroethene	ND	1.0	1	
c-1,2-Dichloroethene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1	
1,3-Dichloropropane	ND	1.0	1	
2,2-Dichloropropane	ND	1.0	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Port of Oakland Phase II

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	1.0	1	
c-1,3-Dichloropropene	ND	0.50	1	
t-1,3-Dichloropropene	ND	0.50	1	
Ethylbenzene	ND	1.0	1	
2-Hexanone	ND	10	1	
Isopropylbenzene	ND	1.0	1	
p-Isopropyltoluene	ND	1.0	1	
Methylene Chloride	ND	10	1	
4-Methyl-2-Pentanone	ND	10	1	
Naphthalene	ND	10	1	
n-Propylbenzene	ND	1.0	1	
Styrene	ND	1.0	1	
1,1,1,2-Tetrachloroethane	ND	1.0	1	
1,1,2,2-Tetrachloroethane	ND	1.0	1	
Tetrachloroethene	ND	1.0	1	
Toluene	ND	1.0	1	
1,2,3-Trichlorobenzene	ND	1.0	1	
1,2,4-Trichlorobenzene	ND	1.0	1	
1,1,1-Trichloroethane	ND	1.0	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
1,1,2-Trichloroethane	ND	1.0	1	
Trichloroethene	ND	1.0	1	
Trichlorofluoromethane	ND	10	1	
1,2,3-Trichloropropane	ND	5.0	1	
1,2,4-Trimethylbenzene	ND	1.0	1	
1,3,5-Trimethylbenzene	ND	1.0	1	
Vinyl Acetate	ND	10	1	
Vinyl Chloride	ND	0.50	1	
p/m-Xylene	ND	1.0	1	
o-Xylene	ND	1.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Tert-Butyl Alcohol (TBA)	ND	10	1	
Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Ethanol	ND	100	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West	Date Received:	01/28/14
1277 Treat Boulevard, Suite 500	Work Order:	14-01-1601
Walnut Creek, CA 94597-7989	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Port of Oakland Phase II		Page 6 of 6

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	99	78-126	
1,2-Dichloroethane-d4	100	75-135	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8015B (M)
Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1599-3	**Sample**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 13:10**	**140129S01**
14-01-1599-3	**Matrix Spike**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 13:44**	**140129S01**
14-01-1599-3	**Matrix Spike Duplicate**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 14:17**	**140129S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	1713	86	1689	84	68-122	1	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1601
Walnut Creek, CA 94597-7989		Preparation:	EPA 3005A Filt.
		Method:	EPA 6010B
Project: Port of Oakland Phase II			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-4	**Sample**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:53**	**140128SA4**
SB-4	**Matrix Spike**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:54**	**140128SA4**
SB-4	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:56**	**140128SA4**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.4275	85	0.4621	92	72-132	8	0-10	
Arsenic	ND	0.5000	0.4864	97	0.4921	98	80-140	1	0-11	
Barium	0.03610	0.5000	0.5535	103	0.5642	106	87-123	2	0-6	
Beryllium	ND	0.5000	0.5253	105	0.5361	107	89-119	2	0-8	
Cadmium	ND	0.5000	0.5183	104	0.5259	105	82-124	1	0-7	
Chromium	ND	0.5000	0.5203	104	0.5323	106	86-122	2	0-8	
Cobalt	ND	0.5000	0.5543	111	0.5615	112	83-125	1	0-7	
Copper	ND	0.5000	0.5332	107	0.5377	108	78-126	1	0-7	
Lead	ND	0.5000	0.5141	103	0.5230	105	84-120	2	0-7	
Molybdenum	ND	0.5000	0.5125	103	0.5247	105	78-126	2	0-7	
Nickel	ND	0.5000	0.5317	106	0.5449	109	84-120	2	0-7	
Selenium	ND	0.5000	0.5080	102	0.5170	103	79-127	2	0-9	
Silver	ND	0.2500	0.2741	110	0.2823	113	86-128	3	0-7	
Thallium	ND	0.5000	0.5474	109	0.5550	111	79-121	1	0-8	
Vanadium	ND	0.5000	0.5101	102	0.5231	105	88-118	3	0-7	
Zinc	0.02099	0.5000	0.5735	111	0.5825	112	89-131	2	0-8	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1601
Walnut Creek, CA 94597-7989		Preparation:	EPA 7470A Filt.
		Method:	EPA 7470A
Project: Port of Oakland Phase II			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1579-2	**Sample**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:35**	**140128S01**
14-01-1579-2	**Matrix Spike**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:37**	**140128S01**
14-01-1579-2	**Matrix Spike Duplicate**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:39**	**140128S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.01030	103	0.01062	106	57-141	3	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B

Project: Port of Oakland Phase II

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-1720-3	**Sample**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 15:14**	**140130S01**
14-01-1720-3	**Matrix Spike**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 15:43**	**140130S01**
14-01-1720-3	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 16:12**	**140130S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	46.33	93	46.08	92	74-122	1	0-21	
Carbon Tetrachloride	ND	50.00	54.22	108	55.87	112	60-144	3	0-21	
Chlorobenzene	ND	50.00	44.14	88	43.82	88	73-120	1	0-22	
1,2-Dibromoethane	ND	50.00	47.55	95	46.86	94	80-122	1	0-20	
1,2-Dichlorobenzene	ND	50.00	43.20	86	43.38	87	70-120	0	0-26	
1,2-Dichloroethane	ND	50.00	45.63	91	44.15	88	64-142	3	0-20	
1,1-Dichloroethene	ND	50.00	42.62	85	43.74	87	52-136	3	0-21	
Ethylbenzene	ND	50.00	48.66	97	48.70	97	77-125	0	0-24	
Toluene	ND	50.00	47.91	96	47.80	96	72-126	0	0-23	
Trichloroethene	ND	50.00	48.16	96	48.85	98	74-128	1	0-22	
Vinyl Chloride	ND	50.00	52.93	106	56.27	113	67-133	6	0-20	
p/m-Xylene	ND	100.0	92.31	92	91.43	91	63-129	1	0-25	
o-Xylene	ND	50.00	44.87	90	44.75	90	62-128	0	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	47.21	94	44.26	89	68-134	6	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	247.3	99	243.6	97	65-143	2	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	47.14	94	47.01	94	61-139	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	46.93	94	46.86	94	64-136	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	47.38	95	46.80	94	67-133	1	0-20	
Ethanol	ND	500.0	432.5	87	476.5	95	34-178	10	0-58	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8015B (M)
Page 1 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-278-518	**LCS**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:19**	**140129B19**
099-15-278-518	**LCSD**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:36**	**140129B19**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	2000	1872	94	1876	94	75-117	0	0-13	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8015B (M)

