PES Environmental, Inc.
Engineering & Environmental Services

Report Prepared for:

AvalonBay Communities, Inc.
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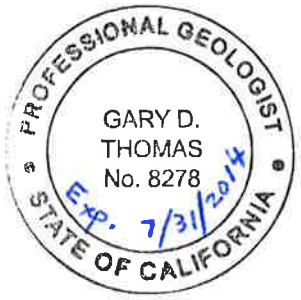
SUPPLEMENTAL SUBSURFACE INVESTIGATION REPORT
6701, 6705, and 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA

JANUARY 13, 2014



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1.0 INTRODUCTION

This report presents the results of a supplemental subsurface investigation of the property located at 6701, 6705, and 6707 Shellmound Street in Emeryville, California (site or subject property; Plates 1 and 2). The investigation was performed by PES Environmental, Inc. (PES) in accordance with our proposal to AvalonBay Communities, Inc. (AvalonBay) dated October 15, 2013. The property, which is improved with asphalt and concrete covered surfaces and buildings, encompasses approximately 2.5 acres and is located in a portion of Emeryville that was reclaimed from San Francisco Bay through filling activities conducted to create buildable land, similar to much of the bay shore area of Emeryville. It is PES' understanding that AvalonBay is considering acquisition of the site and, if acquired, intends to construct a multi-storied multi-family residential development.

The supplemental investigation was conducted to obtain additional physical and chemical data to further our understanding of subsurface conditions and assist with redevelopment planning. The objectives of the supplemental subsurface investigation were to: (1) investigate and better understand subsurface physical conditions of the site fill and how those physical conditions may affect soil and groundwater quality conditions; (2) further evaluate the nature and extent of constituents of concern detected during previous investigations conducted at the site, specifically with respect to volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals (in particular lead); and (3) assess groundwater conditions specifically with respect to concentrations of dissolved metals.

In April 2013 soil, soil gas, and groundwater sampling was conducted by ENVIRON conducted at the site in April 2013. Sample locations SG-1 through SG-5 are shown on Plate 2. For reference, pertinent data from the investigation, along with historical results tables, are provided in Appendix A.

This report is organized as follows:

- Section 2 discusses the investigation field activities and methods for the soil and groundwater sampling activities;
- Section 3 discusses the physical subsurface conditions encountered during the investigation, and the soil and groundwater sampling laboratory analytical results; and
- Section 4 summarizes the results of the supplemental subsurface investigation.

2.0 INVESTIGATION FIELD ACTIVITIES AND METHODS

2.1 Pre-Field Activities

A boring permit was obtained from the Alameda County Public Works Agency, Water Resources Section (ACPWA) prior to drilling. A copy of the drilling permit is included in Appendix B. PES contacted Underground Service Alert more than 48 hours before beginning drilling activities and C. Cruz Sub-Surface Locators, Inc. (C. Cruz) of Milpitas, California, an underground utility locating subcontractor, marked underground utilities and/or screened each proposed work area for subsurface obstructions. In addition, a site-specific Health and Safety Plan (HASP) was prepared in accordance with applicable State and Federal Occupational Safety and Health Administration (OSHA) regulations for use during field work to address potential chemical and physical hazards associated with the supplemental subsurface investigation.

Soil and grab groundwater boring locations are shown on Plate 2. Drilling and sampling activities were conducted with oversight by a licensed California Professional Geologist.

2.2 Field Activities and Methods

2.2.1 Overview Summary of Field Activities

Between November 7 and 11, 2013, a track-mounted, hydraulically driven direct-push soil coring system provided by Cascade Drilling, LP (Cascade) of Richmond, California was utilized to complete the following work:

- A total of 18 soil borings (SB1 through SB18) were drilled to depths of 20 to 25 feet below ground surface (bgs). As discussed below, continuous soil cores were collected from all of the borings. As shown on Plate 2, the locations included:
  - Thirteen borings located in the outdoor portions of the site; and
  - Five borings advanced inside the warehouse building.
- Groundwater samples were collected from temporary well casings placed in six borings (GGW-1 through GGW-6) across the site. The screened interval for the temporary well casing at each location was from 10 to 20 feet bgs.

The methods utilized during the investigation are discussed below.

2.2.2 Boring Advancement and Sampling Methods

Under the supervision of PES, Cascade utilized a track-mounted Geoprobe® 8040DT direct-push rig to advance each boring. The borings were advanced to a total depth of 20 feet bgs with the exception of boring SB14, which was advanced to 25 feet bgs.

Cascade utilized a 3.5-inch outside diameter, dual-wall steel casing system equipped with 5-foot long polyvinyl chloride (PVC) liners to collect 3-inch diameter continuous soil cores from borings SB1 through SB18. The inner PVC liners were removed from the drill casing and the lithology of the soils was logged by PES personnel using the Unified Soil Classification System (USCS). The lithologic logs are presented in Appendix C. The lithologic logs were used to develop geologic cross-sections (refer to Section 3.1).

The grab groundwater borings were advanced by fitting the drill rods with a disposable steel drive point and advancing the rods to the target depth (20 or 25 feet bgs). Upon pushing to the target depth, temporary PVC well casing, as discussed below, was lowered through the drill rods, and the drill rods were retracted to remove the disposable steel drive point and expose the screen interval.

At each boring location, soil samples from targeted depths were collected and placed in plastic bags, and headspace screenings for VOCs were conducted using a photoionization detector (PID). Field PID screening results are included on the boring logs in Appendix C. As indicated on the boring logs and Tables 1 through 4, with the exception of boring SB9, three soil samples were collected from each of the soil borings. Two samples were collected from SB9 because poor soil recovery was obtained in the upper 12 feet of this boring. In general, the soil samples were collected in the following depth intervals:

- Shallow Depth Interval: Sample depths ranged from 1 to 4 feet bgs;
- Intermediate Depth Interval: Sample depths ranged from 4.5 to 9 feet bgs; and
- Deeper Depth Interval: Sample depths ranged from 9.5 to 12.5 feet bgs. These samples were collected in the vadose zone just above first encountered wet soil.

To facilitate collection of groundwater samples, a 0.75-inch diameter temporary PVC well casing was lowered into each borehole. The screened intervals for each temporary well was fitted with a 10-foot section of pre-screened filter pack, consisting of sand surrounding the slotted PVC, encased in a fine wire-mesh housing. Prior to collecting the groundwater samples, each boring was purged with a peristaltic pump. New tubing was utilized at each groundwater sampling location. Blaine Tech Services (Blaine Tech) of San Jose, California, assisted PES with purging and sampling the groundwater borings. During purging, the following field indicator parameters were measured using a multi-parameter field instrument:

- Temperature (degrees Celsius [°C]);
- Conductivity (μS/cm);
- Dissolved oxygen (DO; milligrams per liter [mg/L]);
- pH (standard units);

- Oxidation-reduction potential (ORP; millivolts [mV]); and
- Turbidity (Nephelometric turbidity units [NTUs]).

Purging was continued until the field indicator parameters were stable, to the extent practicable. Groundwater sampling forms containing purge data and field indicator parameter measurements are presented in Appendix D. Groundwater samples were collected from the temporary PVC wells with a peristaltic pump equipped with new disposable tubing at each location. The groundwater samples, which were analyzed for dissolved metals, were field filtered with a 0.45-micron filter into nitric acid-preserved laboratory-provided sample containers. The field filtration process was conducted in accordance with U.S. Environmental Protection Agency (U.S. EPA)-approved methodology (U.S. EPA, 1989[1]).

The soil and groundwater samples were labeled to indicate project location, job number, boring number, sample number, and time and date collected and then immediately placed in a thermally-insulated cooler containing ice. The samples were transported under chain-of-custody protocol to Curtis & Tompkins, Ltd. Analytical Laboratories (C&T) of Berkeley, California, a state-certified laboratory. The soil samples were placed on "hold" at the laboratory pending possible future evaluation.

Downhole drilling and sampling equipment was either steam cleaned or cleaned using a non-phosphate detergent, and double-rinsed with potable water, prior to initiating work and between each sampling location. Following the completion of each day's sampling activities, Cascade removed the temporary well casing, where necessary, and backfilled the borings by tremie-grouting with neat Portland cement mixed with the appropriate amount of clean water in accordance with ACPWA requirements. The borings were grouted from the bottom using at tremie pipe. An ACPWA inspector was periodically on-site to observe the grouting activities.

2.2.3 Soil and Groundwater Analytical Methods

The groundwater samples were analyzed for dissolved Title 22 list of 17 metals using United States Environmental Protection Agency (U.S. EPA) Test Method 6010B and U.S. EPA Test Method 7470A for mercury.

After further evaluation, select soil samples were analyzed by C&T for one or more of the following analyses: (1) VOCs by U.S. EPA Test Method 8260B; (2) SVOCs by U.S. EPA Test Method 8270C; (3) PCBs by U.S. EPA Test Method 8282; (4) lead using U.S. EPA Test Method 6010B; or (5) Title 22 list of 17 metals using U.S. EPA Test Method 6010B and U.S. EPA Test Method 7471A for mercury.

[1] U.S. EPA, 1989. *Superfund Ground Water Issue, Ground Water Sampling for Metals Analyses*. Prepared by Robert W. Puls and Michael J. Barcelona. March.

Additionally, selected soil samples were analyzed for soluble metals using leaching tests to evaluate for hazardous characteristics based on the levels of soluble metals: (1) Soluble Threshold Limit Concentration (STLC) metals (i.e., lead) using the California Waste Extraction Test (WET) with extracts digested using U.S. EPA Test Method 3010A and analyzed by U.S. EPA Test Method 6010B; and (2) Toxicity Characteristic Leaching Procedure (TCLP) metals (i.e., lead) subjected to the TCLP with extracts digested using U.S. EPA Test Method 3010A and analyzed by U.S. EPA Test Method 6010B for lead[2].

3.0 INVESTIGATION RESULTS

Analytical results for the soil and groundwater samples are summarized in Tables 1 through 5. Laboratory analytical reports and chain-of-custody forms are presented in Appendix E. Analytical results for lead in soil for the current and prior investigations are presented on cross sections A-A', B-B', C-C', and D-D' (Plates 3 through 6, respectively; refer to Plate 2 for the alignment of the cross sections).

3.1 Physical Subsurface Conditions

Physical subsurface conditions at the site are presented on four cross sections; alignments are shown on Plate 2. Lithologic logs of the soil borings are presented in Appendix C. The east-west trending cross sections A-A' and B-B' are shown on Plates 3 and 4, respectively, and north-south trending cross sections C-C' and D-D' are shown on Plates 5 and 6, respectively. These cross sections were generated using the lithologic data from the soil borings advanced during the PES' supplemental subsurface investigation and from lithologic data obtained during previous site investigations. As shown on the cross sections, soil beneath the site generally consists of:

- Fill material was encountered throughout the site. This material consisted of coarse-grained sands and gravels that contain varying amounts of fines, and fine--grained silts and clays with varying amounts of sand and gravel. In general, the fill material in the northern portion of the site mainly consists of coarse-grained material. The fill material ranges from 14 to 19 feet thick, and is generally thinner in the central portion of the site (i.e., along the trend of cross section B-B') and toward the west, and thickest toward the northern and southern portions of the site;

[2] Soils in California may be classified as California or non-RCRA Hazardous Waste if either their total concentrations exceed the TTLC or if leaching concentrations exceed the STLC values, as determined via the WET. A soil may also be classified as a Resource Conservation and Recovery Act (RCRA) hazardous waste if leachate concentrations, as determined from the TCLP, exceed the TCLP limits.

Fill material debris[3] has been encountered throughout the site, but is generally most abundant on the western half of the site and at depths below approximately 8 to 10 feet bgs. The approximate percent and content of the debris encountered beneath the site is shown on the cross sections and on the lithologic logs; and

- Fine-grained soils were encountered directly below the fill material. These soils generally consisted of very dark greenish gray to greenish gray clays and occasional silts that are soft to medium stiff. These soils represent Bay Mud deposits.

Wet soil was encountered at depths ranging between 11 to 13 feet bgs during this investigation. A possible hydrocarbon odor and sheen were noted in first encountered wet soil in borings SB1 and SB2, which are located in the southwest portion of the site (Plate 2). Specific lithologies encountered at each boring are described in the attached boring logs (Appendix C).

3.2 Soil Analytical Results

3.2.1 Organic Constituents

3.2.1.1 Volatile Organic Compounds

As indicated on Table 1, acetone (at 35 micrograms per kilogram [μg/kg]) was the only VOC constituent detected in the two soil samples collected from boring SB2.

3.2.1.2 Semivolatile Organic Compounds

Eighteen (18) different SVOCs were detected in the soil samples collected during the subsurface investigation (Table 2). As indicated on Table 2, six of the detected SVOCs are at concentrations equal to or above residential screening levels[4]. The detected concentration ranges for these six SVOC compounds are summarized below:

- Benzo (a) anthracene: Detected in 4 of 10 samples at concentrations ranging from 340 μg/kg (8 feet bgs sample in boring SB7) to 2,400 μg/kg (4 feet bgs sample in boring SB6);

- Benzo (a) pyrene: Detected in 3 of 10 samples at concentrations ranging from 900 μg/kg (5.5 feet bgs sample in boring SB11) to 3,000 μg/kg (4 feet bgs sample in boring SB6);

[3] Debris material encountered during site investigations includes brick, metal, concrete, asphalt, glass, wood, fabric, and rubber.

[4] U.S. Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.

- Benzo (b) fluoranthene: Detected in 4 of 10 samples at concentrations ranging from 970 µg/kg (7.5 feet bgs sample in boring SB2) to 3,700 µg/kg (4 feet bgs sample in boring SB6);

- Benzo (k) fluoranthene: Detected in 2 of 10 samples at concentrations of 360 µg/kg (7.5 feet bgs sample in boring SB2) and 1,500 µg/kg (4 feet bgs sample in boring SB6);

- Indeno (1,2,3-cd) pyrene: Detected in 2 of 10 samples at concentrations of 340 µg/kg (7.5 feet bgs sample in boring SB2) and 1,300 µg/kg (4 feet bgs sample in boring SB6); and

- Naphthalene: Detected in 5 of 10 samples at concentrations ranging from 260 µg/kg (1.5 feet bgs sample in boring SB13) to 28,000 µg/kg (8 feet bgs sample in boring SB7).

3.2.1.3 Polychlorinated Biphenyls

As shown on Table 3, one or more PCB congener was detected in all of the 17 samples analyzed for PCBs. PCBs detected in the samples included Aroclor-1260, Aroclor-1262, and Aroclor-1268. The total PCB concentrations in the samples ranged from 0.013 milligrams per kilogram (mg/kg, 3.5 feet bgs sample in boring SB14) to 10 mg/kg (3 feet bgs sample in boring SB5). Eight of the 10 detections of Aroclor-1260 are at concentrations are above residential screening levels.

3.2.2 Metals

Fifteen (15) different metals were detected in the soil samples collected and analyzed during the subsurface investigation (Table 4). As indicated on Table 4, nine of the detected metals are at concentrations equal to or above residential screening levels and two of these nine metals are at concentrations above their respective Total Threshold Limit Concentration (TTLC) values. The detected concentration ranges for these nine metals are summarized below:

- Antimony: Detected in 7 of 17 samples analyzed at concentrations ranging from 0.62 mg/kg (5.5 feet bgs sample in boring SB11) to 7.5 mg/kg (10 feet bgs sample in boring SB6). No samples displayed concentrations of cadmium in excess of the respective TTLC;

- Arsenic: Detected in all 17 samples analyzed at concentrations ranging from 2.3 mg/kg (8 feet bgs sample in boring SB8) to 49 mg/kg (10 feet bgs sample in boring SB18). No samples displayed concentrations of arsenic in excess of the respective TTLC;

- Cadmium: Detected in 16 of 17 samples analyzed at concentrations ranging from 0.44 mg/kg (1.5 feet bgs sample in boring SB3) to 13 mg/kg (7.5 feet bgs sample in boring SB15). No samples displayed concentrations of cadmium in excess of the respective TTLC;

- Cobalt: Detected in all 17 samples analyzed at concentrations ranging from 4.4 mg/kg (8 feet bgs sample in boring SB8) to 26 mg/kg (5 feet bgs sample in boring SB13). No samples displayed concentrations of cobalt in excess of the respective TTLC;

- Copper: Detected in all 17 samples analyzed at concentrations ranging from 4.7 mg/kg (8 feet bgs sample in boring SB8) to 450 mg/kg (7.5 feet bgs sample in boring SB15 and 10 feet bgs sample in boring SB18). No samples displayed concentrations of copper in excess of the respective TTLC;

- Lead: Detected in all 53 samples analyzed at concentrations ranging from 1.7 mg/kg (11.5 feet bgs sample in boring SB11) to 10,000 mg/kg (10 feet bgs sample in boring SB4). The concentrations of lead in five of the samples exceed the TTLC for lead (1,000 mg/kg);

- Nickel: Detected in all 17 samples analyzed at concentrations ranging from 23 mg/kg (1.5 feet bgs sample in boring SB3) to 190 mg/kg (10 feet bgs sample in boring SB6, 3.5 feet bgs sample in boring SB14, and 10 feet bgs sample in boring SB18). No samples displayed concentrations of nickel in excess of the respective TTLC;

- Vanadium: Detected in all 17 samples analyzed at concentrations ranging from 26 mg/kg (1.5 feet bgs sample in boring SB3) to 11,000 mg/kg (10 feet bgs sample in boring SB18). The concentration of 11,000 mg/kg exceeds the TTLC for vanadium (2,400 mg/kg); and

- Zinc: Detected in all 17 samples analyzed at concentrations ranging from 19 mg/kg (8 feet bgs sample in boring SB8) to 2,500 mg/kg (10 feet bgs sample in boring SB18). No samples displayed concentrations of zinc in excess of the respective TTLC.

3.2.3 Extractable Metals Results

The WET was performed on selected samples with total lead concentrations that were at least 10 times the STLC lead limit of 5.0 mg/L, but less than 1,000 mg/kg. Of the seven samples analyzed, the following five results are at concentrations above the STLC lead limit:

- In boring SB4 (7.5 mg/L in the 5 feet bgs sample);

- In boring SB5 (7.7 mg/L in the 3 feet bgs sample);

- In boring SB12 (12 mg/L in the 2 feet bgs sample);

- In boring SB16 (14 mg/L in the 7.5 feet bgs sample); and

- In boring SB7 (39 mg/L in the 8 feet bgs sample).

The TCLP was performed on eight soil samples with an elevated total lead concentration (see Table 4). As indicated on Table 4, the TCLP lead result for the 5.5 feet bgs sample collected from boring SB1 (6.1 mg/L) was above the TCLP lead limit of 5.0 mg/L. None of the other samples analyzed for TCLP contained a concentration of soluble lead above 5.0 mg/L.

3.3 Groundwater Analytical Results

Eleven (11) different dissolved metals were detected in the groundwater samples collected during the subsurface investigation (Table 5). As indicated on Table 5 and summarized below, two of the metals are at concentrations above their respective State of California Maximum Contaminant Levels (MCLs[5]):

- Arsenic: Detected in 2 of 6 samples at concentrations of 6.4 micrograms per liter (μg/L, boring GGW-2) and 32 μg/L (boring GGW-3). The concentration of 32 μg/L is above the drinking water ESL for arsenic (10 μg/L); and

- Lead: Detected in all 6 samples at concentrations ranging from 1.3J[6] μg/L (boring GGW-4) to 190 μg/L (boring GGW-2). The concentrations of lead in the groundwater samples collected from borings GGW-1, GGW-2, and GGW-3 are above the drinking water ESL for lead (15 μg/L).

As discussed above, the maximum concentration of dissolved lead detected in groundwater was 190 μg/L in boring GGW-2. This boring is located on the western portion of the site (Plate 2). However, as indicated in Table 4 in Appendix A, significantly higher lead concentrations and other metals were detected in groundwater during the April 2013 investigation. Concentrations of lead detected during the April 2013 investigation were as follows:

- Location SG-1 (located on eastern portion of site): 2,700 μg/L;

- Location SG-4 (located on western portion of site): 26,000 μg/L; and

- Location SG-5 (located on western portion of site): 60,000 μg/L.

Based on the comparison of these results, it appears that the April 2013 results for lead and other metals are anomalously high and; therefore, not representative of groundwater conditions beneath the site.

[5] California Department of Public Health Maximum Contaminant Levels (MCLs).
[6] J = Estimated value.

4.0 SUMMARY

In November 2013, PES conducted a supplemental subsurface investigation at the subject property. The investigation consisted of drilling, logging and sampling 18 soil borings in interior (5 soil borings) and exterior (13 soil borings) locations. Large diameter continuous soil cores were retrieved from the soil borings and logged to better understand subsurface lithologic and fill material conditions.

In summary, the results of the supplemental investigation indicate:

- Fill material ranging from 14 to 19 feet thick underlies the entire, and is generally thinner in the central portion of the site and toward the west, and thickest toward the northern and southern portions of the site. Fill material debris, including brick, metal, concrete, asphalt, glass, wood, fabric, and rubber, has been encountered throughout the site, but is generally most abundant on the western half of the site and at depths below approximately 8 to 10 feet bgs. Fine-grained Bay Mud deposits were encountered directly below the fill material;

- The soil results for samples collected from the fill material suggest the presence of elevated concentrations (i.e., equal to or above residential screening levels) of SVOCs, PCBs, and metals. Lead concentrations in 9 of the 53 samples analyzed exceed residential screening levels and the concentrations of lead in five of the samples also exceed the TTLC for lead of 1,000 mg/kg;

- WET was performed on seven selected samples; five of the seven results were at concentrations above the STLC lead limit. The TCLP was performed on eight soil samples with elevated total lead concentrations. Only one sample contained a concentration that was above the TCLP lead limit of 5.0 mg/L;

- April 2013 groundwater results for lead and other metals are anomalously high and are not representative site conditions; and

- Groundwater is impacted with dissolved metals (i.e., arsenic and lead) that exceed California MCLs.

TABLES

Table 1
Summary of Laboratory Analytical Results for Soil - VOCs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Acetone (µg/kg)	Other VOCs (µg/kg)
SB2	SB2-4.0	4	11/7/2013	ND(20)	ND
SB2	SB2-7.5	7.5	11/7/2013	**35**	ND
			Residential Soil RSLs [(1)]	**6,100,000**	N/A

Notes:

Detections are shown in bold.

bgs = Below ground surface.

VOCs = Volatile organic compounds.

µg/kg = Micrograms per kilogram.

ND(20) = Not detected at or above the indicated laboratory reporting limit.

ND = Not detected.

NE = Not Established.

N/A = Not applicable.

1. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.

- Results equal to or exceeding RSLs are shaded.

Table 2
Summary of laboratory Analytical Results for Soil - SVOCs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Acenaphthene (µg/kg)	Acenaphthylene (µg/kg)	Anthracene (µg/kg)	Benzo (a) Anthracene (µg/kg)	Benzo (a) Pyrene (µg/kg)	Benzo (b) Fluoranthene (µg/kg)	Benzo (k) Fluoranthene (µg/kg)	Benzo (g,h,i) Perylene (µg/kg)	Chrysene (µg/kg)	Fluoranthene (µg/kg)	Fluorene (µg/kg)	Indeno (1,2,3-cd) Pyrene (µg/kg)	2-Methyl-naphthalene (µg/kg)	4-Methylphenol (µg/kg)	Naphthalene (µg/kg)	N-Nitrosodi-phenylamine (µg/kg)	Phenanthrene (µg/kg)	Pyrene (µg/kg)
SB2	SB2-4.0	4	11/7/2013	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(330)	ND(67)	ND(330)	ND(67)	ND(67)
SB2	SB2-7.5	7.5	11/7/2013	ND(130)	**270**	**630**	**1,200**	**970**	**970**	**360**	**330**	**1,400**	**2,100**	**210**	**340**	ND(130)	ND(660)	ND(130)	ND(660)	**2,400**	**2,300**
SB6	SB6-4.0	4	11/7/2013	ND(660)	ND(660)	**1,200**	**2,400**	**3,000**	**3,700**	**1,500**	**1,400**	**2,900**	**4,400**	**810**	**1,300**	ND(660)	ND(3,300)	**2,900**	ND(3,300)	**5,500**	**4,500**
SB6	SB6-10.0	10	11/7/2013	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(330)	ND(67)	ND(330)	ND(67)	ND(67)
SB7	SB7-2.5	2.5	11/8/2013	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	**10,000**	**1,500**	ND(1,700)	**450**	ND(330)
SB7	SB7-8.0	8	11/8/2013	**500**	ND(330)	**340**	**340**	ND(330)	ND(330)	ND(330)	ND(330)	**470**	**1,100**	**680**	ND(330)	**9,200**	ND(1,600)	**28,000**	**1,700**	**2,400**	**1,100**
SB11	SB11-2.0	2	11/8/2013	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(6,600)	ND(1,300)	ND(6,600)	ND(1,300)	**1,300**
SB11	SB11-5.5	5.5	11/8/2013	ND(670)	ND(670)	ND(670)	ND(670)	**900**	**990**	ND(670)	ND(670)	**820**	**1,800**	ND(670)	ND(670)	ND(670)	ND(3,300)	ND(670)	ND(3,300)	**750**	**2,300**
SB13	SB13-1.5	1.5	11/8/2013	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	**92**	ND(330)	**260**	ND(330)	ND(66)	**79**
SB13	SB13-10.0	10	11/8/2013	ND(1,700)	ND(1,700)	ND(1,700)	**2,000**	ND(1,700)	**1,800**	ND(1,700)	ND(1,700)	**2,100**	**4,200**	ND(1,700)	ND(1,700)	**2,000**	ND(8,300)	**2,100**	ND(8,300)	**7,500**	**4,000**
Residential Soil RSLs [1]				**340,000**	**NE**	**1,700,000**	**150**	**15**	**150**	**1,500**	**NE**	**15,000**	**230,000**	**230,000**	**150**	**23,000**	**NE**	**3,600**	**NE**	**NE**	**170,000**

Notes:
Detections are shown in bold.
bgs = Below ground surface.
µg/kg = Micrograms per kilogram.
ND(67) = Not detected at or above the indicated laboratory reporting limit.
NE = Not established.
1. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
- Results equal to or exceeding RSLs are shaded.

Table 3
Summary of laboratory Analytical Results for Soil - PCBs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Depth (feet bgs)	Date Collected	Aroclor-1016 (µg/kg)	Aroclor-1221 (µg/kg)	Aroclor-1232 (µg/kg)	Aroclor-1242 (µg/kg)	Aroclor-1248 (µg/kg)	Aroclor-1254 (µg/kg)	Aroclor-1260 (µg/kg)	Aroclor-1262 (µg/kg)	Aroclor-1268 (µg/kg)	Total PCBs (µg/kg)
SB5	SB5-3.0	3	11/7/2013	ND(170)	ND(330)	ND(170)	ND(170)	ND(170)	ND(170)	**10,000**	ND(170)	ND(170)	**10,000**
SB5	SB5-8.0	8	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**180**	ND(12)	**180**
SB5	SB5-11.5	11.5	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**140**	ND(12)	**140**
SB6	SB6-4.0	4	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**570**	ND(12)	ND(12)	**570**
SB6	SB6-8.0	8	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**160**	ND(12)	**160**
SB6	SB6-10.0	10	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**48**	ND(12)	**48**
SB7	SB7-2.5	2.5	11/8/2013	ND(82)	ND(160)	ND(82)	ND(82)	ND(82)	ND(82)	**1,900**	ND(82)	ND(82)	**1,900**
SB7	SB7-8.0	8	11/8/2013	ND(42)	ND(84)	ND(42)	ND(42)	ND(42)	ND(42)	ND(42)	**1,500**	ND(42)	**1,500**
SB11	SB11-2.0	2	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**380**	ND(12)	ND(12)	**380**
SB11	SB11-5.5	5.5	11/8/2013	ND(42)	ND(83)	ND(42)	ND(42)	ND(42)	ND(42)	**1,200**	ND(42)	**1,400**	**2,600**
SB12	SB12-2.0	2	11/8/2013	ND(42)	ND(85)	ND(42)	ND(42)	ND(42)	ND(42)	**2,000**	ND(42)	ND(42)	**2,000**
SB12	SB12-5.0	5	11/8/2013	ND(41)	ND(82)	ND(41)	ND(41)	ND(41)	ND(41)	ND(41)	**1,200**	ND(41)	**1,200**
SB12	SB12-10.0	10	11/8/2013	ND(83)	ND(170)	ND(83)	ND(83)	ND(83)	ND(83)	ND(83)	**6,500**	ND(83)	**6,500**
SB13	SB13-1.5	1.5	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**270**	ND(12)	ND(12)	**270**
SB13	SB13-5.0	5	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**18**	ND(12)	ND(12)	**18**
SB13	SB13-10.0	10	11/8/2013	ND(84)	ND(170)	ND(84)	ND(84)	ND(84)	ND(84)	**3,300**	ND(84)	**1,900**	**5,200**
SB14	SB14-3.5	3.5	11/9/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**13**	ND(12)	ND(12)	**13**
Residential Soil RSLs [1]				**390**	**140**	**140**	**220**	**220**	**110**	**220**	**NE**	**NE**	**NE**

Notes:
Detections are shown in bold.
bgs = below ground surface.
µg/kg = Micrograms per kilogram.
PCBs= Polychlorinated biphenyls.
ND(24) = Compound not detected at or above the indicated laboratory reporting limit.
NE = Not established.
1. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
- Results equal to or exceeding RSLs are shaded.

Table 4
Summary of laboratory Analytical Results for Soil - California Title 22 Metals, STLC, and TCLP
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	STLC Lead (mg/L)	TCLP Lead (mg/L)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
SB1	SB1-1.0	1	11/7/2013	ND(0.51)	5.9	160	0.39	0.94	86	13	52	81	--	--	0.22	ND(0.25)	100	ND(0.51)	ND(0.25)	ND(0.51)	51	190
SB1	SB1-5.5	5.5	11/7/2013	--	--	--	--	--	--	--	--	1,300	--	6.1	--	--	--	--	--	--	--	--
SB1	SB1-11.75	11.75	11/7/2013	--	--	--	--	--	--	--	--	2,400	--	0.75	--	--	--	--	--	--	--	--
SB2	SB2-4.0	4	11/7/2013	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
SB2	SB2-7.5	7.5	11/7/2013	--	--	--	--	--	--	--	--	120	2.7	--	--	--	--	--	--	--	--	--
SB2	SB2-10.75	10.75	11/7/2013	--	--	--	--	--	--	--	--	240	--	--	--	--	--	--	--	--	--	--
SB3	SB3-1.5	1.5	11/7/2013	ND(0.46)	3.4	150	0.59	0.44	16	6.9	16	14	--	--	0.39	ND(0.23)	23	ND(0.46)	ND(0.23)	ND(0.46)	26	46
SB3	SB3-7.5	7.5	11/7/2013	--	--	--	--	--	--	--	--	340	1.8	1.1	--	--	--	--	--	--	--	--
SB3	SB3-11.0	11	11/7/2013	3.3	7.5	810	0.39	4.3	46	10	170	460	--	--	0.17	4.6	38	ND(0.50)	ND(0.25)	ND(0.50)	42	920
SB4	SB4-1.5	1.5	11/7/2013	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--
SB4	SB4-5.0	5	11/7/2013	--	--	--	--	--	--	--	--	110	7.5	--	--	--	--	--	--	--	--	--
SB4	SB4-10.0	10	11/7/2013	--	--	--	--	--	--	--	--	10,000	--	2.4	--	--	--	--	--	--	--	--
SB5	SB5-3.0	3	11/7/2013	--	--	--	--	--	--	--	--	430	7.7	0.27	--	--	--	--	--	--	--	--
SB5	SB5-8.0	8	11/7/2013	3.1	6.7	100	0.21	0.77	39	6.3	100	100	--	--	0.19	0.34	38	ND(0.50)	ND(0.25)	ND(0.50)	29	170
SB5	SB5-11.5	11.5	11/7/2013	--	--	--	--	--	--	--	--	1,100	--	1.0	--	--	--	--	--	--	--	--
SB6	SB6-4.0	4	11/7/2013	--	--	--	--	--	--	--	--	140	--	--	--	--	--	--	--	--	--	--
SB6	SB6-8.0	8	11/7/2013	--	--	--	--	--	--	--	--	58	--	--	--	--	--	--	--	--	--	--
SB6	SB6-10.0	10	11/7/2013	7.5	5.6	140	0.27	1.9	140	16	390	160	--	--	0.13	4.9	190	6.0	ND(0.26)	ND(0.52)	41	270
SB7	SB7-2.5	2.5	11/8/2013	0.75	5.0	160	0.25	1.2	34	9.0	74	120	--	--	0.19	0.69	49	0.66	ND(0.23)	ND(0.47)	35	220
SB7	SB7-8.0	8	11/8/2013	--	--	--	--	--	--	--	--	250	39	--	--	--	--	--	--	--	--	--
SB7	SB7-12.5	12.5	11/8/2013	--	--	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	--	--	--
SB8	SB8-3.5	3.5	11/8/2013	--	--	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--
SB8	SB8-8.0	8	11/8/2013	ND(0.51)	2.3	32	ND(0.10)	ND(0.25)	33	4.4	4.7	3.1	--	--	ND(0.016)	ND(0.25)	24	ND(0.51)	ND(0.25)	ND(0.51)	26	19
SB8	SB8-12.0	12	11/8/2013	--	--	--	--	--	--	--	--	3.0	--	--	--	--	--	--	--	--	--	--
SB9	SB9-4.5	4.5	11/8/2013	ND(0.49)	5.4	120	0.32	0.81	45	10	46	41	--	--	0.12	1.5	38	ND(0.49)	ND(0.24)	ND(0.49)	36	110
SB9	SB9-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	50	--	--	--	--	--	--	--	--	--	--
SB10	SB10-2.0	2	11/8/2013	ND(0.47)	6.9	550	0.33	0.58	38	6.9	27	45	--	--	0.15	0.61	36	ND(0.47)	ND(0.23)	ND(0.47)	34	90
SB10	SB10-5.0	5	11/8/2013	--	--	--	--	--	--	--	--	49	--	--	--	--	--	--	--	--	--	--
SB10	SB10-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--
SB11	SB11-2.0	2	11/8/2013	--	--	--	--	--	--	--	--	28	--	--	--	--	--	--	--	--	--	--
SB11	SB11-5.5	5.5	11/8/2013	0.62	9.2	140	0.26	1.2	160	10	260	170	--	--	0.17	21	170	ND(0.54)	ND(0.27)	ND(0.54)	36	300
SB11	SB11-11.5	11.5	11/8/2013	--	--	--	--	--	--	--	--	1.7	--	--	--	--	--	--	--	--	--	--
SB12	SB12-2.0	2	11/8/2013	--	--	--	--	--	--	--	--	130	12	1.1	--	--	--	--	--	--	--	--
SB12	SB12-5.0	5	11/8/2013	--	--	--	--	--	--	--	--	320	--	--	--	--	--	--	--	--	--	--
SB12	SB12-10.0	10	11/8/2013	ND(0.49)	5.9	210	0.27	1.3	31	6.6	44	290	--	--	0.18	0.28	29	ND(0.49)	ND(0.25)	ND(0.49)	30	1,900
SB13	SB13-1.5	1.5	11/8/2013	--	--	--	--	--	--	--	--	68	--	--	--	--	--	--	--	--	--	--
SB13	SB13-5.0	5	11/8/2013	ND(0.47)	8.4	270	0.42	0.70	23	26	30	54	--	--	0.070	0.37	27	1.6	ND(0.23)	ND(0.47)	45	100
SB13	SB13-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	3,300	--	--	--	--	--	--	--	--	--	--
SB14	SB14-3.5	3.5	11/9/2013	ND(0.46)	7.7	170	0.54	0.67	140	19	33	11	--	--	0.060	ND(0.23)	190	4.5	ND(0.23)	ND(0.46)	53	63
SB14	SB14-8.5	8.5	11/9/2013	--	--	--	--	--	--	--	--	100	--	--	--	--	--	--	--	--	--	--
SB14	SB14-11.5	11.5	11/9/2013	--	--	--	--	--	--	--	--	250	--	--	--	--	--	--	--	--	--	--