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-304-589	**LCS**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 18:46**	**140129B18**
099-15-304-589	**LCSD**	**Aqueous**	**GC 47**	**01/29/14**	**01/29/14 19:03**	**140129B18**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1666	83	1690	84	75-117	1	0-13	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1601
Walnut Creek, CA 94597-7989		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Port of Oakland Phase II			Page 3 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-436-9119	**LCS**	**Aqueous**	**GC 25**	**01/29/14**	**01/29/14 12:37**	**140129B01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	2000	1918	96	78-120	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3005A Filt.
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-13979	**LCS**	**Aqueous**	**ICP 7300**	**01/28/14**	**01/29/14 11:41**	**140128LA4F**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.4930	99	80-120	73-127	
Arsenic	0.5000	0.4910	98	80-120	73-127	
Barium	0.5000	0.5026	101	80-120	73-127	
Beryllium	0.5000	0.4844	97	80-120	73-127	
Cadmium	0.5000	0.4973	99	80-120	73-127	
Chromium	0.5000	0.5114	102	80-120	73-127	
Cobalt	0.5000	0.5465	109	80-120	73-127	
Copper	0.5000	0.5045	101	80-120	73-127	
Lead	0.5000	0.5049	101	80-120	73-127	
Molybdenum	0.5000	0.4927	99	80-120	73-127	
Nickel	0.5000	0.5324	106	80-120	73-127	
Selenium	0.5000	0.4615	92	80-120	73-127	
Silver	0.2500	0.2615	105	80-120	73-127	
Thallium	0.5000	0.5207	104	80-120	73-127	
Vanadium	0.5000	0.4880	98	80-120	73-127	
Zinc	0.5000	0.5193	104	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West		Date Received:	01/28/14
1277 Treat Boulevard, Suite 500		Work Order:	14-01-1601
Walnut Creek, CA 94597-7989		Preparation:	EPA 7470A Filt.
		Method:	EPA 7470A
Project: Port of Oakland Phase II			Page 5 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-763-261	**LCS**	**Aqueous**	**Mercury**	**01/28/14**	**01/28/14 17:33**	**140128L01F**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.009962	100	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8081A

Project: Port of Oakland Phase II

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-678	**LCS**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:22**	**140129L04**
099-12-529-678	**LCSD**	**Aqueous**	**GC 44**	**01/29/14**	**02/03/14 17:36**	**140129L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4739	95	0.4648	93	50-135	36-149	2	0-25	
Gamma-BHC	0.5000	0.4624	92	0.4596	92	50-135	36-149	1	0-25	
Beta-BHC	0.5000	0.4302	86	0.4358	87	50-135	36-149	1	0-25	
Heptachlor	0.5000	0.4499	90	0.4296	86	50-135	36-149	5	0-25	
Delta-BHC	0.5000	0.4254	85	0.4289	86	50-135	36-149	1	0-25	
Aldrin	0.5000	0.4266	85	0.3856	77	50-135	36-149	10	0-25	
Heptachlor Epoxide	0.5000	0.4501	90	0.4500	90	50-135	36-149	0	0-25	
Endosulfan I	0.5000	0.4812	96	0.4710	94	50-135	36-149	2	0-25	
Dieldrin	0.5000	0.4586	92	0.4530	91	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.4257	85	0.4521	90	50-135	36-149	6	0-25	
Endrin	0.5000	0.4762	95	0.4857	97	50-135	36-149	2	0-25	
Endrin Aldehyde	0.5000	0.3948	79	0.3477	70	50-135	36-149	13	0-25	
4,4'-DDD	0.5000	0.4083	82	0.4513	90	50-135	36-149	10	0-25	
Endosulfan II	0.5000	0.4651	93	0.4750	95	50-135	36-149	2	0-25	
4,4'-DDT	0.5000	0.4432	89	0.4652	93	50-135	36-149	5	0-25	
Endosulfan Sulfate	0.5000	0.4414	88	0.4489	90	50-135	36-149	2	0-25	
Methoxychlor	0.5000	0.4318	86	0.4567	91	50-135	36-149	6	0-25	

Total number of LCS compounds: 17
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-533-886	**LCS**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 22:12**	**140129L05**
099-12-533-886	**LCSD**	**Aqueous**	**GC 58**	**01/29/14**	**02/03/14 22:30**	**140129L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.488	124	2.470	124	50-135	1	0-25	
Aroclor-1260	2.000	2.261	113	2.348	117	50-135	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 3510C
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-3793	**LCS**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 13:05**	**140129L17**
095-01-003-3793	**LCSD**	**Aqueous**	**GC/MS SS**	**01/29/14**	**02/03/14 13:25**	**140129L17**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	200.0	187.7	94	191.6	96	61-120	51-130	2	0-20	
Acenaphthylene	200.0	184.9	92	188.8	94	55-120	44-131	2	0-20	
Butyl Benzyl Phthalate	200.0	213.1	107	218.1	109	56-122	45-133	2	0-20	
4-Chloro-3-Methylphenol	200.0	180.7	90	172.5	86	52-120	41-131	5	0-20	
2-Chlorophenol	200.0	204.6	102	196.9	98	47-120	35-132	4	0-20	
1,4-Dichlorobenzene	200.0	181.1	91	182.0	91	36-120	22-134	0	0-20	
Dimethyl Phthalate	200.0	191.3	96	188.1	94	60-120	50-130	2	0-20	
2,4-Dinitrotoluene	200.0	208.5	104	193.6	97	61-121	51-131	7	0-20	
Fluorene	200.0	186.3	93	183.0	92	67-120	58-129	2	0-20	
N-Nitroso-di-n-propylamine	200.0	189.0	95	179.8	90	39-123	25-137	5	0-20	
Naphthalene	200.0	181.5	91	180.9	90	54-120	43-131	0	0-20	
4-Nitrophenol	200.0	77.10	39	69.14	35	14-120	0-138	11	0-20	
Pentachlorophenol	200.0	169.2	85	160.7	80	31-127	15-143	5	0-20	
Phenol	200.0	99.93	50	94.41	47	17-120	0-137	6	0-20	
Pyrene	200.0	187.5	94	201.8	101	58-124	47-135	7	0-20	
1,2,4-Trichlorobenzene	200.0	173.0	87	173.1	87	49-120	37-132	0	0-20	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Project: Port of Oakland Phase II

Date Received: 01/28/14
Work Order: 14-01-1601
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-13064	**LCS**	**Aqueous**	**GC/MS R**	**01/30/14**	**01/30/14 12:50**	**140130L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	50.15	100	80-120	73-127	
Carbon Tetrachloride	50.00	62.67	125	67-139	55-151	
Chlorobenzene	50.00	47.18	94	78-120	71-127	
1,2-Dibromoethane	50.00	50.95	102	80-120	73-127	
1,2-Dichlorobenzene	50.00	46.52	93	63-129	52-140	
1,2-Dichloroethane	50.00	47.76	96	70-130	60-140	
1,1-Dichloroethene	50.00	48.11	96	66-126	56-136	
Ethylbenzene	50.00	52.64	105	80-123	73-130	
Toluene	50.00	51.96	104	80-120	73-127	
Trichloroethene	50.00	53.25	106	80-122	73-129	
Vinyl Chloride	50.00	61.92	124	70-130	60-140	
p/m-Xylene	100.0	100.5	100	75-123	67-131	
o-Xylene	50.00	49.20	98	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	52.56	105	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	246.0	98	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	54.27	109	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	51.88	104	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.72	101	67-133	56-144	
Ethanol	500.0	489.8	98	42-168	21-189	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1601 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3005A Filt.	469	ICP 7300	1
EPA 7470A	EPA 7470A Filt.	769	Mercury	1
EPA 8015B (M)	EPA 3510C	682	GC 47	1
EPA 8015B (M)	EPA 5030C	797	GC 25	2
EPA 8081A	EPA 3510C	842	GC 44	1
EPA 8082	EPA 3510C	669	GC 58	1
EPA 8260B	EPA 5030C	867	GC/MS R	2
EPA 8270C	EPA 3510C	449	GC/MS SS	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1601 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Environmental Resources Management

CHAIN OF CUSTODY RECORD

NO: 07901

14-01-1601

1277 Treat Boulevard, Suite 500 • Walnut Creek, CA • 94597 • (925) 946-0455 • FAX (925) 946-9968

Page 1 of 1

PROJECT #	PROJECT NAME
0231462.02	Port of Oakland Phase II

SAMPLER: (PRINT NAME)	(SIGNATURE)
Bailey Blosser	Bailey Blosser

RECEIVING LABORATORY: Calscience

	SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESER-VATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	MATRIX: GAS	TPHg/VOCs/fuel oxygenates 8260B	TPHd/mo 8015M w/silica gel cleanup	SVOCs 8270C	CA Title 22 Metals 6010/7000 series	Pesticides: PCBs 8081A/8082						
1	SB-4	1/27/14	0840		X	low flow peri pump	HCl	Y	40mL	3		X		X										
2	SB-4	1/27/14	0840		X		—	Y	1L	1		X			X									
3	SB-4	1/27/14	0840		X		—	Y	1L	1		X				X								
4	SB-4	1/27/14	0840		X		—	Y	1L	1		X						X						
5	SB-4	1/27/14	0840		X	[illegible]	HNO_3	Y	250mL	1		X					X ☆							

1/28/14 BB

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Liza Medina	1/27/14	3:15	Tom O'Malley CEL	1/27/14	1515
Tom O'Malley To GSO	1/27/14	1730	[illegible]	1/28/14	1020

FIELD REMARKS:
- standard TAT
- ☆ = field filtered

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED

☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS

SEND REPORT TO: bailey.blosser@erm.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

1601

GSO

WebShip > > > > >

800-322-5555 www.gso.com

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
CB A T, ERM

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523771788

NPS

ORC

A

GARDEN GROVE

D92843A

20572045

Print Date : 01/27/14 16:03 PM

Package 1 of 1

Send Label To Printer | Print All | Edit Shipment | Finish

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1601

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ERM

DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.7 °C - 0.3 °C (CF) = 2.4 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** JS

CUSTODY SEALS INTACT:

☑ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** JS

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☑VOA**h** (3) ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB (3) ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☑250PB**nf** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 659

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 659

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Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-01-1593

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM - West

Client Project Name: Port of Oakland Phase II / 0231462.02

Attention: Bailey Blosser
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Approved for release on 02/05/2014 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Port of Oakland Phase II / 0231462.02
Work Order Number: 14-01-1593

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-01-1593 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 01/28/14. They were assigned to Work Order 14-01-1593.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client:	ERM - West 1277 Treat Boulevard, Suite 500 Walnut Creek, CA 94597-7989	Work Order:	14-01-1593
		Project Name:	Port of Oakland Phase II / 0231462.02
		PO Number:	
		Date/Time Received:	01/28/14 10:20
		Number of Containers:	3
Attn:	Bailey Blosser		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SVP-7	14-01-1593-1	01/27/14 10:23	1	Air
SVP-4	14-01-1593-2	01/27/14 11:03	1	Air
SVP-4-DUP	14-01-1593-3	01/27/14 11:03	1	Air

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client: ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Work Order: 14-01-1593
Project Name: Port of Oakland Phase II / 0231462.02
Received: 01/28/14