Table 4
Summary of laboratory Analytical Results for Soil - California Title 22 Metals, STLC, and TCLP
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	STLC Lead (mg/L)	TCLP Lead (mg/L)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
SB15	SB15-2.5	2.5	11/9/2013	--	--	--	--	--	--	--	--	**8.2**	--	--	--	--	--	--	--	--	--	--
SB15	SB15-7.5	7.5	11/9/2013	**3.8**	**4.6**	**250**	**0.27**	**13**	**43**	**6.6**	**450**	**870**	--	--	**0.14**	**0.43**	**48**	ND(0.50)	ND(0.25)	ND(0.50)	**40**	**1,700**
SB15	SB15-11.5	11.5	11/9/2013	--	--	--	--	--	--	--	--	**130**	--	--	--	--	--	--	--	--	--	--
SB16	SB16-2.5	2.5	11/9/2013	--	--	--	--	--	--	--	--	**19**	--	--	--	--	--	--	--	--	--	--
SB16	SB16-7.5	7.5	11/9/2013	--	--	--	--	--	--	--	--	**280**	**14**	**1.8**	--	--	--	--	--	--	--	--
SB16	SB16-10.5	10.5	11/9/2013	**1.4**	**11**	**180**	**0.34**	**0.89**	**53**	**6.7**	**51**	**210**	--	--	**0.24**	ND(0.26)	**34**	**3.4**	ND(0.26)	ND(0.52)	**41**	**510**
SB17	SB17-2.0	2	11/9/2013	ND(0.47)	**7.8**	**150**	**0.46**	**0.61**	**41**	**12**	**32**	**54**	--	--	**0.12**	ND(0.24)	**43**	ND(0.47)	ND(0.24)	ND(0.47)	**53**	**87**
SB17	SB17-5.0	5	11/9/2013	--	--	--	--	--	--	--	--	**27**	--	--	--	--	--	--	--	--	--	--
SB17	SB17-9.5	9.5	11/9/2013	--	--	--	--	--	--	--	--	**150**	--	--	--	--	--	--	--	--	--	--
SB18	SB18-2.0	2	11/9/2013	--	--	--	--	--	--	--	--	**30**	--	--	--	--	--	--	--	--	--	--
SB18	SB18-5.0	5	11/9/2013	--	--	--	--	--	--	--	--	**34**	--	--	--	--	--	--	--	--	--	--
SB18	SB18-10.0	10	11/9/2013	ND(0.48)	**49**	**640**	**0.47**	**5.5**	**43**	**13**	**450**	**650**	--	--	**0.41**	**5.1**	**190**	**2.8**	ND(0.24)	ND(0.48)	**11,000**	**2,500**
Residential Soil RSLs [2]				**3.1**	**0.61**	**1,500**	**16**	**7.0**	**12,000 [1]**	**2.3**	**310**	**400**	N/A	N/A	**1.0**	**39**	**150**	**39**	**39**	**0.078**	**39**	**2,300**
TTLC [3]				**500**	**500**	**10,000**	**75**	**100**	**2,500**	**8,000**	**2,500**	**1,000**	N/A	N/A	**20**	**3,500**	**2,000**	**100**	**500**	**700**	**2,400**	**5,000**
STLC and TCLP Regulatory Thresholds				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**5.0**	**5.0**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
Detections are shown in bold.
bgs = Below ground surface.
mg/kg = Milligrams per kilogram.
mg/L = Milligrams per liter.
ND(0.24) = Not detected at or above the indicated laboratory reporting limit.
-- = Not analyzed.
N/A = Not applicable.
STLC = Soluble Threshold Limit Concentration.
TCLP = Toxicity Characteristic Leaching Procedure.
1. Value is for chromium III.
2. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
3. TTLC = Total Threshold Limit Concentration.
- Results equal to or exceeding RSLs, STLC or TCLP values are shaded.

Table 5
Summary of Laboratory Analytical Results for Groundwater - Dissolved California Title 22 Metals
6701 Shellmound Street
Emeryville, California

Boring Location	Pre-Pack Well Screen Depth (feet bgs)	Date Collected	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
GGW-1	10 to 20	11/11/2013	ND(10)	ND(5.0)	**250**	ND(2.0)	ND(5.0)	**8.9**	ND(5.0)	ND(5.0)	**59**	**0.28**	**10**	**5.4**	**27**	ND(5.0)	ND(10)	**71**	**210**
GGW-2	10 to 20	11/11/2013	ND(10)	**6.4**	**280**	ND(2.0)	ND(5.0)	**8.0**	ND(5.0)	**9.1**	**190**	**0.41**	ND(5.0)	**8.5**	**26**	ND(5.0)	ND(10)	**22**	**360**
GGW-3	10 to 20	11/11/2013	ND(10)	**32**	**340**	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	**17**	ND(0.20)	**8.7**	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	**29**
GGW-4	10 to 20	11/11/2013	ND(10)	ND(5.0)	**200**	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	**1.3 J**	ND(0.20)	**10**	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	ND(20)
GGW-5	10 to 20	11/11/2013	ND(10)	ND(5.0)	**350**	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	**9.9**	**0.21**	**6.6**	**6.4**	ND(10)	ND(5.0)	ND(10)	ND(5.0)	**23**
GGW-6	10 to 20	11/11/2013	ND(10)	ND(5.0)	**94**	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	**3.1 J**	ND(0.20)	**5.9**	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	ND(20)
	California MCLs [1]		**6.0**	**10**	**1,000**	**4.0**	**5.0**	**50** [2]	**NE**	**1,300**	**15**	**2.0**	**NE**	**100**	**50**	**NE**	**2.0**	**NE**	**NE**

Notes:
Detections are shown in bold.
Analytical results presented in micrograms per liter (µg/L).
bgs = below ground surface.
ND(5.0) = Compound not detected at or above the indicated laboratory reporting limit.
J = Estimated value.
1. California Department of Public Health Maximum Contaminant Levels (MCLs).
2. ESL value is for chromium (total).
- Results equal to or exceeding MCLs are shaded.

ILLUSTRATIONS

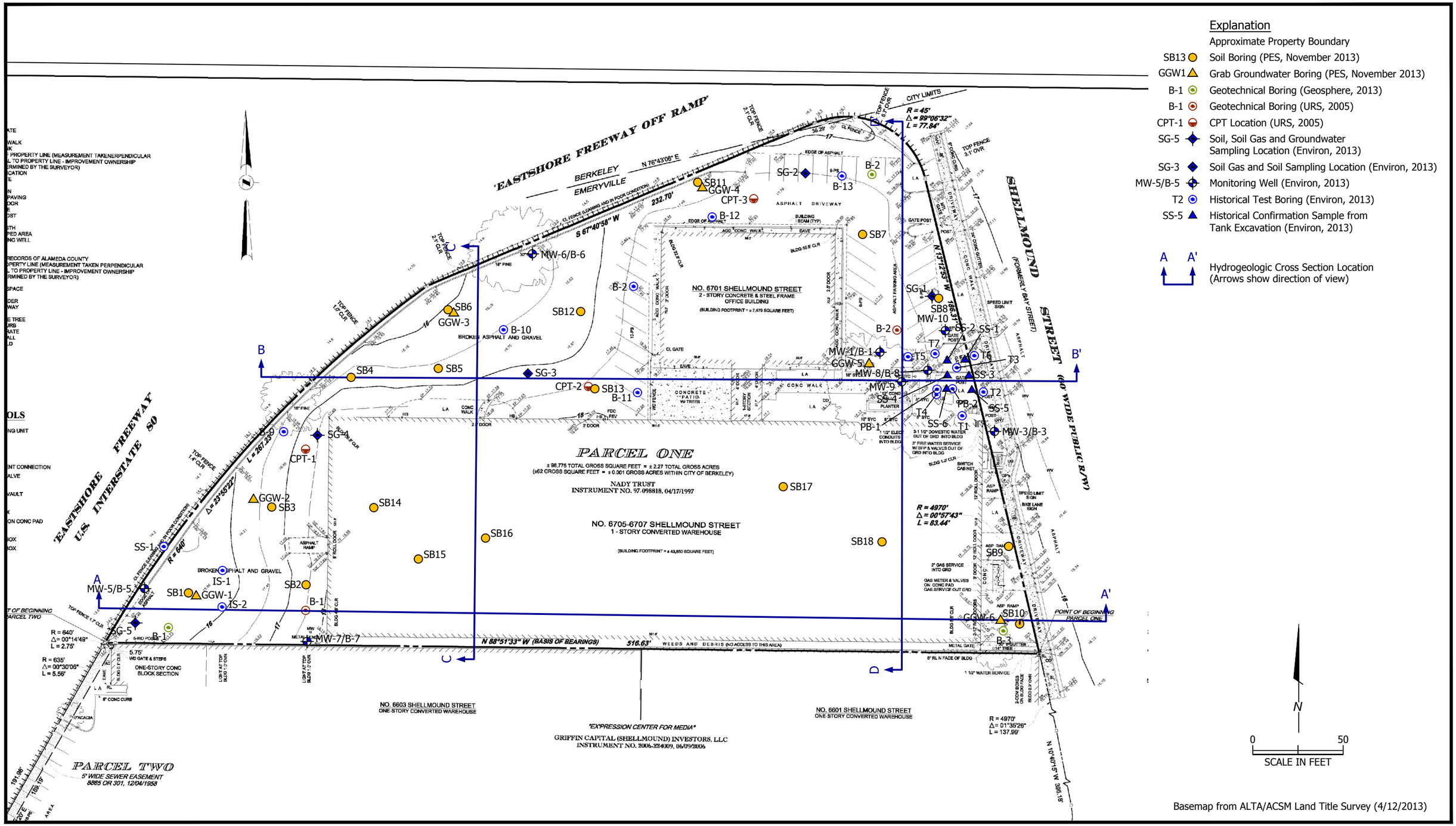
U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle.1997

PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE
1

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- SB13 — Soil Boring (PES, November 2013)
- GGW1 — Grab Groundwater Boring (PES, November 2013)
- B-1 — Geotechnical Boring (Geosphere, 2013)
- B-1 — Geotechnical Boring (URS, 2005)
- CPT-1 — CPT Location (URS, 2005)
- SG-5 — Soil, Soil Gas and Groundwater Sampling Location (Environ, 2013)
- SG-3 — Soil Gas and Soil Sampling Location (Environ, 2013)
- MW-5/B-5 — Monitoring Well (Environ, 2013)
- T2 — Historical Test Boring (Environ, 2013)
- SS-5 — Historical Confirmation Sample from Tank Excavation (Environ, 2013)
- A A' — Hydrogeologic Cross Section Location (Arrows show direction of view)

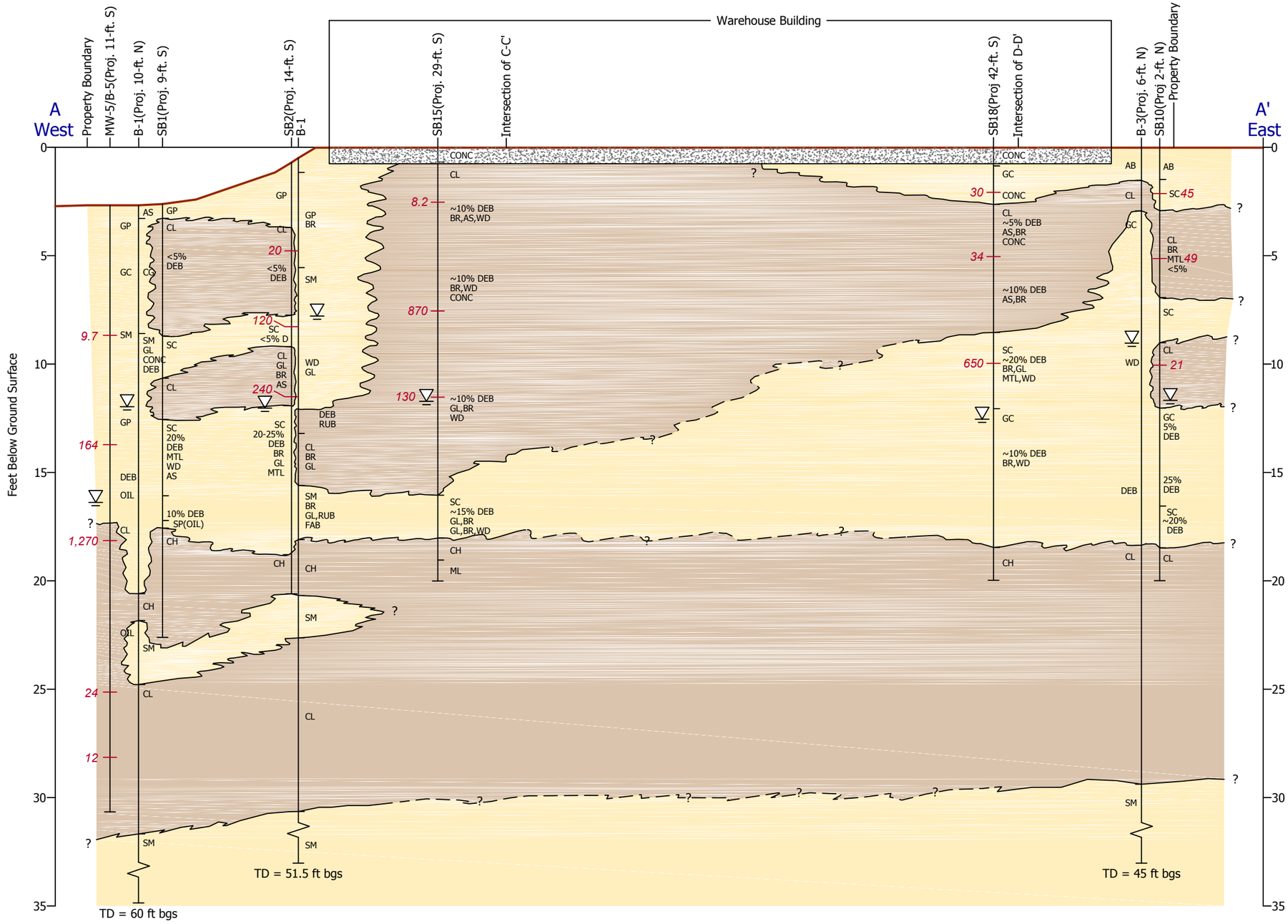
Basemap from ALTA/ACSM Land Title Survey (4/12/2013)

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Boring, Well, and Cross Section Location Map
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE 2

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 11-ft. S) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

- Concrete (CONC)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

650 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

5 — Vertical Scale in Feet
0 — 50 — Horizontal Scale in Feet

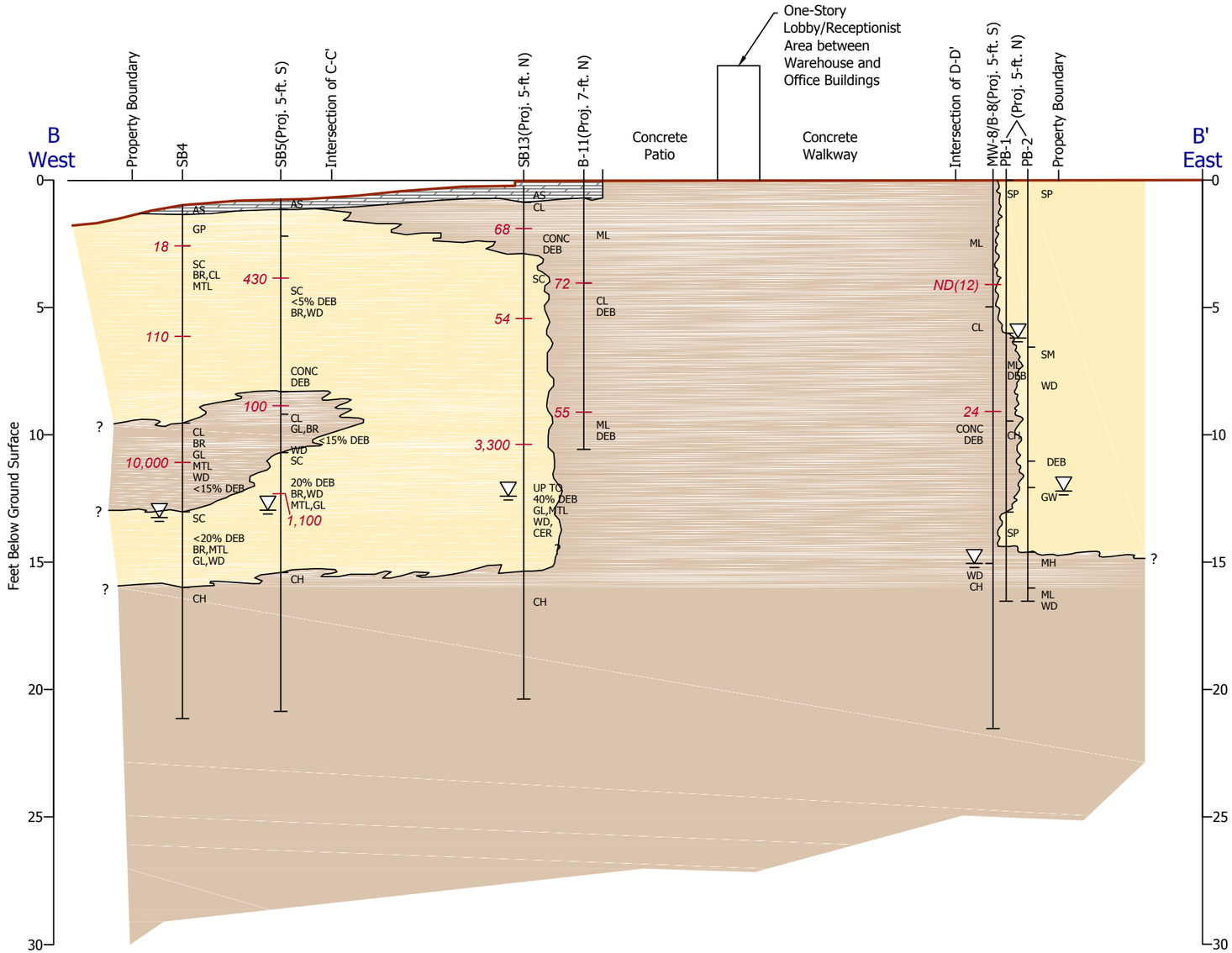
Vertical Exaggeration 10:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section A-A'
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE 3

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 5-ft. S) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

- Asphalt (AS)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

3,300 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

ND(12) — Not detected at or above the indicated laboratory reporting limit.