Attn: Bailey Blosser

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SVP-7 (14-01-1593-1)						
Acetone	25		4.8	ug/m3	EPA TO-15	N/A
Benzene	3.3		1.6	ug/m3	EPA TO-15	N/A
2-Butanone	41		4.4	ug/m3	EPA TO-15	N/A
Tetrachloroethene	3600		34	ug/m3	EPA TO-15	N/A
Trichloroethene	8.1		2.7	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	130		2.7	ug/m3	EPA TO-15	N/A
SVP-4 (14-01-1593-2)						
Acetone	11		4.9	ug/m3	EPA TO-15	N/A
Tetrachloroethene	4.2		3.5	ug/m3	EPA TO-15	N/A
SVP-4-DUP (14-01-1593-3)						
Acetone	16		4.8	ug/m3	EPA TO-15	N/A
Tetrachloroethene	4.3		3.4	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	**14-01-1593-1-A**	**01/27/14 10:23**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 18:20**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	25	4.8	1	
Benzene	3.3	1.6	1	
Benzyl Chloride	ND	7.8	1	
Bromodichloromethane	ND	3.4	1	
Bromoform	ND	5.2	1	
Bromomethane	ND	1.9	1	
2-Butanone	41	4.4	1	
Carbon Disulfide	ND	6.2	1	
Carbon Tetrachloride	ND	3.1	1	
Chlorobenzene	ND	2.3	1	
Chloroethane	ND	1.3	1	
Chloroform	ND	2.4	1	
Chloromethane	ND	1.0	1	
Dibromochloromethane	ND	4.3	1	
Dichlorodifluoromethane	ND	2.5	1	
Diisopropyl Ether (DIPE)	ND	8.4	1	
1,1-Dichloroethane	ND	2.0	1	
1,1-Dichloroethene	ND	2.0	1	
1,2-Dibromoethane	ND	3.8	1	
Dichlorotetrafluoroethane	ND	14	1	
1,2-Dichlorobenzene	ND	3.0	1	
1,2-Dichloroethane	ND	2.0	1	
1,2-Dichloropropane	ND	2.3	1	
1,3-Dichlorobenzene	ND	3.0	1	
1,4-Dichlorobenzene	ND	3.0	1	
c-1,3-Dichloropropene	ND	2.3	1	
c-1,2-Dichloroethene	ND	2.0	1	
t-1,2-Dichloroethene	ND	2.0	1	
t-1,3-Dichloropropene	ND	4.5	1	
Ethanol	ND	9.4	1	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1	
Ethylbenzene	ND	2.2	1	
4-Ethyltoluene	ND	2.5	1	
Hexachloro-1,3-Butadiene	ND	16	1	
2-Hexanone	ND	6.1	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1	
Methylene Chloride	ND	17	1	
4-Methyl-2-Pentanone	ND	6.1	1	
Naphthalene	ND	26	1	
o-Xylene	ND	2.2	1	
p/m-Xylene	ND	8.7	1	
Styrene	ND	6.4	1	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1	
Tert-Butyl Alcohol (TBA)	ND	6.1	1	
Toluene	ND	1.9	1	
Trichloroethene	8.1	2.7	1	
Trichlorofluoromethane	ND	5.6	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1	
1,1,1-Trichloroethane	130	2.7	1	
1,1,2-Trichloroethane	ND	2.7	1	
1,3,5-Trimethylbenzene	ND	2.5	1	
1,1,2,2-Tetrachloroethane	ND	6.9	1	
1,2,4-Trimethylbenzene	ND	7.4	1	
1,2,4-Trichlorobenzene	ND	15	1	
Vinyl Acetate	ND	7.0	1	
Vinyl Chloride	ND	1.3	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	99	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	**14-01-1593-1-A**	**01/27/14 10:23**	**Air**	**GC/MS YY**	**N/A**	**01/30/14 20:57**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	3600	34	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	68-134	
1,2-Dichloroethane-d4	106	67-133	
Toluene-d8	99	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4	**14-01-1593-2-A**	**01/27/14 11:03**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 16:32**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	11	4.9	1.03	
Benzene	ND	1.6	1.03	
Benzyl Chloride	ND	8.0	1.03	
Bromodichloromethane	ND	3.5	1.03	
Bromoform	ND	5.3	1.03	
Bromomethane	ND	2.0	1.03	
2-Butanone	ND	4.6	1.03	
Carbon Disulfide	ND	6.4	1.03	
Carbon Tetrachloride	ND	3.2	1.03	
Chlorobenzene	ND	2.4	1.03	
Chloroethane	ND	1.4	1.03	
Chloroform	ND	2.5	1.03	
Chloromethane	ND	1.1	1.03	
Dibromochloromethane	ND	4.4	1.03	
Dichlorodifluoromethane	ND	2.5	1.03	
Diisopropyl Ether (DIPE)	ND	8.6	1.03	
1,1-Dichloroethane	ND	2.1	1.03	
1,1-Dichloroethene	ND	2.0	1.03	
1,2-Dibromoethane	ND	4.0	1.03	
Dichlorotetrafluoroethane	ND	14	1.03	
1,2-Dichlorobenzene	ND	3.1	1.03	
1,2-Dichloroethane	ND	2.1	1.03	
1,2-Dichloropropane	ND	2.4	1.03	
1,3-Dichlorobenzene	ND	3.1	1.03	
1,4-Dichlorobenzene	ND	3.1	1.03	
c-1,3-Dichloropropene	ND	2.3	1.03	
c-1,2-Dichloroethene	ND	2.0	1.03	
t-1,2-Dichloroethene	ND	2.0	1.03	
t-1,3-Dichloropropene	ND	4.7	1.03	
Ethanol	ND	9.7	1.03	
Ethyl-t-Butyl Ether (ETBE)	ND	8.6	1.03	
Ethylbenzene	ND	2.2	1.03	
4-Ethyltoluene	ND	2.5	1.03	
Hexachloro-1,3-Butadiene	ND	16	1.03	
2-Hexanone	ND	6.3	1.03	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	7.4	1.03	
Methylene Chloride	ND	18	1.03	
4-Methyl-2-Pentanone	ND	6.3	1.03	
Naphthalene	ND	27	1.03	
o-Xylene	ND	2.2	1.03	
p/m-Xylene	ND	8.9	1.03	
Styrene	ND	6.6	1.03	
Tert-Amyl-Methyl Ether (TAME)	ND	8.6	1.03	
Tert-Butyl Alcohol (TBA)	ND	6.2	1.03	
Tetrachloroethene	4.2	3.5	1.03	
Toluene	ND	1.9	1.03	
Trichloroethene	ND	2.8	1.03	
Trichlorofluoromethane	ND	5.8	1.03	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.03	
1,1,1-Trichloroethane	ND	2.8	1.03	
1,1,2-Trichloroethane	ND	2.8	1.03	
1,3,5-Trimethylbenzene	ND	2.5	1.03	
1,1,2,2-Tetrachloroethane	ND	7.1	1.03	
1,2,4-Trimethylbenzene	ND	7.6	1.03	
1,2,4-Trichlorobenzene	ND	15	1.03	
Vinyl Acetate	ND	7.3	1.03	
Vinyl Chloride	ND	1.3	1.03	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	98	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4-DUP	**14-01-1593-3-A**	**01/27/14 11:03**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 17:26**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	16	4.8	1.01	
Benzene	ND	1.6	1.01	
Benzyl Chloride	ND	7.8	1.01	
Bromodichloromethane	ND	3.4	1.01	
Bromoform	ND	5.2	1.01	
Bromomethane	ND	2.0	1.01	
2-Butanone	ND	4.5	1.01	
Carbon Disulfide	ND	6.3	1.01	
Carbon Tetrachloride	ND	3.2	1.01	
Chlorobenzene	ND	2.3	1.01	
Chloroethane	ND	1.3	1.01	
Chloroform	ND	2.5	1.01	
Chloromethane	ND	1.0	1.01	
Dibromochloromethane	ND	4.3	1.01	
Dichlorodifluoromethane	ND	2.5	1.01	
Diisopropyl Ether (DIPE)	ND	8.4	1.01	
1,1-Dichloroethane	ND	2.0	1.01	
1,1-Dichloroethene	ND	2.0	1.01	
1,2-Dibromoethane	ND	3.9	1.01	
Dichlorotetrafluoroethane	ND	14	1.01	
1,2-Dichlorobenzene	ND	3.0	1.01	
1,2-Dichloroethane	ND	2.0	1.01	
1,2-Dichloropropane	ND	2.3	1.01	
1,3-Dichlorobenzene	ND	3.0	1.01	
1,4-Dichlorobenzene	ND	3.0	1.01	
c-1,3-Dichloropropene	ND	2.3	1.01	
c-1,2-Dichloroethene	ND	2.0	1.01	
t-1,2-Dichloroethene	ND	2.0	1.01	
t-1,3-Dichloropropene	ND	4.6	1.01	
Ethanol	ND	9.5	1.01	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1.01	
Ethylbenzene	ND	2.2	1.01	
4-Ethyltoluene	ND	2.5	1.01	
Hexachloro-1,3-Butadiene	ND	16	1.01	
2-Hexanone	ND	6.2	1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	7.3	1.01	
Methylene Chloride	ND	18	1.01	
4-Methyl-2-Pentanone	ND	6.2	1.01	
Naphthalene	ND	26	1.01	
o-Xylene	ND	2.2	1.01	
p/m-Xylene	ND	8.8	1.01	
Styrene	ND	6.5	1.01	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1.01	
Tert-Butyl Alcohol (TBA)	ND	6.1	1.01	
Tetrachloroethene	4.3	3.4	1.01	
Toluene	ND	1.9	1.01	
Trichloroethene	ND	2.7	1.01	
Trichlorofluoromethane	ND	5.7	1.01	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.01	
1,1,1-Trichloroethane	ND	2.8	1.01	
1,1,2-Trichloroethane	ND	2.8	1.01	
1,3,5-Trimethylbenzene	ND	2.5	1.01	
1,1,2,2-Tetrachloroethane	ND	6.9	1.01	
1,2,4-Trimethylbenzene	ND	7.4	1.01	
1,2,4-Trichlorobenzene	ND	15	1.01	
Vinyl Acetate	ND	7.1	1.01	
Vinyl Chloride	ND	1.3	1.01	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	98	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-12917**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 15:00**	**140129L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	4.8	1	
Benzene	ND	1.6	1	
Benzyl Chloride	ND	7.8	1	
Bromodichloromethane	ND	3.4	1	
Bromoform	ND	5.2	1	
Bromomethane	ND	1.9	1	
2-Butanone	ND	4.4	1	
Carbon Disulfide	ND	6.2	1	
Carbon Tetrachloride	ND	3.1	1	
Chlorobenzene	ND	2.3	1	
Chloroethane	ND	1.3	1	
Chloroform	ND	2.4	1	
Chloromethane	ND	1.0	1	
Dibromochloromethane	ND	4.3	1	
Dichlorodifluoromethane	ND	2.5	1	
Diisopropyl Ether (DIPE)	ND	8.4	1	
1,1-Dichloroethane	ND	2.0	1	
1,1-Dichloroethene	ND	2.0	1	
1,2-Dibromoethane	ND	3.8	1	
Dichlorotetrafluoroethane	ND	14	1	
1,2-Dichlorobenzene	ND	3.0	1	
1,2-Dichloroethane	ND	2.0	1	
1,2-Dichloropropane	ND	2.3	1	
1,3-Dichlorobenzene	ND	3.0	1	
1,4-Dichlorobenzene	ND	3.0	1	
c-1,3-Dichloropropene	ND	2.3	1	
c-1,2-Dichloroethene	ND	2.0	1	
t-1,2-Dichloroethene	ND	2.0	1	
t-1,3-Dichloropropene	ND	4.5	1	
Ethanol	ND	9.4	1	
Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1	
Ethylbenzene	ND	2.2	1	
4-Ethyltoluene	ND	2.5	1	
Hexachloro-1,3-Butadiene	ND	16	1	
2-Hexanone	ND	6.1	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Port of Oakland Phase II / 0231462.02