5 — Vertical Scale in Feet
0

0 — 50 — Horizontal Scale in Feet

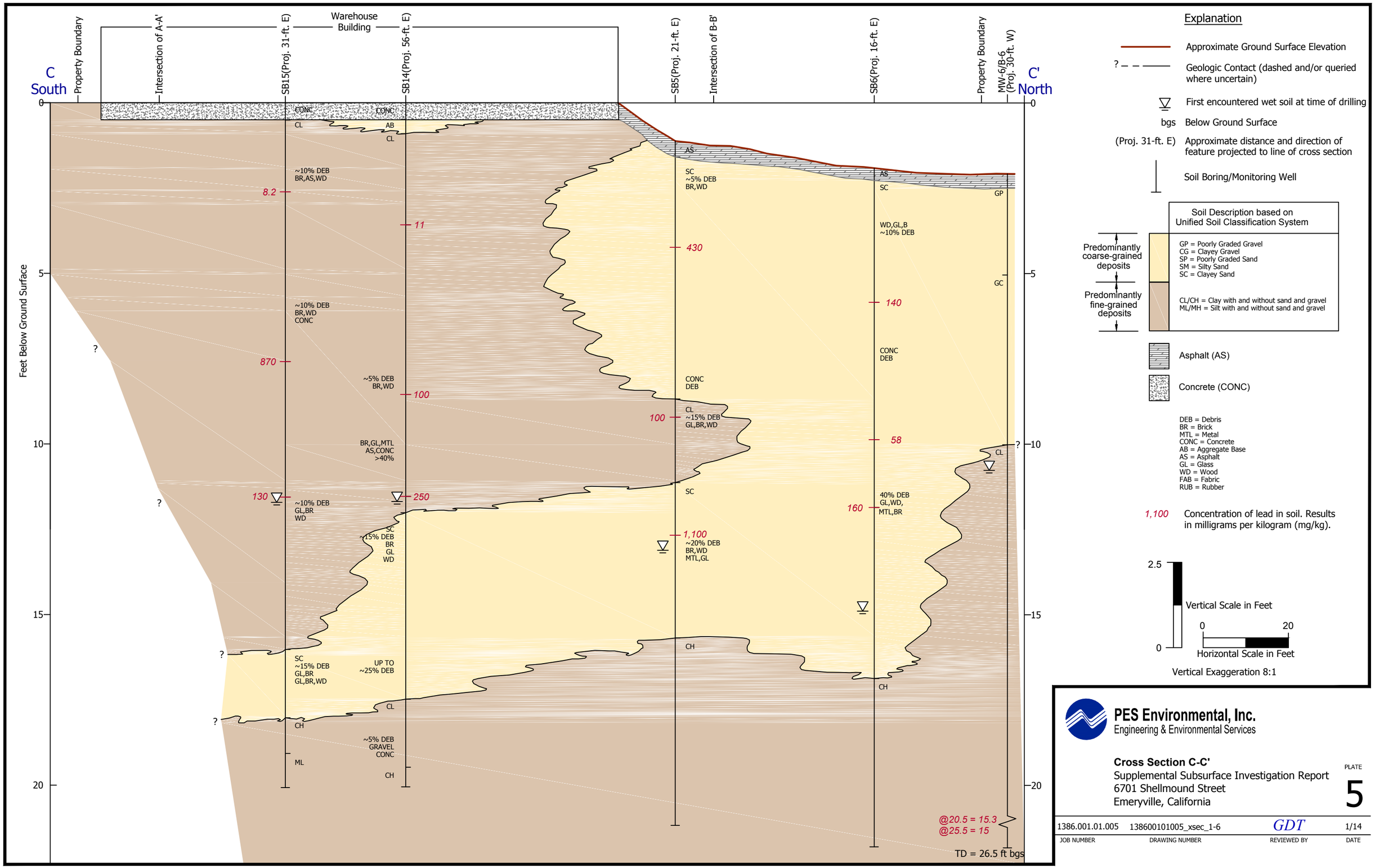
Vertical Exaggeration 10:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section B-B'
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE
4

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 31-ft. E) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
GP = Poorly Graded Gravel
CG = Clayey Gravel
SP = Poorly Graded Sand
SM = Silty Sand
SC = Clayey Sand

Predominantly fine-grained deposits:
CL/CH = Clay with and without sand and gravel
ML/MH = Silt with and without sand and gravel

- Asphalt (AS)
- Concrete (CONC)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

1,100 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

2.5
0
Vertical Scale in Feet
0
20
Horizontal Scale in Feet

Vertical Exaggeration 8:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section C-C'
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE 5

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

D South

D' North

Property Boundary | Intersection of A-A' | Warehouse Building | SB18(Proj. 11-ft. E) | SB17(Proj. 66-ft. E) | PB-1(Proj. 19-ft. W) | Intersection of B-B' | MW-8/B-8 (Proj. 7-ft. W) | MW-1/B-1 (Proj. 12-ft. E) | B-2(Proj. 3-ft. E) | SB8(Proj. 20-ft. W) | SB7(Proj. 22-ft. E) | B-2(Proj.17-ft. E) | Property Boundary

Feet Below Ground Surface

0 | 5 | 10 | 15 | 20 | 25 | 30 | 35

CONC | GC | CONC | CL | ~5% DEB AS,BR CONC | ~10% DEB AS,BR | SC ~20% DEB BR,GL MTL,WD | GC | ~10% DEB BR,WD | CH | ~10% DEB BR,GL,MTL WD | ~20% DEB BR,GL,WD | BR | ~15% DEB AS,WD,BR | SC ~10% DEB GL,WD,BR | CL | SP | ML | DEB | CH WD | SP | CL | CONC DEB | SM | CH WD | CL WD | CH | SM | CL/SM WD | CH | WD | CL | AS | AB | AS | SP | GW CONC DEB | SP | GP | CL | SM | SM | GC <5% DEB | SP | CL <5% DEB WD | CH | CL | AS | AS | SC <5% DEB BR GL | SP | GC | CL | AS | GC | MTL | SM GL CONC RUB | CH | CH/CL | CL | CL | TD = 51.5 ft bgs | TD = 40 ft bgs

30 | 54 | 34 | 27 | 650 | 150 | ND(12) | 24 | 61 | 3 | 160 | 77 | 8 | 4.5 | 200 | 3.1 | 3.0 | 120 | 250 | 2.1

Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 11-ft. E) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well
- Asphalt (AS)
- Concrete (CONC)
- 650 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).
- ND(12) — Not detected at or above the indicated laboratory reporting limit.

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

5 — Vertical Scale in Feet — 0

0 — 20 — Horizontal Scale in Feet

Vertical Exaggeration 10:1

PES Environmental, Inc.
Engineering & Environmental Services

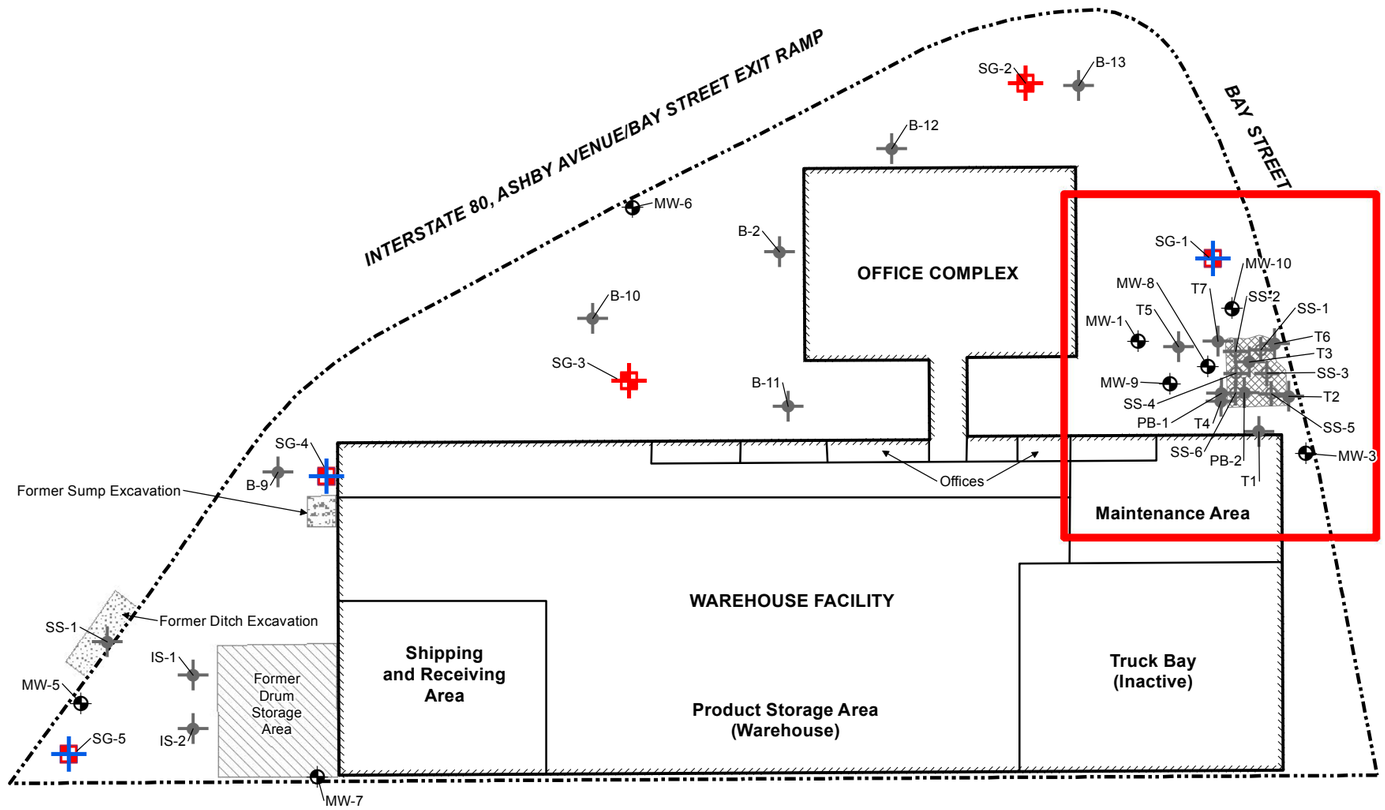
Cross Section D-D'
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE 6

1386.001.01.005	138600101005_xsec_1-6	GDT	1/14
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX A

PERTINENT DATA FROM ENVIRON'S APRIL 2013 INVESTIGATION



Legend

- Soil, Soil Gas and Groundwater Sampling Location
- Soil Gas and Soil Sampling Location
- Monitoring Well
- Historical Test Boring
- Historical Confirmation Sample from Tank Excavation
- Wall
- Building
- Property Line
- Approximate Extent of Previous Tank Excavation

Note: Interior building dimensions are approximate.

N

0 50 100

SCALE IN FEET

ENVIRON

Soil, Soil Gas, and Groundwater Sampling Locations
6707 Bay Street
Emeryville, California

Date:	Contract Number:		Figure
4/29/13	03-32356A		3
Drafter: RS	Approved:	Revised:	

Path: Q:\DRAWINGS\03323356A\03323356A-PropSoilSampLocation.mxd

Tables

Table 1 - Organics in Soil
2013 Subsurface Investigation by ENVIRON
Nady Systems

Borehole ID	Sample Depth	TPH (mg/kg)		Pesticides and PCBs (mg/kg)		
		TPH-Diesel	TPH-Motor Oil	DDT	Arochlor 1260	Total PCBs
SG-1	3.5-4.0	**43**	**250**	**0.03**	ND < 0.5	ND < 0.5
SG-2	3.0-3.5	**43**	**340**	**0.068**	ND < 1.0	ND < 1.0
SG-3	3.5-4.0	**290**	**1,400**	**0.25**	**14**	**14**
SG-4	3.5-4.0	**200**	**400**	**0.42**	**8**	**8**
SG-5	4.5-5.0	**33**	**290**	ND < 0.020	ND < 1.0	ND < 1.0
CHHSL - Residential [1]		*na*	*na*	*1.6*	*0.089*	*0.089*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource [2]		*100*	*500*	*1.7*	*0.22*	*0.22*

Notes:
exceeds regulatory criteria
Only detected compounds are shown.
Detections are in **bold**.
CHHSL: California Human Health Screening Level
DDT: dichlorodiphenyltrichloroethane
ESL: Environmental Screening Level
mg/kg: milligrams per kilogram
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
NDW: Non-Drinking Water Resource Area
PCBs: Polychlorinated Biphenyls
TPH: Total Petroleum Hydrocarbons
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table 2 - Metals in Soil
2013 Subsurface Investigation by ENVIRON
Nady Systems

Borehole ID	Sample Depths	Metals (mg/kg, except where noted)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead - STLC (mg/L)	Lead - TCLP (mg/L)	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
SG-1	3.5-4.0	**5.2**	**11**	**280**	ND < 0.5	**1**	**100**	**22**	**480**	**990**	**12**	ND<0.2	**0.2**	**4.2**	**220**	**0.6**	**60**	**490**
SG-2	3.0-3.5	**1.9**	**12**	**160**	**0.51**	**0.84**	**50**	**11**	**88**	**120**	**4**	ND<0.2	**0.36**	**1.3**	**63**	ND < 0.5	**50**	**220**
SG-3	3.5-4.0	**8.9**	**7.3**	**230**	ND < 0.5	**0.94**	**54**	**9.3**	**160**	**830**	--	--	**0.2**	**1.3**	**51**	ND < 0.5	**49**	**240**
SG-4	3.5-4.0	**2.6**	**6.9**	**170**	ND < 0.5	**0.82**	**68**	**14**	**78**	**130**	--	--	**0.32**	**2.9**	**83**	ND < 0.5	**45**	**440**
SG-5	4.5-5.0	**1**	**9.9**	**120**	ND < 0.5	**0.44**	**44**	**7.3**	**44**	**75**	--	--	**0.12**	**0.5**	**34**	ND < 0.5	**41**	**97**
CHHSL - Residential [1]		*30*	*0.07*	*5,200*	*150*	*1.7*	*10,000*	*660*	*3,000*	*150*	*N/A*	*N/A*	*18*	*380*	*1,600*	*380*	*530*	*23,000*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource [2]		*20*	*0.39*	*750*	*4*	*12*	*750*	*0.33*	*230*	*80*	*N/A*	*N/A*	*6.7*	*40*	*150*	*20*	*200*	*600*

Notes:
exceeds regulatory criteria
exceeds California hazardous waste criteria
Only detected compounds are shown.
Detections are in **bold**.
mg/kg: milligrams per kilogram
mg/L: milligrams per liter
N/A: Not Applicable
--: not analyzed
ND < ##: Not detected at or above laboratory reporting limit shown
CHHSL: California Human Health Screening Level
ESL: Environmental Screening Level
NDW: Non-Drinking Water Resource Area
STLC: Soluble Threshold Limit Concentration
TCLP: Toxicity Characteristic Leaching Procedure
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table 3 - Organics in Groundwater
2013 Subsurface Investigation by ENVIRON
Nady Systems

Location ID	Depth to Water (ft bgs)	Observations	TPH (ug/L)		VOCs (ug/L)															
			TPH-Diesel	TPH-Motor Oil	Benzene	TBA	n-Butyl Benzene	sec-Butyl Benzene	Carbon disulfide	Chloro-benzene	Ethyl-benzene	cis-1,2-DCE	Isopropyl-benzene	4-isopropyl toluene	Naph-thalene	n-Propyl benzene	Toluene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Total Xylenes
SG-1	10.75	Gray color, no odor	920	5,600	ND < 0.5	ND < 2.0	ND < 0.5	ND < 0.5	**1.1**	**4.4**	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
SG-4	11.75	Black color, strong H2S odor	4,700	12,000	**2**	**2.3**	ND < 0.5	**1.3**	**3.9**	ND < 0.5	ND < 0.5	**0.69**	**1.1**	ND < 0.5	ND < 0.5	ND < 0.5	**0.54**	ND < 0.5	ND < 0.5	ND < 0.5
SG-5	10.29	Black color, sheen, H2S odor	58,000	9,500	**8.1**	ND < 20	**32**	**38**	ND < 5.0	ND < 5.0	**45**	ND < 5.0	**67**	**13**	**84**	**87**	ND < 5.0	**350**	**24**	**59**
California MCL - Drinking Water[1]			*na*	*na*	*1*	*na*	*na*	*na*	*na*	*100**	*300*	*6*	*na*	*na*	*na*	*na*	*150*	*na*	*na*	*1,750*
ESL - Groundwater[2]			*100*	*100*	*1*	*12*	*na*	*na*	*na*	*25*	*30*	*6*	*na*	*na*	*6.2*	*na*	*40*	*na*	*na*	*20*
ESL - Evaluation of Potential Vapor Intrusion Concerns, Residential[2]			*na*	*na*	*27*	*na*	*na*	*na*	*na*	*na*	*310*	*na*	*na*	*na*	*160*	*na*	*95,000*	*na*	*na*	*37,000*

Notes:
exceeds regulatory criteria
Only detected compounds are shown.
Detections are in **bold**.
bgs: below ground surface
DCE: dichloroethene
ESL: Environmental Screening Level
H2S: hydrogen sulfide
ug/L: micrograms per liter
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
NDW: Non-Drinking Water Resource Area
TBA: t-Butyl alcohol
TPH: Total Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
1. California Department of Public Health, 2013. *California Maximum Contaminant Levels (MCLs)*. March.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.
*: indicates USEPA MCL, shown for compounds that have a federal MCL but do not have a California MCL.

Table 4 - Metals in Groundwater
2013 Subsurface Investigation by ENVIRON
Nady Systems

Location ID	Depth to Water (ft bgs)	Observations	Total Metals (ug/L)													
			Antimony	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
SG-1	10.75	Gray color, no odor	ND < 50	**210**	**12,000**	ND < 25	**4,100**	**820**	**4,200**	**2,700**	**2.7**	**77**	**4,600**	ND < 19	**2,100**	**5,900**
SG-4	11.75	Black color, strong H2S odor	**150**	**650**	**23,000**	**210**	**1,400**	**210**	**8,300**	**26,000**	**130**	**270**	**1,600**	**19**	**480**	**78,000**
SG-5	10.29	Black color, sheen, H2S odor	**94**	**1,600**	**25,000**	**320**	**1,800**	**490**	**34,000**	**60,000**	**52**	**180**	**2,700**	**53**	**1,900**	**160,000**
California MCL - Drinking Water[1]			*6*	*10*	*1,000*	*5*	*50*	*na*	*1,300*	*15*	*2*	*na*	*100*	*na*	*na*	*na*
ESL - Groundwater[2]			*6*	*36*	*1,000*	*0.25*	*50*	*3*	*3.1*	*2.5*	*0.025*	*180*	*8.2*	*0.19*	*15*	*81.0*
STLC - California Hazardous Waste Criteria			*15,000*	*5,000*	*100,000*	*1,000*	*5,000*	*80,000*	*25,000*	*5,000*	*200*	*350,000*	*20,000*	*5,000*	*24,000*	*250,000*

Notes:
exceeds regulatory criteria
exceeds hazardous waste and regulatory criteria
Only detected compounds are shown.
Detections are in **bold**.
bgs: below ground surface
ug/L: micrograms per liter
H2S: hydrogen sulfide
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
STLC: Soluble Threshold Limit Concentration
1. California Department of Public Health, 2013. *California Maximum Contaminant Levels (MCLs)*. March.
2. San Francisco Bay Regional Water Quality Control Board, 2013. *2013 Tier 1 ESL Lookup Tables*. February.

Table 5 - VOCs and Fixed Gases in Soil Gas
2013 Subsurface Investigation by ENVIRON
Nady Systems

		VOCs (ug/m^3)															Fixed Gases (% by volume)			
Location ID	**Depth to Water (ft bgs)**	**Acetone**	**Benzene**	**Chloro-methane**	**Ethyl-benzene**	**4-Ethyl-toluene**	**2-Butanone (MEK)**	**PCE**	**TCE**	**Toluene**	**1,2,4-Trimethyl-benzene**	**1,3,5-Trimethyl-benzene**	**cis-1,2-DCE**	**o-Xylene**	**p/m-Xylene**	**1,1-DFA (Leak Check)**	**Methane**	**Carbon Dioxide**	**Oxygen and Argon**	**Nitrogen**
SG-1	10.75	ND < 7.2	**8.6**	ND < 1.6	ND < 3.3	ND < 3.7	ND < 6.7	ND < 5.2	ND < 4.1	**3.4**	ND < 11	ND < 3.7	ND < 3.0	ND < 3.3	ND < 13	ND < 8.2	ND < 0.5	**8.49**	**8.9**	**82.6**
SG-2	--	ND < 13	ND < 4.5	ND < 2.9	ND < 6.1	**13**	ND < 12	ND < 9.6	ND < 7.6	ND < 5.3	**37**	**16**	ND < 5.6	ND < 6.1	ND < 24	ND < 15	ND < 0.5	**10.7**	**12**	**77.2**
SG-3	--	ND < 38	**73**	ND < 8.3	ND < 17	ND < 20	ND < 35	**30**	ND < 21	**18**	ND < 59	ND < 20	**24**	ND < 17	ND < 69	**140**	**0.864**	ND < 0.5	**19.9**	**79.3**
SG-4	11.75	**19**	**37**	**2.4**	**4.6**	ND < 3.6	**7.7**	ND < 4.9	**9.6**	**16**	ND < 11	ND < 3.6	ND < 2.9	**5.8**	**16**	ND < 7.8	ND < 0.5	**9.52**	**11.4**	**79.1**
SG-5	10.29	**19**	**9.5**	ND < 1.7	**6.2**	ND < 4.0	ND < 7.3	ND < 5.6	**9.1**	**6.1**	ND < 12	ND < 4.0	ND < 3.3	**12**	**26**	ND < 8.9	ND < 0.5	**8.5**	**13.6**	**77.9**
SG-2-Shroud	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**130,000**	--	--	--	--
Shallow Soil Gas CHHSL - Residential [1]		*na*	*36.2*	*na*	*na*	*na*	*na*	*180*	*528*	*135,000*	*na*	*na*	*15,900*	*315,000*	*317,000*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes:
exceeds regulatory criteria
Only detected compounds are shown.
Detections are in **bold**.
na: not available
N/A: not applicable
ND < ##: Not detected at or above laboratory reporting limit shown
--: not analyzed
bgs: below ground surface
CHHSL: California Human Health Screening Level
DCE: dichloroethene
DFA: difluoroethane
PCE: tetrachloroethene
TCE: trichloroethene
ug/m^3: micrograms per cubic meter
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January.

Appendix D.4

Historical Environmental Sampling Data

Table D4-1 - Historical Total Petroleum Hydrocarbons (TPH) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	TPH (mg/kg)		
				Oil & Grease	TEPH	Total VOCs
IS-1	4/26/1989	Drum Area	3.5	**1,915**	**46**	ND<10
			7	**3,390**	**200**	ND<10
			10	**36,535**	ND<10	ND<10
IS-2	4/26/1989	Drum Area	3	**1,305**	**50**	ND<10
			8.5	**2,185**	ND<10	**300**
B-1/MW-1	7/5/1989	West of Tanks	5.5	**845**	**12**	ND<10
			10.5	ND<50	ND<10	ND<10
			16	**1,600**	**63**	ND<10
			20.5	**80**	ND<10	ND<10
			25.5	**95**	ND<10	ND<10
			30.5	ND<50	ND<10	ND<10
B-2	7/5/1989	West of office	0.5	ND<50	ND<10	ND<10
			6	**1,160**	**19**	ND<10
			10	**14,900**	**172**	**20**
			16	ND<50	ND<10	ND<10
B-3/MW-3	8/28/1989	SE of Tanks	5	**1,845**	**30**	ND<10
			12	**95**	**20**	ND<10
			15	**625**	**260**	**120**
			20	ND<20	ND<10	ND<10
			25	**20**	ND<10	ND<10
B-4	8/28/1989	Location unknown	4.5	**6,685**	ND<10	ND<10
			10	**25,470**	**170**	ND<10
			14.5	ND<20	ND<10	ND<10
B-5/MW-5	8/31/1989	At trench and drum area	6	**330**	ND<10	ND<10
			11	**3,580**	**15**	**25**
			15.5	**1,200**	**15**	**20**
			22.5	**110**	**20**	ND<10
			25.5	**115**	ND<10	ND<10
B-6/MW-6	8/31/1989	NW site boundary	20.5	**100**	ND<10	ND<10
			25.5	**190**	ND<10	ND<10
SS-1-E	10/5/1989	UST Confirmation	2' Beneath UST	--	**12**	**12**
SS-2-W	10/5/1989	UST Confirmation	2' Beneath UST	--	**11**	ND<10
SS-3-E	10/5/1989	UST Confirmation	2' Beneath UST	--	ND<10	ND<10
SS-4-W	10/5/1989	UST Confirmation	2' Beneath UST	--	**60**	**240**
SS-5-E	10/5/1989	UST Confirmation	2' Beneath UST	--	**35**	**115**
SS-6-W	10/5/1989	UST Confirmation	2' Beneath UST	--	**700**	**460**
B-7/MW-7	1/3/1990	Drum Area	4	**9,000**	ND<10	ND<10
			9	**8,800**	**788**	ND<10
B-8/MW-8	1/3/1990	Downgradient of USTs	4	**2,000**	ND<10	ND<10
			9	**20,000**	ND<10	ND<10
B-9	1/4/1990	At sump	4	**23,000**	ND<10	ND<10
			9	**15,000**	**5,050**	ND<10
B-10	1/4/1990	NW part of site	4	**9,500**	**380**	ND<10
			9	**6,300**	ND<10	ND<10
B-11	1/4/1990	Between office and warehouse	4	**45,000**	ND<10	ND<10
			9	**30,400**	ND<10	ND<10
B-12	1/4/1990	N of office	4	**12,000**	ND<10	ND<10
			9	**38,800**	ND<10	ND<10
B-13	1/4/1990	N part of site	4	**9,400**	ND<10	ND<10
			9	**3,000**	ND<10	ND<10
Sump	1/5/1990	Sump Excavation	Confirmation	**10,500**	ND<10	ND<10
MW-9	4/13/1994	W of Tank Excavation	8.5	--	ND<1	--
			15.5	**470**	--	--
MW-10	4/14/1994	N of Tank Excavation	9.5	--		
			15.5	**9,400**	**7,300**	**2**
T-1	4/13/1994	S of tank excavation	8	--	--	--
			14	--	**96**	ND<1
T-2	4/13/1994	SE tank excavation	6	**160**	**40**	--
			8.5	--	--	ND<1
T-3	4/13/1994	Bottom tank excavation	8	--	--	ND<1
			14.5	--	--	--
T-4	4/14/1994	SW tank excavation	9	--	--	ND<1
			14.5	--	--	--
T-5	4/14/1994	W of tank excavation	5	**710**	ND<10	ND<1
			9	ND<50	ND<1	ND<1
			14.5	--	--	--
T-7	4/14/1994	NW tank excavation	7.5	**68**	ND<10	ND<1
			14	--	ND<20	160
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [1]				*500*	*100*	*na*

Notes:
exceeds regulatory criteria
Only locations with detected TPH and/or Total VOC data are shown.
mg/kg: milligrams per kilogram
na: not available
ND<##: Not detected at or above laboratory reporting limit shown.
TEPH: Total Extractable Petroleum Hydrocarbons
TPH: Total Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
UST: Underground storage tank
1. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table D4-2 - Historical Volatile OrganicCompound (VOC) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths (ft bgs)	VOCs (ug/kg)											
				Acetone	Benzene	Ethylbenzene	Toluene	Total Xylenes	MIBK	1,2-DCB	1,3-DCB	1,4-DCB	MEK	Carbon Disulfide	Methylene Chloride
SS-1-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<200,000	**1,300**	**40**	NR	**300**	**600,000**	ND<30	**120**	**260**	ND<200,000	ND<80,000	ND<30
SS-2-W	10/5/1989	UST Confirmation	2' Beneath UST	ND<20	**230**	**30**	**60**	**50**	**20**	ND<30	ND<30	ND<30	ND<20	ND<3	ND<30
SS-3-E	10/5/1989	UST Confirmation	2' Beneath UST	**40**	ND<30	ND<30	**50**	**35**	ND<20	ND<30	ND<30	ND<30	ND<20	ND<3	ND<30
SS-4-W	10/5/1989	UST Confirmation	2' Beneath UST	ND<2,000,000	**1,400**	110	NR	**1,100**	**3,300,000**	**70**	**2,000**	**2,400**	ND<2,000,000	ND<800,000	ND<30
SS-5-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<400,000	ND<300	ND<300	NR	**1,000**	**180,000**	ND<30	ND<30	ND<30	ND<40,000	ND<20,000	ND<30
SS-6-W	10/5/1989	UST Confirmation	2' Beneath UST	ND<2,000,000	**4,600**	ND<1,500	NR	**7,500**	**5,000,000**	ND<30	ND<30	ND<30	ND<2,000,000	ND<800,000	ND<30
B-7/MW-7	1/3/1990	Drum Area	4	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<10	**250**	**61**	**1,020**	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<100	ND<100	ND<100	ND<100	**8,300**	ND<100	ND<100	ND<100	ND<500	ND<100	ND<50
B-9	1/4/1990	At sump	4	ND<50	ND<10	ND<10	**12**	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	**54**	**140**	**26**	**380**	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
B-11	1/4/1990	Between office and warehouse	4	ND<50	ND<10	ND<10	**15**	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
PB-1	9/5/1991	Soil Boring in tank area	6	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	**2**	ND<5	ND<20	ND<5	ND<5
			8.5	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	**3**	**4**	ND<5	ND<20	ND<5	ND<5
PB-2	9/5/1991	Soil Boring in tank area	5.5	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<5	ND<20	ND<5	ND<5
			8	ND<20	**5**	ND<5	ND<5	ND<5	ND<10	**4**	**4**	ND<5	ND<20	ND<5	ND<5
MW-9	4/13/1994	W of Tank Excavation	8.5	**70**	ND<5	ND<5	ND<5	ND<5	**6**	NR	NR	NR	**10**	ND<5	ND<10
			15.5	**140**	**4**	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**20**	ND<5	ND<10
MW-10	4/14/1994	N of Tank Excavation	9.5	**30**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	ND<10	ND<5	ND<10
			15.5	**320**	ND<10	ND<10	ND<10	ND<10	**11**	NR	NR	NR	**120**	**20**	**40**
T-2	4/13/1994	SE tank excavation	6	--	--	--	--	--	--	--	--	--	--	--	--
			8.5	**110**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**20**	ND<5	ND<10
T-3	4/13/1994	Bottom tank excavation	8	**70**	**4**	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**10**	ND<5	ND<10
			14.5	**100**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**20**	ND<5	ND<10
T-4	4/14/1994	SW tank excavation	9	**50**	ND<5	ND<5	ND<5	ND<5	**10**	NR	NR	NR	**8**	**4**	ND<10
			14.5	**160**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**40**	ND<5	ND<10
T-5	4/14/1994	W of tank excavation	5	--	--	--	--	--	--	--	--	--	--	--	--
			9	**20**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	ND<10	ND<5	ND<10
			14.5	ND<20	**12**	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**10**	ND<5	ND<10
T-6	4/14/1994	NE tank excavation	7.5	**100**	ND<5	ND<5	ND<5	ND<5	**6**	NR	NR	NR	**10**	ND<5	ND<10
			14	ND<100	ND<30	ND<30	ND<30	ND<30	ND<50	NR	NR	NR	ND<50	ND<30	ND<50
T-7	4/14/1994	NW tank excavation	7.5	**30**	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	**9**	ND<5	ND<10
			14	ND<1,000	ND<1,000	**600**	ND<300	ND<300	**500**	NR	NR	NR	ND<500	ND<300	ND<500
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [1]				*500*	*44*	*2,900*	*2,900*	*2,300*	*2,800*	*1,100*	*7,400*	*590*	*6,500*	*na*	*77*