Parameter	Result	RL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1	
Methylene Chloride	ND	17	1	
4-Methyl-2-Pentanone	ND	6.1	1	
Naphthalene	ND	26	1	
o-Xylene	ND	2.2	1	
p/m-Xylene	ND	8.7	1	
Styrene	ND	6.4	1	
Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1	
Tert-Butyl Alcohol (TBA)	ND	6.1	1	
Tetrachloroethene	ND	3.4	1	
Toluene	ND	1.9	1	
Trichloroethene	ND	2.7	1	
Trichlorofluoromethane	ND	5.6	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1	
1,1,1-Trichloroethane	ND	2.7	1	
1,1,2-Trichloroethane	ND	2.7	1	
1,3,5-Trimethylbenzene	ND	2.5	1	
1,1,2,2-Tetrachloroethane	ND	6.9	1	
1,2,4-Trimethylbenzene	ND	7.4	1	
1,2,4-Trichlorobenzene	ND	15	1	
Vinyl Acetate	ND	7.0	1	
Vinyl Chloride	ND	1.3	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	99	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-12916**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**01/30/14 18:36**	**140130L01**

Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	ND	3.4	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	104	67-133	
Toluene-d8	100	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15

Project: Port of Oakland Phase II / 0231462.02

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-12917	**LCS**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 12:37**	**140129L01**
095-01-021-12917	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**01/29/14 13:27**	**140129L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	59.39	54.23	91	55.42	93	67-133	56-144	2	0-30	
Benzene	79.87	75.07	94	75.39	94	70-130	60-140	0	0-30	
Benzyl Chloride	129.4	131.0	101	131.4	101	38-158	18-178	0	0-30	
Bromodichloromethane	167.5	155.9	93	156.7	94	70-130	60-140	1	0-30	
Bromoform	258.4	235.0	91	236.6	92	63-147	49-161	1	0-30	
Bromomethane	97.08	92.64	95	93.86	97	70-139	58-150	1	0-30	
2-Butanone	73.73	70.23	95	73.38	100	66-132	55-143	4	0-30	
Carbon Disulfide	77.85	75.52	97	75.75	97	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	146.6	93	147.3	94	70-136	59-147	0	0-30	
Chlorobenzene	115.1	105.6	92	105.9	92	70-130	60-140	0	0-30	
Chloroethane	65.96	60.81	92	61.58	93	65-149	51-163	1	0-30	
Chloroform	122.1	111.8	92	111.6	91	70-130	60-140	0	0-30	
Chloromethane	51.63	48.85	95	50.75	98	69-141	57-153	4	0-30	
Dibromochloromethane	213.0	195.2	92	196.3	92	70-138	59-149	1	0-30	
Dichlorodifluoromethane	123.6	112.3	91	112.9	91	67-139	55-151	1	0-30	
Diisopropyl Ether (DIPE)	104.5	85.69	82	86.71	83	63-130	52-141	1	0-30	
1,1-Dichloroethane	101.2	93.60	93	94.12	93	70-130	60-140	1	0-30	
1,1-Dichloroethene	99.12	94.43	95	94.92	96	70-135	59-146	1	0-30	
1,2-Dibromoethane	192.1	173.4	90	174.2	91	70-133	60-144	0	0-30	
Dichlorotetrafluoroethane	174.8	127.7	73	132.1	76	51-135	37-149	3	0-30	
1,2-Dichlorobenzene	150.3	132.2	88	132.0	88	48-138	33-153	0	0-30	
1,2-Dichloroethane	101.2	91.07	90	91.48	90	70-132	60-142	0	0-30	
1,2-Dichloropropane	115.5	108.0	93	108.6	94	70-130	60-140	1	0-30	
1,3-Dichlorobenzene	150.3	132.6	88	131.9	88	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	133.4	89	132.6	88	52-136	38-150	1	0-30	
c-1,3-Dichloropropene	113.5	108.9	96	109.1	96	70-130	60-140	0	0-30	
c-1,2-Dichloroethene	99.12	92.08	93	92.47	93	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	89.56	90	89.87	91	70-130	60-140	0	0-30	
t-1,3-Dichloropropene	113.5	118.9	105	119.6	105	70-147	57-160	1	0-30	
Ethanol	188.4	162.9	86	166.4	88	37-139	20-156	2	0-30	
Ethyl-t-Butyl Ether (ETBE)	104.5	92.23	88	92.55	89	67-130	56-140	0	0-30	
Ethylbenzene	108.6	99.25	91	99.81	92	70-130	60-140	1	0-30	
4-Ethyltoluene	122.9	112.5	92	113.0	92	68-130	58-140	0	0-30	
Hexachloro-1,3-Butadiene	266.6	218.4	82	217.2	81	44-146	27-163	1	0-30	
2-Hexanone	102.4	95.16	93	95.69	93	70-136	59-147	1	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	83.69	93	84.00	93	68-130	58-140	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15

Project: Port of Oakland Phase II / 0231462.02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Methylene Chloride	86.84	78.59	91	79.28	91	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	95.86	94	96.53	94	70-130	60-140	1	0-30	
Naphthalene	131.1	115.6	88	116.6	89	24-144	4-164	1	0-30	
o-Xylene	108.6	97.31	90	97.81	90	69-130	59-140	1	0-30	
p/m-Xylene	217.1	195.9	90	196.9	91	70-132	60-142	1	0-30	
Styrene	106.5	95.91	90	96.10	90	65-131	54-142	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	91.83	88	91.96	88	69-130	59-140	0	0-30	
Tert-Butyl Alcohol (TBA)	151.6	133.0	88	134.6	89	66-144	53-157	1	0-30	
Tetrachloroethene	169.6	152.6	90	152.9	90	70-130	60-140	0	0-30	
Toluene	94.21	88.77	94	89.23	95	70-130	60-140	1	0-30	
Trichloroethene	134.3	121.9	91	122.6	91	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	123.2	88	125.8	90	63-141	50-154	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	178.4	93	179.5	94	70-136	59-147	1	0-30	
1,1,1-Trichloroethane	136.4	122.2	90	122.6	90	70-130	60-140	0	0-30	
1,1,2-Trichloroethane	136.4	125.5	92	126.1	92	70-130	60-140	0	0-30	
1,3,5-Trimethylbenzene	122.9	109.0	89	109.2	89	62-130	51-141	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	150.9	88	151.3	88	63-130	52-141	0	0-30	
1,2,4-Trimethylbenzene	122.9	111.1	90	111.2	90	60-132	48-144	0	0-30	
1,2,4-Trichlorobenzene	185.5	163.0	88	163.2	88	31-151	11-171	0	0-30	
Vinyl Acetate	88.03	73.68	84	74.34	84	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	59.82	94	62.55	98	70-134	59-145	4	0-30	

Total number of LCS compounds: 57
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15

Project: Port of Oakland Phase II / 0231462.02

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-12916	**LCS**	**Air**	**GC/MS YY**	**N/A**	**01/30/14 15:24**	**140130L01**
095-01-021-12916	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**01/30/14 16:13**	**140130L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	59.39	62.16	105	62.75	106	67-133	56-144	1	0-30	
Benzene	79.87	84.63	106	83.83	105	70-130	60-140	1	0-30	
Benzyl Chloride	129.4	144.0	111	143.5	111	38-158	18-178	0	0-30	
Bromodichloromethane	167.5	183.2	109	179.8	107	70-130	60-140	2	0-30	
Bromoform	258.4	270.7	105	266.1	103	63-147	49-161	2	0-30	
Bromomethane	97.08	104.3	107	106.2	109	70-139	58-150	2	0-30	
2-Butanone	73.73	72.79	99	84.21	114	66-132	55-143	15	0-30	
Carbon Disulfide	77.85	84.86	109	84.51	109	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	175.0	111	170.2	108	70-136	59-147	3	0-30	
Chlorobenzene	115.1	118.4	103	116.4	101	70-130	60-140	2	0-30	
Chloroethane	65.96	68.73	104	69.70	106	65-149	51-163	1	0-30	
Chloroform	122.1	129.3	106	127.5	104	70-130	60-140	1	0-30	
Chloromethane	51.63	57.38	111	57.69	112	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	226.5	106	221.3	104	70-138	59-149	2	0-30	
Dichlorodifluoromethane	123.6	133.7	108	130.4	105	67-139	55-151	3	0-30	
Diisopropyl Ether (DIPE)	104.5	99.82	96	100.1	96	63-130	52-141	0	0-30	
1,1-Dichloroethane	101.2	106.7	105	106.2	105	70-130	60-140	0	0-30	
1,1-Dichloroethene	99.12	110.7	112	108.6	110	70-135	59-146	2	0-30	
1,2-Dibromoethane	192.1	197.2	103	193.4	101	70-133	60-144	2	0-30	
Dichlorotetrafluoroethane	174.8	148.8	85	147.6	84	51-135	37-149	1	0-30	
1,2-Dichlorobenzene	150.3	147.0	98	145.5	97	48-138	33-153	1	0-30	
1,2-Dichloroethane	101.2	108.7	107	106.0	105	70-132	60-142	2	0-30	
1,2-Dichloropropane	115.5	121.3	105	121.3	105	70-130	60-140	0	0-30	
1,3-Dichlorobenzene	150.3	148.6	99	146.8	98	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	148.8	99	147.0	98	52-136	38-150	1	0-30	
c-1,3-Dichloropropene	113.5	123.0	108	122.4	108	70-130	60-140	1	0-30	
c-1,2-Dichloroethene	99.12	102.2	103	101.9	103	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	99.99	101	99.78	101	70-130	60-140	0	0-30	
t-1,3-Dichloropropene	113.5	136.1	120	134.4	118	70-147	57-160	1	0-30	
Ethanol	188.4	186.7	99	190.5	101	37-139	20-156	2	0-30	
Ethyl-t-Butyl Ether (ETBE)	104.5	102.0	98	102.9	98	67-130	56-140	1	0-30	
Ethylbenzene	108.6	113.3	104	110.6	102	70-130	60-140	2	0-30	
4-Ethyltoluene	122.9	127.6	104	125.7	102	68-130	58-140	1	0-30	
Hexachloro-1,3-Butadiene	266.6	241.8	91	238.4	89	44-146	27-163	1	0-30	
2-Hexanone	102.4	108.4	106	106.9	104	70-136	59-147	1	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	93.98	104	93.28	103	68-130	58-140	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

ERM - West
1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597-7989

Date Received: 01/28/14
Work Order: 14-01-1593
Preparation: N/A
Method: EPA TO-15

Project: Port of Oakland Phase II / 0231462.02

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Methylene Chloride	86.84	87.61	101	87.28	101	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	109.4	107	109.1	107	70-130	60-140	0	0-30	
Naphthalene	131.1	129.8	99	125.9	96	24-144	4-164	3	0-30	
o-Xylene	108.6	111.8	103	109.1	101	69-130	59-140	2	0-30	
p/m-Xylene	217.1	227.3	105	221.6	102	70-132	60-142	3	0-30	
Styrene	106.5	106.7	100	105.6	99	65-131	54-142	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	100.7	96	101.0	97	69-130	59-140	0	0-30	
Tert-Butyl Alcohol (TBA)	151.6	150.1	99	150.6	99	66-144	53-157	0	0-30	
Tetrachloroethene	169.6	171.3	101	167.2	99	70-130	60-140	2	0-30	
Toluene	94.21	100.1	106	98.04	104	70-130	60-140	2	0-30	
Trichloroethene	134.3	139.7	104	138.1	103	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	142.1	101	144.7	103	63-141	50-154	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	205.4	107	203.0	106	70-136	59-147	1	0-30	
1,1,1-Trichloroethane	136.4	142.1	104	139.7	102	70-130	60-140	2	0-30	
1,1,2-Trichloroethane	136.4	141.3	104	140.7	103	70-130	60-140	0	0-30	
1,3,5-Trimethylbenzene	122.9	124.9	102	122.0	99	62-130	51-141	2	0-30	
1,1,2,2-Tetrachloroethane	171.6	170.5	99	169.0	98	63-130	52-141	1	0-30	
1,2,4-Trimethylbenzene	122.9	127.5	104	125.1	102	60-132	48-144	2	0-30	
1,2,4-Trichlorobenzene	185.5	173.1	93	173.1	93	31-151	11-171	0	0-30	
Vinyl Acetate	88.03	85.16	97	84.80	96	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	67.23	105	69.42	109	70-134	59-145	3	0-30	

Total number of LCS compounds: 57
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Summa Canister Vacuum Summary

Work Order: 14-01-1593

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SVP-7	-29.70 in Hg	-5.00 in Hg	LC291	Summa Canister 1L
SVP-4	-29.70 in Hg	-5.00 in Hg	LC241	Summa Canister 1L
SVP-4-DUP	-29.70 in Hg	-5.00 in Hg	LC093	Summa Canister 1L

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Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-01-1593 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	846	GC/MS YY	2

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-01-1593 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 1/27/14
PAGE: 1 OF 1

LABORATORY CLIENT: ERM
ADDRESS: 1277 Treat Blvd., Suite 500
CITY: Walnut Creek STATE: CA ZIP: 94597
TEL: 925 482. 3204 E-MAIL: bailey.blosser@erm.com

CLIENT PROJECT NAME / NUMBER: Port of Oakland Phase II 0231462.02
PROJECT ADDRESS: 205 Brush Street.
CITY: Oakland STATE: CA ZIP:
PROJECT CONTACT: Bailey Blosser
SAMPLER(S): (NAME / SIGNATURE) Bailey B