Notes:
exceeds regulatory criteria
Only locations with detected VOCs are shown.
Only detected compounds are shown.
ug/kg: micrograms per kilogram
bgs: below ground surface
DCB: dichlorobenzene
MEK: Methyl ethyl ketone
MIBK: Methyl isobutyl ketone
na: not available
ND<##: Not detected at or above laboratory reporting limit shown
TCA: trichloroethane
TCE: trichloroethene
UST: Underground storage tank
1. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table D4-3 - Historical Semi-Volatile Organic Compound (SVOC) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	SVOCs (ug/kg)														
				Benzo(a) anthracene	Benzo(a) pyrene	Benzo(k) fluoranthene	Chrysene	Fluor-anthene	Isophor-one	2-Methyl naphthal-ene	Naphthal-ene	Nitro-benzene	Phen-anthrene	Pyrene	Bis (2-ethylhexyl) phthalate	4-Methyl phenol	1,2,4-TCB
SS-3-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<30	ND<30	ND<30	ND<70	ND<30	ND<30	ND<30	ND<30	ND<30	ND<30	ND<30	ND<300	**200**	**200**
SS-5-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<200	ND<200	ND<200	ND<400	ND<200	ND<200	**1,000**	**300**	ND<200	ND<200	ND<200	ND<2,000	ND<200	ND<200
B-7/MW-7	1/3/1990	Drum Area	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	**390**	**320**	ND<300	**1,500**	**750**	ND<300	**530**	**380**	ND<2,000	ND<300	ND<300
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**410**	ND<2,000	ND<300	ND<300
B-9	1/4/1990	At sump	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	**690**	**340**	ND<300	**1,100**	**8,900**	ND<300	**590**	**550**	ND<2,000	ND<300	ND<300
B-11	1/4/1990	Between office and warehouse	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**320**	ND<2,000	ND<300	ND<300
			9	**580**	ND<300	ND<300	**820**	**1,100**	ND<300	ND<300	ND<300	ND<300	**560**	**1,800**	ND<2,000	ND<300	ND<300
B-12	1/4/1990	N of office	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**370**	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
B-13	1/4/1990	N part of site	4	ND<300	**470**	ND<300	**390**	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**920**	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
MW-9	4/13/1994	W of Tank Excavation	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**400**	ND<300	ND<300
T-2	4/13/1994	SE tank excavation	6	ND<300	ND<300	**200**	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300
			8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-5	4/14/1994	W of tank excavation	5	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	**400**	ND<300	ND<300
			14.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHHSL - Residential [1]				*na*	*38*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [2]				*380*	*38*	*380*	*3,800*	*40,000*	*na*	*250*	*1,700*	*na*	*11,000*	*85,000*	*160,000*	*na*	*7,600*

Notes:
exceeds regulatory criteria
Only locations with detected SVOCs are shown.
Only detected compounds are shown.
na: not available
ND<##: Not detected at or above laboratory reporting limit shown
SVOCs: Semivolatile Organic Compounds
TCB: trichlorobenzene
ug/kg: micrograms per kilogram
UST: Underground storage tank

1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (Revised 2009)* . January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table D4-4 - Historical Metals Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths (ft bgs)	Metals (mg/kg)														
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
IS-1	4/26/1989	Drum Area	3.5	6.5	ND<2.2	110	0.05	4.1	20.1	5.6	70	100	ND<5	1.2	32.1	15.2	15.4	200
			7	1.4	ND<2.2	130	ND<0.025	4.2	21.5	6.4	104	130	ND<5	ND<1	31.5	ND<0.1	17.3	48.9
			10	1.6	ND<2.2	255	ND<0.025	10.2	63.5	11.4	1,042	4,300	ND<5	3.7	42.6	ND<0.1	17.3	5,400
IS-2	4/26/1989	Drum Area	3	ND<1	ND<2.2	90	ND<0.025	3.2	18.5	6	56.7	90	ND<5	1.2	30.9	ND<0.1	15.6	270
			8.5	ND<1	ND<2.2	35.7	ND<0.025	1.5	6.6	2.8	13.8	5.3	ND<5	ND<1	15.5	ND<0.1	6.7	22.9
B-1/MW-1	7/5/1989	West of Tanks	5.5	ND<1	ND<2.2	92	ND<0.025	1.4	13	5.7	28	61	ND<5	ND<1	14	ND<0.1	15	94
			10.5	ND<1	ND<2.2	21	ND<0.025	0.6	12.5	2.6	4	3	ND<5	ND<1	12.7	ND<0.1	7	5.4
			16	4	ND<2.2	78	ND<0.025	12	42	12.4	15.3	160	ND<5	2.4	30	ND<0.1	32	6,040
			20.5	ND<1	ND<2.2	61	ND<0.025	2.4	15	4.5	23	77	ND<5	ND<1	19	ND<0.1	12	106
			25.5	ND<1	ND<2.2	67	ND<0.025	2	10	8	13	8	ND<5	ND<1	24	ND<0.1	12	27
			30.5	ND<1	ND<2.2	23	ND<0.025	1.2	9.9	3.6	7.4	4.5	ND<5	ND<1	22	ND<0.1	6.7	15
B-2	7/5/1989	West of office	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			6	1.2	ND<2.2	109	ND<0.025	1.6	11.8	5	92	167	ND<5	ND<1	18.5	ND<0.1	9.7	67
			10	ND<1	ND<2.2	41	ND<0.025	ND<0.3	12.7	2.7	22.5	1,360	ND<5	ND<1	12.5	ND<0.1	13	532
			16	1.2	ND<2.2	95	ND<0.025	2.4	43	12	10	11	ND<5	ND<1	79	ND<0.1	10	23
			20.5	ND<1	ND<2.2	35	ND<0.025	1.4	7.8	1.9	9	8.7	ND<5	ND<1	16.6	ND<0.1	17	11
B-5/MW-5	8/31/1989	At trench and drum area	6	ND<1	ND<2.2	29.2	ND<0.025	0.5	13.5	3.4	13.3	9.7	ND<5	ND<1	18	ND<0.1	12	52
			11	1.05	ND<2.2	167.1	ND<0.025	2.15	15.2	8.7	64	164	ND<5	ND<1	22	ND<0.1	23.4	200
			15.5	3.85	ND<2.2	661	ND<0.025	4.5	22.4	8.2	200	1,270	ND<5	ND<1	26.8	ND<0.1	20	1420
			22.5	ND<1	ND<2.2	1,150	ND<0.025	3.8	19	40	44.2	24	ND<5	ND<1	151	ND<0.1	58.3	58.6
			25.5	ND<1	ND<2.2	158	ND<0.025	3.1	21	12.3	22.6	12	ND<5	ND<1	54	ND<0.1	31	42
B-6/MW-6	8/31/1989	NW site boundary	20.5	ND<1	ND<2.2	250	ND<0.025	3.5	23	19	22.5	15.3	ND<5	ND<1	48	ND<0.1	53	47
			25.5	ND<1	ND<2.2	56.5	ND<0.025	3.3	25	11	22	15	ND<5	ND<1	54	ND<0.1	25	42.6
B-7/MW-7	1/3/1990	Drum Area	4	ND<10	ND<16	140	0.48	ND<0.7	32	8.6	27	ND<12	ND<0.09	ND<1	28	ND<0.4	36	79
			9	ND<10	ND<16	24	0.13	ND<0.7	21	ND<2	3.6	ND<12	0.088	ND<1	16	ND<0.4	12	310
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<10	ND<16	42	0.16	ND<0.7	27	2.8	18	ND<12	ND<0.009	ND<1	18	ND<0.4	15	75
			9	ND<10	ND<16	85	0.15	ND<0.7	9.6	ND<2	41	24	0.36	ND<1	6.8	ND<0.4	8.5	120
B-9	1/4/1990	At sump	4	ND<10	ND<16	140	0.41	ND<0.7	33	7.4	55	41	0.45	ND<1	32	ND<0.4	31	120
			9	ND<16	ND<16	610	0.31	44	180	15	2,300	980	0.66	27	350	ND<0.4	26	6,200
B-10	1/4/1990	NW part of site	4	ND<10	ND<16	33	0.05	ND<0.7	23	ND<2	39	42	0.1	ND<1	10	ND<0.4	5	95
			9	ND<16	21	590	0.33	1.3	34	6.9	140	1,500	0.62	ND<1	24	ND<0.4	28	410
B-11	1/4/1990	tween office and wareho	4	ND<10	ND<16	240	0.36	1	22	5.4	44	72	0.092	ND<1	25	ND<0.4	21	940
			9	ND<10	ND<16	160	0.31	0.7	21	3.6	ND<4,500	55	0.012	ND<1	24	ND<0.4	17	160
B-12	1/4/1990	N of office	4	ND<10	ND<16	89	0.23	ND<0.7	36	3.4	170	120	ND<0.009	ND<1	29	ND<0.4	21	150
			9	ND<28	38	540	0.26	7.7	190	28	2,200	3,000	ND<0.009	20	110	ND<0.4	23	3,600
B-13	1/4/1990	N part of site	4	ND<10	ND<16	160	0.36	ND<0.7	62	6.5	120	520	ND<0.009	ND<1	42	ND<0.4	27	300
			9	ND<10	ND<16	37	0.15	ND<0.7	29	2.9	4.9	12	ND<0.009	ND<1	18	ND<0.4	15	210
Sump	1/5/1990	Sump Excavation	Confirmation	ND<10	ND<16	180	0.48	ND<0.7	95	10	49	62	0.022	ND<1	135	ND<0.4	39	150
MW-9	4/13/1994	W of Tank Excavation	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	ND<3	4.2	190	0.43	ND<0.25	26	12	30	19	ND<0.083	ND<1	36	ND<0.5	27	61
MW-10	4/14/1994	N of Tank Excavation	9.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	4.4	19	140	0.21	3.3	59	10	330	250	0.77	3.1	37	1.1	24	530
T-2	4/13/1994	SE tank excavation	6	5.1	9.3	170	0.23	1	25	8.7	2,100	330	ND<0.087	1.5	55	0.5	26	580
			8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-5	4/14/1994	W of tank excavation	5	ND<2.9	6	130	0.31	0.27	25	9.2	60	61	0.21	ND<0.98	28	ND<0.49	26	88
			9	ND<3	ND<2.5	41	ND<0.10	ND<0.25	23	4.2	14	1.5	ND<0.087	ND<1	19	ND<0.5	15	18
			14.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-7	4/14/1994	NW tank excavation	7.5	ND<3	4.2	150	0.45	0.28	27	10	40	6.1	ND<0.087	ND<0.99	37	ND<0.5	27	62
			14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHHSL - Residential[1]				*30*	*0.07*	*5,200*	*16*	*1.7*	*100,000*	*660*	*3,000*	*80*	*18*	*380*	*1,600*	*380*	*530*	*23,000*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area[2]				*20*	*0.39*	*750*	*4*	*12*	*750*	*0.33*	*230*	*80*	*6.7*	*40*	*150*	*20*	*200*	*600*

Notes:
exceeds regulatory and California hazardous waste criteria
exceeds regulatory criteria
Only detected compounds are shown.
bgs: below ground surface
mg/kg: milligrams per kilogram
ND<##: Not detected at or above laboratory reporting limit shown

1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (Revised 2009)*. January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.

Table D4-5- Historical PCBs Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	PCBs (mg/kg)	
				Arochlor 1260	Other PCBs
B-7/MW-7	1/3/1990	Drum Area	4	ND<1	ND
			9	ND<1	ND
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<1	ND
			9	**2.3**	ND
B-9	1/4/1990	At sump	4	ND<1	ND
			9	ND<1	ND
B-10	1/4/1990	NW part of site	4	ND<1	ND
			9	ND<1	ND
B-11	1/4/1990	Between office and warehouse	4	**2.2**	ND
			9	ND<1	ND
B-12	1/4/1990	N of office	4	ND<1	ND
			9	ND<1	ND
B-13	1/4/1990	N part of site	4	**3.1**	ND
			9	ND<1	ND
Sump	1/5/1990	Sump Excavation	Confirmation	**4.2**	ND
CHHSL - Residential [1]				*0.089*	*0.089*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [2]				*0.22*	*0.22*

Notes:
exceeds regulatory criteria
Only locations with detections are shown.
Only detected compounds are shown.
mg/kg: milligrams per kilogram
ND<##: Not detected at or above laboratory reporting limit shown
PCBs: Polychlorinated biphenyls
UST: Underground storage tank

APPENDIX B

DRILLING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 10/08/2013 By jamesy

Permit Numbers: W2013-0840
Permits Valid from 11/11/2013 to 11/11/2013

Application Id:	1379975457955	**City of Project Site:**	Emeryville
Site Location:	6701 Shellmound Street		
Project Start Date:	10/14/2013	**Completion Date:**	10/14/2013
Assigned Inspector:	Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org		
Extension Start Date:	11/11/2013	**Extension End Date:**	11/11/2013
Extension Count:	1	**Extended By:**	jamesy

Applicant:	PES Environmental, Inc. - Gary Thomas 1682 Novato Boulevard, Suite 100, Novato, CA 94947	**Phone:** 415-899-1600
Property Owner:	Attn. Frederic D. Schrag Nady Systems, Inc. 6701 Shellmound Street, Emeryville, CA 94608	**Phone:** 510-652-2411 x263
Client:	Attn. Jeff White AvalonBay Communities, Inc. 400 Race Street, Suite 200, San Jose, CA 95126	**Phone:** 415-601-9512
Contact:	Gary Thomas	**Phone:** 415-899-1600 **Cell:** 415-250-7217

	Total Due:	$265.00
Receipt Number: WR2013-0385	**Total Amount Paid:**	$265.00
Payer Name : Gary Thomas	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 24 Boreholes
Driller: Cascade Drilling - Lic #: 938110 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2013-0840	10/08/2013	01/12/2014	24	4.50 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

5. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory

agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

BORING LOGS

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 15% FINES	GW		WELL-GRADED GRAVELS WITH OR WITHOUT SAND
			GP		POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
		GRAVELS WITH 15% OR MORE FINES	GM		SILTY GRAVELS WITH OR WITHOUT SAND
			GC		CLAYEY GRAVELS WITH OR WITHOUT SAND
	SANDS MORE THAN HALF COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 15% FINES	SW		WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP		POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
		SANDS WITH 15% OR MORE FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OL		ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CH		INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OH		ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
HIGHLY ORGANIC SOILS			PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

ABBREVIATION KEY

PID (PPM) - Photo Ionization Detector readings in parts per million from headspace soil sample screening.

BLOWS/6" - Blows required to drive sampler 6 inches as indicated on the logs using sample drive hammer weight of 140 pounds falling 30 inches.

5Y 5/2 - Soil Color according to Munsell Soil Color Charts (1994 Revised Edition)

feet MSL - feet above Mean Sea Level

feet BGS - feet below ground surface

SYMBOLS KEY

- No Soil Sample Recovered
- Partial Soil Sample Recovered
- Undisturbed Soil Sample Recovered
- Soil Sample Submitted for Laboratory Analysis
- Hydropunch Sample
- First Encountered Groundwater Level
- Piezometric Groundwater level

PES Environmental, Inc.
Engineering & Environmental Services

Unified Soil Classification System Chart
6701 Shellmound Street
Emeryville, California