P.O.NO.: 0231462.02
LAB CONTACT OR QUOTE NO.
LAB USE ONLY 14-01-1593

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ EDD

SPECIAL INSTRUCTIONS:
run for TO-15 4 Naphthalene
standard TAT

REQUESTED ANALYSES: TO-15 4 Naphthalene

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment: Canister ID#	Canister Size 6L or 1L	Flow Controller ID #	Start Sampling Information: Date	Time (24 hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24 hr clock)	Canister Pressure ("Hg)	TO-15 4 Naphthalene
1	SVP-7	SVP-7	SV	4291	1L	SGM310	1/27/14	~~1015~~ 1015	-30	1/27/14	1023	-5	X
2	SVP-4	SVP-4	SV	4241	1L	~~SGM375~~	1/27/14	1052	-30	1/27/14	1103	-5	X
3	SVP-4-DUP	SVP-4-DUP	SV	4093	1L	~~4093~~ SGM375	1/27/14	1052	-30	1/27/14	1103	-5	X

BB

Relinquished by: (Signature) Liza Perkins
Relinquished by: (Signature) Tom O'Malley 1050 1/27/14 1730
Relinquished by: (Signature)

Received by: (Signature) Tom O'Malley CTC
Received by: (Signature) Drew K. aa
Received by: (Signature)

Date: 1/27/14 Time: 1515
Date: 1/28/14 Time: 1020
Date: Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively

04/01/13 Revision

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Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ERM

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523771862

NPS

1593

ORC

A

GARDEN GROVE

D92843A

20572238

Print Date : 01/27/14 16:06 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-01-1593

SAMPLE RECEIPT FORM

Box 1 of 1

CLIENT: ERM DATE: 01/28/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature _____ °C - 0.3 °C (CF) = _____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter Checked by: 836

CUSTODY SEALS INTACT:

☐ Box ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ Labeled/Checked by: 300

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 836

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered Scanned by: 836

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Appendix C
QA/QC Memorandum

Memorandum

Environmental Resources Management

One Lakeshore Centre
3281 E. Guasti Road
Suite 300
Ontario, CA 91761
(909) 947-3500
(909) 947-3499 (fax)

To: Bailey Blosser

From: Shanna Bauer

Date: 2/11/2014

Subject: Data Review of Port of Oakland Phase II Samples Collected January 23, 2014 and January 27, 2014

Project Number: 0231462.03

Data Package: Calscience Environmental Laboratories, Inc. Data Packages 14-01-1601, 14-01-1593, 14-01-1415, and 14-01-1599

The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* October 1999 and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* July 2004.

HOLDING TIME AND PRESERVATION EVALUATION

The samples were prepared and analyzed within the method prescribed time period from the date of collection. The sample shipments were received at the laboratory within the method prescribed temperature preservation requirements. None of the data were qualified based on holding time or temperature preservation exceedances.

BLANK EVALUATION

The method and trip blank sample results were non-detected for each of the target analytes. None of the data required qualification based on blank results.

BLANK SPIKE EVALUATION

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance. The LCS recoveries indicate acceptable laboratory accuracy and precision.

MATRIX SPIKE EVALUATION

The matrix spike (MS)/matrix spike duplicate (MSD) recoveries were within the laboratory's limits of acceptance, indicating acceptable laboratory accuracy and precision and minimal matrix interference, except as indicated in Table 1. Qualifications were required for chromium and vanadium in several samples due to a low bias. All results were qualified as estimated with a low bias (J-).

SURROGATE SPIKE EVALUATION

The surrogate recoveries were within acceptable limits, except as listed in Table 2. Only one surrogate was outside of limits. Associated detections were qualfied as estimated with a high bias (J+).

DUPLICATE EVALUATION

Two samples were submitted in duplicate. ERM calculated the relative percent difference (RPD) between detected results. The USEPA has not established control criteria for field duplicate samples; therefore, sample data are not qualified on the basis of field duplicate imprecision. The RPDs are presented in Table 3. Please note, several analytes had very high RPD, likely due to dilution of the sample but not the duplicate.

TPH EVALUATION

The laboratory noted that the sample chromatograms for the total petroleum hydrocarbons analysis did not resemble the diesel, motor oil, or gasoline standard for several samples. ERM qualified the affected samples as tentatively identified and estimated (NJ) as shown in Table 4.

OVERALL ASSESSMENT

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

Table 1
Spike Recoveries Outside of Acceptable Limits
Port of Oakland Phase II
Oakland, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
MS/MSD										
14-01-1599	SB-7-0.5-1.0	see below	Chromium	45/48	75-125	2	20	42	mg/kg	J-
14-01-1599	--	SB-3-0.5-1.0	Chromium	--	--	--	--	5.68	mg/kg	J-
14-01-1599	--	SB-3-6.0-6.5	Chromium	--	--	--	--	28.3	mg/kg	J-
14-01-1599	--	SB-10-0.5-1.0	Chromium	--	--	--	--	7.95	mg/kg	J-
14-01-1599	--	SB-4-0.5-1.0	Chromium	--	--	--	--	36.2	mg/kg	J-
14-01-1599	--	SB-4-7-7.5	Chromium	--	--	--	--	34.1	mg/kg	J-
14-01-1599	--	SB-7-7.0-7.5	Chromium	--	--	--	--	42.7	mg/kg	J-
14-01-1599	--	SB-10-6.0-6.5	Chromium	--	--	--	--	28.5	mg/kg	J-
14-01-1599	SB-7-0.5-1.0	--	Copper	4X	75-125	4X	20	--	--	--
14-01-1599	SB-7-0.5-1.0	--	Lead	4X	75-125	4X	20	--	--	--
14-01-1599	SB-7-0.5-1.0	see below	Vanadium	64/65	75-125	0	20	27	mg/kg	J-
14-01-1599	--	SB-3-0.5-1.0	Vanadium	--	--	--	--	19.6	mg/kg	J-
14-01-1599	--	SB-3-6.0-6.5	Vanadium	--	--	--	--	17.5	mg/kg	J-
14-01-1599	--	SB-10-0.5-1.0	Vanadium	--	--	--	--	26.6	mg/kg	J-
14-01-1599	--	SB-4-0.5-1.0	Vanadium	--	--	--	--	23.8	mg/kg	J-
14-01-1599	--	SB-4-7-7.5	Vanadium	--	--	--	--	23.6	mg/kg	J-
14-01-1599	--	SB-7-7.0-7.5	Vanadium	--	--	--	--	28.8	mg/kg	J-
14-01-1599	--	SB-10-6.0-6.5	Vanadium	--	--	--	--	18.4	mg/kg	J-
14-01-1599	SB-7-0.5-1.0	--	Zinc	4X	75-125	4X	20	--	--	--
14-01-1599	SB-7-0.5-1.0	--	Mercury	4X	71-137	4X	14	--	--	--
14-01-1599	SB-7-0.5-1.0	--	Aldrin	149/127	50-135	16	25	ND	--	--
14-01-1599	SB-7-0.5-1.0	--	Aroclor-1016	202/253	50-135	22	20	ND	--	--
14-01-1415	SB-6-0.5-1.0	--	1,2-Dichloroethane	80/78	80-120	2	20	ND	--	--

Key:
J = Estimated detected result
4X = The sample concentration was greater than 4 times the spike concentration
RPD = Relative percent difference

Table 1
Spike Recoveries Outside of Acceptable Limits
Port of Oakland Phase II
Oakland, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier

- = Low bias
-- = No qualification required

Table 2
Surrogate Recovery Results out of Acceptable Limits
Port of Oakland Phase II
Oakland, California

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	ERM Qualifier
14-01-1599	SB-4-0.5-1.0	8081A	Decachlorobiphenyl	175	24-168	J+ (Detects only)

Key:
J = Estimated detected result
+ = High bias
UJ = Nondetected, estimated report limit
J/UJ = Detected results are estimated; nondetected results are estimated at the report limit
R = Rejected result

Table 3
Field Duplicate Results and Calculated Relative Percent Differences
Port of Oakland Phase II
Oakland, California

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
14-01-1593	SVP-4/SVP-4 DUP	Acetone	11	16	4.9	ug/m3	37.0
14-01-1593	SVP-4/SVP-4 DUP	Tetrachloroethene	4.2	4.3	3.5	ug/m3	2.4
14-01-1599	SB-2/SB-2 DUP	Arsenic	0.0183	0.0189	0.01	mg/L	3.2
14-01-1599	SB-2/SB-2 DUP	Barium	0.299	0.225	0.01	mg/L	28.2
14-01-1599	SB-2/SB-2 DUP	Nickel	0.0167	0.0157	0.01	mg/L	6.2
14-01-1599	SB-2/SB-2 DUP	Zinc	0.0119	0.0129	0.01	mg/L	8.1
14-01-1599	SB-2/SB-2 DUP	TPH as Motor Oil	480	360	250	ug/L	28.6
14-01-1599	SB-2/SB-2 DUP	TPH as Diesel	19000	14000	500	ug/L	30.3
14-01-1599	SB-2/SB-2 DUP	TPH as Gasoline	63000	14000	5000	ug/L	127.3
14-01-1599	SB-2/SB-2 DUP	Benzene	1800	1300	50	ug/L	32.3
14-01-1599	SB-2/SB-2 DUP	n-Butylbenzene	760	17	100	ug/L	191.2
14-01-1599	SB-2/SB-2 DUP	sec-Butylbenzene	150	<100	100	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Ethylbenzene	6800	1300	100	ug/L	135.8
14-01-1599	SB-2/SB-2 DUP	Isopropylbenzene	390	63	100	ug/L	144.4
14-01-1599	SB-2/SB-2 DUP	Naphthalene	1400	<1000	1000	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	n-Propylbenzene	1500	140	100	ug/L	165.9
14-01-1599	SB-2/SB-2 DUP	Toluene	15000	3100	100	ug/L	131.5
14-01-1599	SB-2/SB-2 DUP	1,2,4-Trimethylbenzene	9900	560	100	ug/L	178.6
14-01-1599	SB-2/SB-2 DUP	1,3,5-Trimethylbenzene	2900	160	100	ug/L	179.1
14-01-1599	SB-2/SB-2 DUP	p/m-Xylene	26000	3100	100	ug/L	157.4
14-01-1599	SB-2/SB-2 DUP	o-Xylene	10000	1500	100	ug/L	147.8
14-01-1599	SB-2/SB-2 DUP	Methyl-t-Butyl-Ether (MTBE)	<100	18	10	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Anthracene	120	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Benzo(a)Anthracene	170	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Benzo(a)Pyrene	100	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Benzo(k)Fluoranthene	98	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Chrysene	140	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Fluoranthene	460	<97	97	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	2,4-Dimethylphenol	<9.6	18	9.6	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	2-Methylnaphthalene	390	19	97	ug/L	181.4
14-01-1599	SB-2/SB-2 DUP	1-Methylnaphthalene	210	11	97	ug/L	180.1
14-01-1599	SB-2/SB-2 DUP	2-Methylphenol	<9.6	11	9.6	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	3/4-Methylphenol	<9.6	17	9.6	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Naphthalene	780	59	97	ug/L	171.9
14-01-1599	SB-2/SB-2 DUP	Phenanthrene	520	12	97	ug/L	191.0
14-01-1599	SB-2/SB-2 DUP	Phenol	<9.6	18	9.6	ug/L	NC
14-01-1599	SB-2/SB-2 DUP	Pyrene	430	<97	97	ug/L	NC

Key:
NC = Not calculated, one result was detected and the other result was nondetected
µg/L = Micrograms per liter
mg/L = Milligrams per liter

Table 3
Field Duplicate Results and Calculated Relative Percent Differences
Port of Oakland Phase II
Oakland, California

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			

ug/m3 = Micrograms per cubic meter
RPD = Relative percent difference

Table 4
Suspect TPH Results
Port of Oakland Phase II
Oakland, California

Lab Package	Sample ID	Compound	Reported Concentration	ERM Qualifier	Notes
14-01-1599	SB-2	TPH as Motor Oil	480 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	SB-2	TPH as Diesel	19000 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	SB-2 DUP	TPH as Motor Oil	360 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	SB-2 DUP	TPH as Diesel	14000 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	Waste Soil	TPH as Motor Oil	89 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1599	Waste Soil	TPH as Diesel	58 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1599	SB-5	TPH as Diesel	53 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	SB-9	TPH as Diesel	60000 ug/L	NJ	Tentatively Identified and Estimated
14-01-1599	SB-4-0.5-1.0	TPH as Motor Oil	380 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1599	SB-7-0.5-1.0	TPH as Motor Oil	58 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1599	SB-4-0.5-1.0	TPH as Diesel	70 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1599	SB-7-0.5-1.0	TPH as Diesel	22 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-6-0.5-1.0	TPH as Motor Oil	34 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-5-0.5-1.0	TPH as Motor Oil	680 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-2-1.5-2.0	TPH as Motor Oil	370 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-2-8.5-9.0	TPH as Motor Oil	65 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-9-6.0-6.5	TPH as Motor Oil	67 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-8-0.5-1.0	TPH as Motor Oil	10000 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-6-0.5-1.0	TPH as Diesel	15 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-5-0.5-1.0	TPH as Diesel	390 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-2-1.5-2.0	TPH as Diesel	170 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-2-8.5-9.0	TPH as Diesel	80 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-9-2.5-3.0	TPH as Diesel	13 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-9-6.0-6.5	TPH as Diesel	560 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-8-0.5-1.0	TPH as Diesel	9900 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-2-1.5-2.0	TPH as Gasoline	3.7 mg/kg	NJ	Tentatively Identified and Estimated

Table 4
Suspect TPH Results
Port of Oakland Phase II
Oakland, California

Lab Package	Sample ID	Compound	Reported Concentration	ERM Qualifier	Notes
14-01-1415	SB-9-2.5-3.0	TPH as Gasoline	2.5 mg/kg	NJ	Tentatively Identified and Estimated
14-01-1415	SB-8-0.5-1.0	TPH as Gasoline	1.6 mg/kg	NJ	Tentatively Identified and Estimated

Key:
µg/L = Micrograms per liter
mg/L = Milligrams per liter
mg/kg = Milligrams per kilogram
NJ = Estimated value - chromatogram did not resemble the standard hydrocarbon pattern
D = Duplicate sample
TPH = Total petroleum hydrocarbons