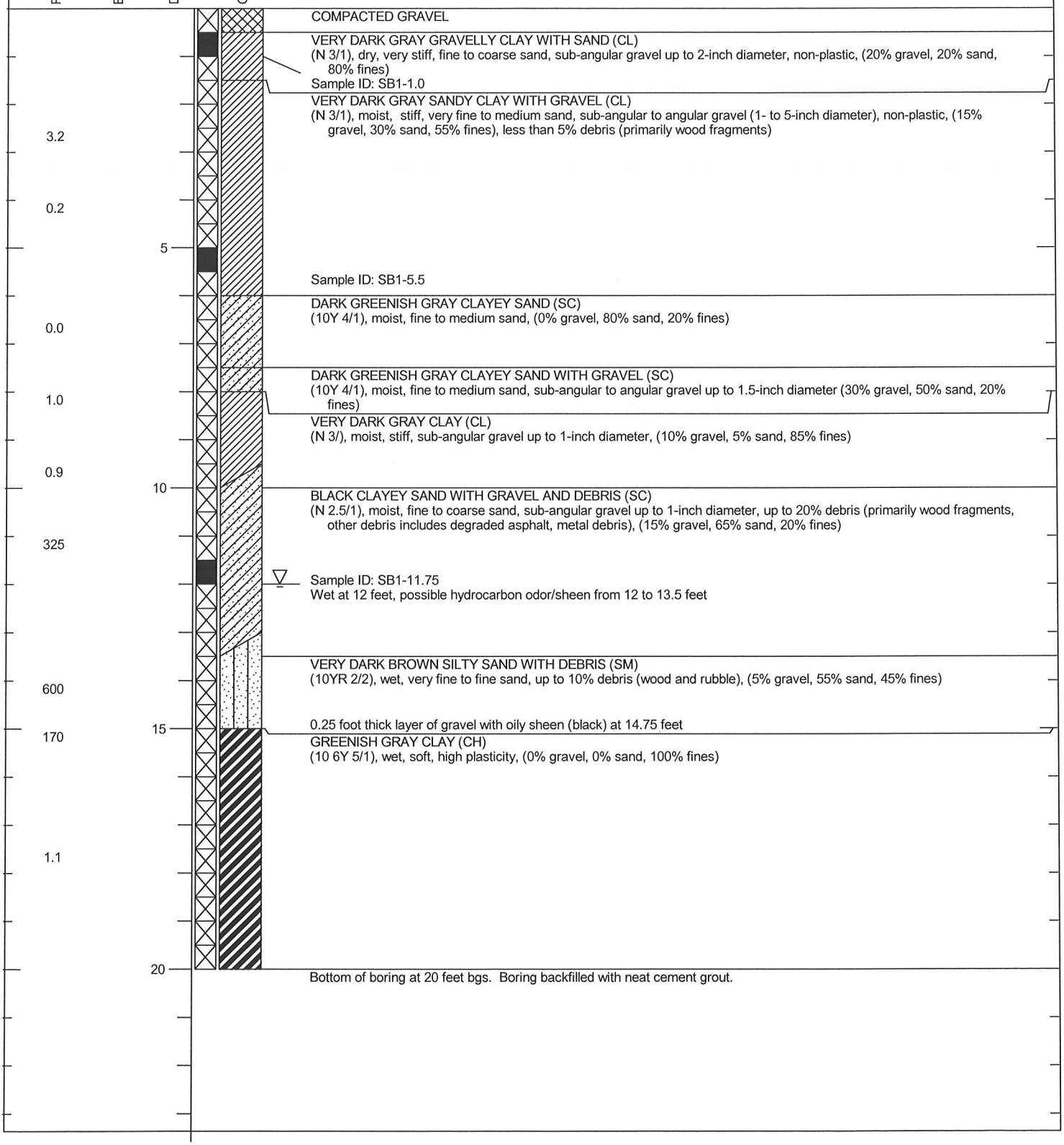
PLATE
C-0

1368.001.01.005	USCS Chart	GDT	12/13
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB1



PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE

C-1

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB2

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN SILTY GRAVEL WITH SAND (GM) (2.5Y 4/4), moist, sub-angular to angular gravel up to 1.5-inch diameter, very fine to coarse sand, (60% gravel, 20% sand, 20% fines) Compacted gravel, sub-angular to angular gravel up to 1 in diameter. Very little recovery 0 to 2 feet
2.3				
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (60% gravel, 20% sand, 20% fines)
1.2				
				Sample ID: SB2-4.0
				3-inch thick layer of concrete-like material at 4.5 feet
		5		
1.2				
				VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick fragments), (15% gravel, 45% sand, 40% fines)
1.0				Sample ID: SB2-7.5
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 10% debris (brick, glass, and asphalt fragments), (20% gravel, 25% sand, 55% fines)
1.1				
		10		
			▽	Sample ID: SB2-10.75
				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 25% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines) Possible hydrocarbon sheen and odor
115				
96				
		15		
120				VERY DARK GREENISH GRAY CLAY WITH GRAVEL, SAND, AND DEBRIS (CH) (10GY 3/1), wet, medium stiff, gravel, sand, and debris (up to 20%) in Bay mud matrix, debris (wood, glass, and concrete fragments), (15% gravel, 10% sand, 75% fines) Possible hydrocarbon staining/odor
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-2

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB3

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN SILTY SAND WITH GRAVEL (SM) (2.5Y 4/4), dry, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (40% gravel, 45% sand, 15% fines) Sample ID: SB3-1.5
2.4				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 5% debris (brick, glass, and wood fragments), (60% gravel, 20% sand, 20% fines) Large (greater than 3-inch diameter) concrete fragments at 2 feet
		5		
				Increase in sand content to (20% gravel, 30% sand, 50% fines) at 6 feet
3.5				Increase in debris content up to 10% (wood, glass, and brick fragments) Sample ID: SB3-7.5
				Decrease in sand and gravel content to (15% gravel, 15% sand, 70% fines) at 9.0 feet
1.5		10		
				Sample ID: SB3-11.0 ▽
35.1				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, ceramic, and wood fragments), (15% gravel, 55% sand, 30% fines)
4.5		15		
				GREENISH GRAY CLAY (CH) (10GY 5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
1.1				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-3

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB4

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN GRAVEL WITH SAND AND SILT (GP) (2.5Y 4/4), dry, very fine to coarse sand, angular gravel up to 1.5-inch diameter, (50% gravel, 40% sand, 10% fines) Sample ID: SB4-1.5
0.6				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick, glass, and metal fragments), (20% gravel, 45% sand, 35% fines)
1.0				
		5		Sample ID: SB4-5.0
1.2				
1.0				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, glass, wood and metal fragments), (15% gravel, 30% sand, 55% fines)
		10		Sample ID: SB4-10.0
12.1			▽	BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, and wood fragments), (15% gravel, 60% sand, 25% fines)
1.3		15		BLACK CLAY (CH) (N 2.5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
4.1				GREENISH GRAY CLAY (CH) (10GY 5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE

C-4

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB5

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				No recovery
1.0				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick and wood fragments), (25% gravel, 35% sand, 40% fines)
				Sample ID: SB5-3.0
1.3				
		5		
				Concrete debris from 6.5 to 7.5 feet
0.9				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, glass, and wood fragments), (15% gravel, 25% sand, 60% fines) Sample ID: SB5-6.0
		10		Abundant brick debris at 10 feet
0.9				
			▽	BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), moist, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines) Sample ID: SB5-11.5 Wet at 12 feet
1.4				
		15		DARK GREENISH GRAY CLAY (CH) (10GY 4/1), wet, soft, very fine to fine sand, high plasticity, (0% gravel, 10% sand, 90% fines)
2.2				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE

C-5

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB6

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 10% debris (brick, glass and wood fragments), (15% gravel, 55% sand, 30% fines)
1.6				
				Change in color to VERY DARK GRAY (2.5Y 3/1), increase in clay content to (15% gravel, 45% sand, 40% fines) at 3.5 feet
				Sample ID: SB6-4.0
		5		
				Concrete debris at 5.5 feet
2.4				
				DARK GREENISH GRAY CLAYEY SAND (SC) (10Y 4/1), moist, stiff, fine sand, (0% gravel, 80% sand, 20% fines) Sample ID: SB6-8.0
				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), moist, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 40% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines)
4.1				
		10		Sample ID: SB6-10.0
			▽	Wet at 13 feet
1.7				
		15		GREENISH GRAY CLAY WITH SAND (CH) (10GY 5/1), wet, soft, very fine to fine sand, high plasticity, (0% gravel, 20% sand, 80% fines)
3.2				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE

C-6

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB7

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 2.0-inch diameter, less than 5% debris (brick and glass fragments), (15% gravel, 55% sand, 30% fines)
0.9				
				Sample ID: SB7-2.5
				Change in color to VERY DARK GRAY (2.5Y 3/1), increase in clay content to (15% gravel, 45% sand, 40% fines) at 3.0 feet
1.2				
		5		Abundant brick fragments at 5 feet
1.6				
				Sample ID: SB7-8.0
				DARK GREENISH GRAY SAND WITH CLAY (SP) (10Y 4/1), moist, fine to medium sand, (0% gravel, 90% sand, 10% fines)
		10		
1.8				
			▽	Sample ID: SB7-12.5
				Wet at 13.0 feet
		15		DARK GREENISH GRAY CLAYEY GRAVEL WITH SAND (GC) (10Y 4/1), wet, fine to coarse sand, sub-angular to angular gravel up to 3-inch diameter, (60% gravel, 15% sand, 25% fines)
2.5				
1.9				GREENISH GRAY SANDY CLAY (CL) (10GY 5/1), wet, soft, very fine to fine sand, low plasticity, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-7

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB8

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				LIGHT YELLOWISH BROWN SILTY SAND WITH GRAVEL (SM) (10YR 6/4), dry, very fine to fine sand, sub-angular to angular gravel up to 1-inch diameter, (15% gravel, 70% sand, 15% fines)
0.3				
				DARK YELLOWISH BROWN CLAYEY GRAVEL WITH SAND (GC) (10YR 3/4), moist, very fine to fine sand, minor coarse sand, sub-angular to angular gravel up to 3-inch diameter, less than 5% debris (brick fragments), (50% gravel, 20% sand, 30% fines) Sample ID: SB8-3.5
		5		
0.1				YELLOWISH BROWN SAND (SP) (10Y 5/4), moist, fine to medium sand, (0% gravel, 100% sand, 0% fines)
0.2				Sample ID: SB8-8.0
		10		
0.4				Sample ID: SB8-12.0 Wet at 12.5 feet Change in color to DARK GREENISH GRAY (5GY 4/1) at 13 feet
		15		VERY DARK GRAY CLAY WITH SILT AND SAND (CL) (N 3/), wet, medium stiff, very fine to fine sand, less than 5% debris (wood), (0% gravel, 20% sand, 80% fines)
1.6				
2.0				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-8

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB9

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				GRAY GRAVEL WITH SAND (GP) (5Y 5/1), dry, very fine to coarse sand, angular gravel up to 1.5-inch diameter, (60% gravel, 40% sand, 15% fines)
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 55% sand, 30% fines)
1.1				Change in color to VERY DARK GRAY (2.5Y 3/1) at 4 feet, increase in clay to (15% gravel, 45% sand, 40% fines)
		5		Sample ID: SB9-4.5
				VERY DARK GREENISH GRAY CLAYEY SAND WITH GRAVEL (SC) (10Y 3/1), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, up to 5% debris (brick fragments), (15% gravel, 45% sand, 40% fines)
0.8				
		10		Sample ID: SB9-10.0
			▽	VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick and wood fragments), (50% gravel, 20% sand, 30% fines)
1.7		15		
0.9				GREENISH GRAY SILT WITH SAND (ML) (5GY 5/1), moist, stiff, very fine to fine sand, non-plastic, (0% gravel, 20% sand, 80% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-9

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB10

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (20% gravel, 50% sand, 30% fines)
1.3				Sample ID: SB10-2.0
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick, metal and concrete fragments), (20% gravel, 25% sand, 55% fines)
		5		Sample ID: SB10-5.0
2.1				OLIVE BROWN CLAYEY SAND (SC) (2.5Y 4/3), moist, very fine to medium sand, trace fine gravel, (5% gravel, 65% sand, 30% fines)
1.6				DARK GREENISH GRAY CLAY WITH SAND (CL) (5GY 4/1), moist, soft, very fine to medium sand, (0% gravel, 20% sand, 80% fines)
		10		Sample ID: SB10-10.0
			▽	
3.2				VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (50% gravel, 20% sand, 30% fines), up to 5% debris at 12 to 15 feet
		15		Increase in debris to up to 25% from 15 to 16 feet (primarily wood and glass fragments)
2.7				BLACK CLAYEY SAND WITH GRAVEL (SC) (N2 5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2.5-inch diameter, up to 20% debris (brick, concrete, glass, and wood), (15% gravel, 70% sand, 15% fines)
3.1				GREENISH GRAY CLAY WITH SILT (CL) (5GY 5/1), moist, stiff, very fine to fine sand, low plasticity, (0% gravel, 10% sand, 90% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-10

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB11

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				LIGHT YELLOWISH BROWN GRAVEL WITH SAND (GP) (2.5Y 6/3), dry, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, (60% gravel, 40% sand, 0% fines)
0.3				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (2.5Y 3/1), moist, very stiff, very fine to coarse sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB11-2.0
		5		DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 10% debris (brick, wood and metal fragments), (0% gravel, 100% sand, 0% fines) Concrete debris at 4 feet Sample ID: SB11-5.5 Concrete debris at 6 feet
1.1				
0.9				
		10		OLIVE BROWN SAND WITH CLAY (SP) (2.5Y 4/6), moist, fine to medium sand, (0% gravel, 90% sand, 10% fines)
			▽	Sample ID: SB11-11.5 Wet at 12 feet
2.1				Change in color to DARK GREENISH GRAY (10GY 4/1) at 12.75 feet
		15		
1.4				
				DARK GREENISH GRAY CLAY WITH SAND (CL) (10GY 4/1), wet, soft, very fine to fine sand, (0% gravel, 20% sand, 80% fines)
1.0		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-11

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB12

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick and wood fragments), (15% gravel, 30% sand, 55% fines)
2.1				Sample ID: SB12-2.0
				VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, stiff, very fine to medium sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 55% sand, 30% fines) Concrete debris at 3 feet
1.3		5		Sample ID: SB12-5.0
0.7				
		10		Increase in debris up to 20% (brick and glass fragments) at 9.75 feet Sample ID: SB12-10.0
			▽	Wet at 12 feet, Increase in debris up to 30% (brick, wood and glass fragments) at 12 feet
9.1				
15		15		Up to 85% debris (wood) from 15 to 16 feet
				DARK GREENISH GRAY SAND (SP) (10GY 4/1), wet, very fine to medium sand, (0% gravel, 95% sand, 5% fines)
1.4				DARK GREENISH GRAY SANDY CLAY (CL) (106Y 4/1), wet, stiff, very fine to fine sand, low plasticity, (0% gravel, 30% sand, 70% fines)
				Shell fragments present from 19 to 20 feet
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-12

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB13

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
1.3				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB13-1.5 Concrete debris at 2 to 2.5 feet
1.2		5		VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, stiff, very fine to medium sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick and wood fragments), (15% gravel, 55% sand, 30% fines) Sample ID: SB13-5.0
2.0				Increase in debris up to 20% (brick, wood, metal, ceramic, and glass fragments) at 8.5 feet
		10		Sample ID: SB13-10.0
2.1			▽	Wet at 12 feet; increase in debris up to 40% (ceramic, wood, metal, and glass fragments) at 12 feet
		15		VERY DARK GRAY CLAY (CH) (N 3/), wet, soft, very fine sand, (0% gravel, 10% sand, 90% fines)
4.0				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-13

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB14

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
0.9				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines)
				Sample ID: SB14-3.5
1.1		5		
				Change in color to VERY DARK GRAY (N 3/) at 8 feet, increase in debris to up to 5% (brick and wood fragments)
				Sample ID: SB14-8.5
1.2		10		
				Increase in debris to up to 40% (brick, glass, metal, asphalt and concrete fragments)
				▽ Sample ID: SB14-11.5
				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 5-inch diameter, up to 15% debris (brick, wood and glass fragments), (15% gravel, 60% sand, 25% fines)
4.7				Increase in clay content to (15% gravel, 30% sand, 35% fines) at 13.5 feet
		15		
				Decrease in clay content to (15% gravel, 60% sand, 25% fines) at 16 feet Up to 25% debris (brick, metal, concrete, glass, and wood debris)
20.6				
				BLACK SANDY CLAY WITH GRAVEL (CL) (N 2.5/1), wet, medium stiff, very fine to fine sand, sub-angular to angular gravel up to 1-inch diameter, up to 5% debris (wood, metal, and glass fragments), (15% gravel, 25% sand, 60% fines)
				VERY DARK GRAY CLAY WITH SAND (CH) (N 3/1), wet, soft, very fine sand, (0% gravel, 10% sand, 90% fines) Gravel and concrete debris at 19 to 19.5 feet
6.4		20		
		25		Bottom of boring at 25 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	25 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-14

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB15

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines), up to 10% debris (brick, asphalt, and wood fragments)
0.3				Sample ID: SB15-2.5
				Change in color to VERY DARK GRAY (N 3/) at 3.5 feet
		5		
1.2				Increase in debris to up to 10% (brick, wood, and concrete fragments)
				Sample ID: SB15-7.5
0.7				
		10		
			▽	Sample ID: SB15-11.5 Wet at 11.75 feet Change in color to BLACK (N 2.5/1), up to 10% debris (glass, brick, and wood fragments)
1.0				
		15		
1.5				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, wood and glass fragments), (15% gravel, 55% sand, 30% fines)
2.8				VERY DARK GRAY CLAY (CH) (N 3/), wet, soft, high plasticity, (0% gravel, 5% sand, 95% fines)
				DARK GREENISH GRAY SANDY SILT (ML) (5GY 4/1), wet, soft, very fine to fine sand, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE

C-15

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB16

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines)
1.0				Sample ID: SB16-2.5
		5		Change in color to VERY DARK GRAY (N 3/) at 4.5 feet
				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), moist, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (wood, metal, concrete, and glass fragments), (15% gravel, 60% sand, 25% fines)
				Sample ID: SB16-7.5
0.6				
		10		
				Sample ID: SB16-10.5
			▽	Wet at 11 feet
1.3				
				Increase in clay content to (15% gravel, 45% sand, 40% fines) at 13 feet Increase in debris to up to 25% (wood, brick, metal, and glass fragments)
		15		
2.5				VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/), wet, soft, sub-angular to angular gravel up to 3-inch diameter, up to 20% debris (clay pipe and wood fragments), (70% gravel, 15% sand, 15% fines)
				VERY DARK GREENISH GRAY CLAY (CH) (5GY 3/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
0.9				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE

C-16

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB17

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, up to 10% debris (brick, wood, and glass fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB17-2.0
1.0				
		5		Sample ID: SB17-5.0
				Increase in debris to up to 20% (large brick fragments, glass and wood debris)
0.3				Sample ID: SB17-9.5
		10		Abundant brick fragments at 10 feet
0.5				DARK OLIVE GRAY SANDY CLAY (CL) (5Y 3/6), wet, medium stiff, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 15% debris (asphalt, wood and brick fragments), (15% gravel, 20% sand, 65% fines)
1.2		15		BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 10% debris (glass, wood and brick fragments), (15% gravel, 60% sand, 25% fines)
1.9				DARK OLIVE GRAY CLAY WITH SAND (CL) (5Y 3/8), wet, soft, very fine to fine sand, sub-angular to angular gravel, up to 1.5-inch diameter, black marbling present, (0% gravel, 15% sand, 85% fines)
				DARK GREENISH GRAY SANDY CLAY (CL) (5GY 4/1), wet, very fine to fine sand, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE

C-17

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB18

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
0.4				OLIVE BROWN CLAYEY GRAVEL WITH SAND (GC) (2.5Y 4/1), dry, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2.5-inch diameter, up to 10% debris (brick, wood, concrete, and glass fragments), (50% gravel, 25% sand, 25% fines) Sample ID: SB18-2.0 Abundant concrete debris at 2 feet
0.5				DARK GREENISH GRAY SANDY CLAY WITH GRAVEL (CL) (5GY 4/1), MOIST, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 5% debris (brick, asphalt, and concrete fragments), (15% gravel, 30% sand, 55% fines) Abundant asphalt debris from 3 to 4 feet
		5		Sample ID: SB18-5.0
0.7				Change in color to VERY DARK GRAY (N 3/) Increase in debris to up to 10% (wood and brick fragments)
0.8				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), moist, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 20% debris (brick, glass, wood and metal fragments), (15% gravel, 45% sand, 40% fines)
		10		Sample ID: SB18-10.0
1.0			▽	VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/), wet, very fine to coarse sand, sub-angular to angular gravel, up to 3-inch diameter, up to 10% debris (brick and wood fragments), (50% gravel, 25% sand, 25% fines)
		15		
1.3				VERY DARK GREENISH GRAY CLAY (CH) (5GY 3/1), wet, soft, very fine sand, high plasticity, (0% gravel, 10% sand, 90% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE

C-18

APPENDIX D

GROUNDWATER SAMPLING FORMS

WELL GAUGING DATA

Project # 131111-PC Date 11/11/13 Client PES

Site 6701 Shellmound St., Emeryville

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
GGW1	0850	3/4					11.87	20.05		
GGW2	0940	3/4					12.69	20.10		
GGW3	1030	3/4					12.28	20.11		
GGW4	1122	3/4					13.49	20.10		
GGW5	1200	3/4					13.42	20.12		
GGW6	1255	3/4					10.79	20.10		

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 670 Shellmound, Emeryville				PROJECT NUMBER 13111-PC1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. C	INITIALS
YSI ProPlus	12J017 02	11/11/13 0910	DO→100%	99.2	Y	18.1	PC
			4/7/10 pH	4.00/7.02/10.02	Y	18.5	
			3900 µs	3904	Y	18.8	
			237.5 mV @ 20°C	231.1	Y	18.8	

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW-1	Well Diameter: 2 3 4 6 8 (3/4")
Total Well Depth (TD): 20.05	Depth to Water (DTW): 11.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI Pro Plus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.51	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.11 gpm Tubing Intake: 16'

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
0905	19.2	9.14	3774	>1000	0.18	-90.9	0.1	brown light sheen
0907	19.3	9.23	3868	>1000	0.13	-91.1	0.2	" " "
0910	19.2	9.26	3870	669	0.12	-141.7	0.3	cloudy brown "
0912	19.1	9.21	3852	327	0.12	-116.0	0.4	" " "
0914	19.2	9.25	3863	521	0.11	-104.4	0.5	" " "
0917	19.2	9.23	3845	216	0.10	-101.0	0.6	cloudy
		per client, continue purge for turbidity drop.						

Did well dewater? Yes (No) Gallons actually evacuated: 1

Sampling Date: 11/11/13 Sampling Time: Depth to Water: 11.91

Sample I.D.: GGW-1 Laboratory: CET

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D. GGW1	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.05	Depth to Water (DTW): 11.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI Pro Plus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.51	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: Peri. Pump w/ New Tubing

Flow Rate= 0.1 gpm

1 Case Volume		Specified Volumes		Calculated Volume	
0.2	(Gals.) X	3	=	0.6	Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C) (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
0920	19.1	9.20	3865	169	0.09	-98.0	0.7	
0923	19.1	9.19	3862	134	0.08	-100.2	0.8	
0925	19.1	9.22	3902	157	0.09	-107.0	0.9	
0926	19.2	9.15	3866	123	0.08	-110.7	1.0	

Did well dewater? Yes (No) Gallons actually evacuated: 1

Sampling Date: 11/11/13 Sampling Time: 0926 Depth to Water: 11.91

Sample I.D.: GGW1 Laboratory: CET

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-Rel	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW2	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.10	Depth to Water (DTW): 12.69
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI Pro Plus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.17	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm Tubing Intake: 16'

0.2 (Gals.) X	3	= 0.6 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
0947	20.2	9.15	2155	>1000	0.07	-104.3	0.1	dark brown.
0949	20.1	9.16	2156	>1000	0.06	-107.9	0.2	" "
0952	20.0	9.16	2161	>1000	0.07	-111.6	0.3	" "
0956	19.9	9.15	2164	>1000	0.06	-111.4	0.4	"
0958	19.9	9.14	2168	>1000	0.06	-113.8	0.5	"
1001	20.0	9.13	2169	>1000	0.06	-113.6	0.6	"
		Per client, continue purge to see if turbidity drops						

Did well dewater? Yes (No) Gallons actually evacuated: 1.6

Sampling Date: 11/11/13 Sampling Time: 1035 Depth to Water: 12.78

Sample I.D.: GGW2 Laboratory: C&T

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 6701 Shellmound St, Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW-2	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.10	Depth to Water (DTW): 12.69
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI Pro Plus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.17	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peristaltic Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1004	19.9	9.12	2174	>1000	0.06	-112.7	0.7	brown
1008	19.8	9.08	2180	879	0.09	-112.6	0.8	"
1011	19.8	9.08	2177	788	0.06	-111.6	0.9	"
1014	19.9	9.08	2175	700	0.06	-109.9	1.0	"
1016	19.9	9.08	2176	594	0.06	-111.3	1.1	"
1019	19.9	9.08	2180	558	0.06	-115.5	1.2	"
1022	19.8	9.09	2181	530	0.06	-109.7	1.3	"

Did well dewater? Yes (No) Gallons actually evacuated: 1.6

Sampling Date: 11/11/13 Sampling Time: 1035 Depth to Water: 12.78

Sample I.D.: GGW-2 Laboratory: CAT

Analyzed for: TPHd22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW-2	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.10	Depth to Water (DTW): 12.69
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI Pro Plus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.17	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- (X) Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- (X) Other: New Tubing

Flow Rate= 0.08 gpm

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1025	19.8	9.08	2180	490	0.07	-105.7	1.4	lightbrown
1028	19.6	9.08	2180	439	0.06	-103.5	1.5	" "
1031	19.5	9.07	2178	420	0.06	-112.2	1.6	" "

Did well dewater? Yes (No) Gallons actually evacuated: 1.6

Sampling Date: 11/11/13 Sampling Time: 1035 Depth to Water: 12.78

Sample I.D.: GGW-2 Laboratory: C&T

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW3	Well Diameter: 2 3 4 6 8 (3/4")
Total Well Depth (TD): 20.11	Depth to Water (DTW): 12.28
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI ProPlus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.85	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm Tubing Intake: 16'

1 Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Gals.
0.2		3		0.6	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1044	21.3	10.13	2148	71000	0.08	-55.3	0.1	black
1047	21.5	9.45	1898	678	0.06	-60.0	0.2	grey, cloudy
1050	21.3	9.37	1802	532	0.07	-63.5	0.3	" "
1053	21.2	9.27	1748	534	0.07	-62.6	0.4	" "
1056	21.2	9.24	1712	457	0.07	-62.3	0.5	" "
1059	20.7	9.16	1643	413	0.08	-63.4	0.6	" "
1102	21.1	9.12	1567	402	0.07	-66.8	0.7	" "
1105	21.4	9.09	1496	545	0.07	-64.1	0.8	" "

Did well dewater? Yes (No)		Gallons actually evacuated: 0.8	
Sampling Date: 11/11/13	Sampling Time: 1109	Depth to Water: 12.28	
Sample I.D.: GGW3		Laboratory: C&T	
Analyzed for: Title 22		Other:	
EB I.D. (if applicable):	@ Time	Duplicate I.D. (if applicable):	
FB I.D. (if applicable):	@ Time	Analyzed for:	
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 131111-PC	Site: 670 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGLW4	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.10	Depth to Water (DTW): 13.49
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI ProPlus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.81	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm Pump Intake:

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1134	18.7	7.54	2062	71000	0.28	-50.0	0.1	grey
1137	18.7	7.51	2139	651	0.22	-71.7	0.2	"
1140	18.6	7.50	2164	183	0.20	-52.2	0.3	cloudy
1143	18.6	7.49	2181	51	0.18	-49.7	0.4	"
1146	18.7	7.49	2190	29	0.17	-52.2	0.5	"
1149	18.6	7.48	2172	23	0.20	-57.2	0.6	clear
1152	18.7	7.48	2191	27	0.20	-53.3	0.7	"
1155	18.7	7.48	2193	23	0.25	-54.4	0.8	"
1158								

Did well dewater?	Yes	(No)	Gallons actually evacuated:	0.8
Sampling Date: 11/11/13	Sampling Time: 1200		Depth to Water:	13.50
Sample I.D.: GGLW4	Laboratory: CET			
Analyzed for: Title 22	Other:			
EB I.D. (if applicable):	@ Time	Duplicate I.D. (if applicable):		
FB I.D. (if applicable):	@ Time	Analyzed for:		
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L	
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV	

WELL MONITORING DATA SHEET

Project #: 131111-PC1	Site: 670 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGW-5	Well Diameter: 2 3 4 6 8 (3/4")
Total Well Depth (TD): 20.12	Depth to Water (DTW): 13.42
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI ProPlus
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.76	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm Tubing Intake: 16.5'

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C) (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1215	17.9	7.71	5198	>1000	0.10	-86.6	0.1	grey
1218	17.8	7.58	4261	>1000	0.09	-89.8	0.2	"
1221	18.0	7.52	4001	>1000	0.11	-91.5	0.3	"
1224	17.8	7.50	3893	>1000	0.12	-88.8	0.4	"
1227	17.9	7.49	3822	706	0.45	-83.5	0.5	"
1230	18.0	7.49	3765	503	0.61	-83.1	0.6	"
1233	17.8	7.48	3736	357	0.54	-80.0	0.7	light grey
1235	17.8	7.47	3705	275	0.46	-77.1	0.8	" "
1238	17.8	7.46	3649	196	0.44	-75.6	0.9	" "
1240	17.7	7.46	3654	151	0.42	-75.7	1.0	" "
1243	17.7	7.46	3632	119	0.39	-73.4	1.1	cloudy
1246	17.7	7.47	3631	125	0.37	-73.1	1.2	"

Did well dewater? Yes (No) Gallons actually evacuated: 1.2

Sampling Date: 11/11/13 Sampling Time: 1250 Depth to Water: 13.50

Sample I.D.: GGW-5 Laboratory: CET

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 13111-PC1	Site: 6701 Shellmound St., Emeryville
Sampler: PC	Date: 11/11/13
Well I.D.: GGLW-6	Well Diameter: 2 3 4 6 8 (3/4)
Total Well Depth (TD): 20.10	Depth to Water (DTW): 10.79
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type:
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.65	

Purge Method:
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- 2" Rediflo pump
- Extraction Pump
- X Other: Peri. Pump

Sampling Method:
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- X Other: New Tubing

Flow Rate= 0.08 gpm Tubing Intake: 16'

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°C) (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	Observations
1304	19.5	7.63	2394	>1000	0.14	-521.8	0.1	grey
1307	19.5	7.62	2389	>1000	0.14	-535.1	0.2	"
1310	19.4	7.61	2388	>1000	0.15	-542.6	0.3	"
1312	19.6	7.60	2384	>1000	0.31	-542.2	0.4	"
1315	19.5	7.57	2381	>1000	0.45	-536.8	0.5	"
1318	19.6	7.56	2384	580	0.34	-531.3	0.6	cloudy
1320	19.5	7.55	2389	418	0.30	-524.7	0.7	"
1323	19.6	7.55	2388	381	0.28	-516.4	0.8	"
1326	19.60	7.54	2387	412	0.26	-516.3	0.9	"
1329	19.6	7.53	2388	408	0.25	-513.9	1.0	"

Did well dewater? Yes (No) Gallons actually evacuated: 1.0

Sampling Date: 11/11/13 Sampling Time: 1334 Depth to Water: 10.80

Sample I.D.: GGLW-6 Laboratory: C&T

Analyzed for: Title 22 Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

APPENDIX E

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION FOR SOIL AND GROUNDWATER SAMPLES


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250703
ANALYTICAL REPORT

PES Environmental, Inc.
1682 Novato Boulevard
Novato, CA 94947

Project : 1386.001.01.003
Location : 6701 Shellmound, Emeryville
Level : II

Sample ID	Lab ID
GGW-1	250703-001
GGW-2	250703-002
GGW-3	250703-003
GGW-4	250703-004
GGW-5	250703-005
GGW-6	250703-006

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/12/2013

Will S Rice
Project Manager
will.rice@ctberk.com

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250703**
Client:	**PES Environmental, Inc.**
Project:	**1386.001.01.003**
Location:	**6701 Shellmound, Emeryville**
Request Date:	**11/11/13**
Samples Received:	**11/11/13**

This data package contains sample and QC results for six water samples, requested for the above referenced project on 11/11/13. The samples were received cold and intact.

Metals (EPA 6010B and EPA 7470A):
Lead was detected between the MDL and the RL in the method blank for batch 204944. No other analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD 250703

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T

SAMPLERS: M. Buttress, P. Cornish

JOB NUMBER: 1386.001.01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: M. Buttress

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX: Vapor	Water	Soil	Sedim't	# of Containers & Preservatives: Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13 11	11		0926	GGW-1		X			1			1		
2				1035	GGW-2		X			1			1		
3				1109	GGW-3		X			1			1		
4				1200	GGW-4		X			1			1		
5				1250	GGW-5		X			1			1		
6				1334	GGW-6		X			1			1		

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Title 22 Metals (6010/7471)*
							X	X
							X	
							X	
							X	
							X	
							X	

NOTES

Turn Around Time: 24-hour

*: dissolved metals. samples filtered in field. use HNO_3 preserved container, unpreserved container is back-up.

Page 1 of 1

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	11/11/13	1700

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250703 Date Received 11/11/13 Number of coolers 1
Client YES Project 6701 Stellmond

Date Opened 11/11 By (print) M (sign) M
Date Logged in b By (print) b (sign) b

1. Did cooler come with a shipping slip (airbill, etc) ____ YES (NO)
Shipping info ____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many ____ Name ____ Date ____
2B. Were custody seals intact upon arrival? ____ YES NO (N/A)
3. Were custody papers dry and intact when received? ____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? ____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ____ (YES) NO
6. Indicate the packing in cooler: (if other, describe) ____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) ____

☒ Samples Received on ice & cold without a temperature blank; ~~temp. taken with IR gun~~

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? ____ YES (NO)
If YES, what time were they transferred to freezer? ____
9. Did all bottles arrive unbroken/unopened? ____ (YES) NO
10. Are there any missing / extra samples? ____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? ____ (YES) NO
12. Are sample labels present, in good condition and complete? ____ (YES) NO
13. Do the sample labels agree with custody papers? ____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? ____ (YES) NO
15. Are the samples appropriately preserved? ____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? ____ (YES) NO N/A
17. Did you document your preservative check? ____ (YES) NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? ____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? ____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? ____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? ____ YES (NO)
If YES, Who was called? ____ By ____ Date: ____

COMMENTS
17) -VOS Neil w pH >2 added 1mL HNO3 (Lot# 37901) to 17 to pH <2

Curtis & Tompkins Sample Preservation for 250703

Sample	pH: <2	>9	>12	Other
-001a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
-002a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
-003a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
-004a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
-005a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
-006a	[✓]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____

Analyst: MM

Date: 11/11/13

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-1	Diln Fac:	1.000
Lab ID:	250703-001	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	250	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	8.9	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	59	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	0.28	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	10	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	5.4	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	27	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	71	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	210	20		204944	11/11/13	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-2	Diln Fac:	1.000
Lab ID:	250703-002	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	6.4	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	280	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	8.0	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	9.1	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	190	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	0.41	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	8.5	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	26	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	22	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	360	20		204944	11/11/13	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-3	Diln Fac:	1.000
Lab ID:	250703-003	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	32	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	340	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	17	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	ND	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	8.7	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	29	20		204944	11/11/13	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-4	Diln Fac:	1.000
Lab ID:	250703-004	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	200	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	1.3 J	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	ND	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	10	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	ND	20		204944	11/11/13	EPA 3010A	EPA 6010B

J= Estimated value
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-5	Diln Fac:	1.000
Lab ID:	250703-005	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	350	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	9.9	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	0.21	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	6.6	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	6.4	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	23	20		204944	11/11/13	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Dissolved California Title 22 Metals

Lab #:	250703	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	GGW-6	Diln Fac:	1.000
Lab ID:	250703-006	Sampled:	11/11/13
Matrix:	Filtrate	Received:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Arsenic	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Barium	94	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Chromium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Copper	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Lead	3.1 J	5.0	0.85	204944	11/11/13	EPA 3010A	EPA 6010B
Mercury	ND	0.20		204971	11/12/13	METHOD	EPA 7470A
Molybdenum	5.9	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Nickel	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Selenium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Silver	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Thallium	ND	10		204944	11/11/13	EPA 3010A	EPA 6010B
Vanadium	ND	5.0		204944	11/11/13	EPA 3010A	EPA 6010B
Zinc	ND	20		204944	11/11/13	EPA 3010A	EPA 6010B

J= Estimated value
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC715684	Batch#:	204944
Matrix:	Filtrate	Prepared:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL
Antimony	ND	10	
Arsenic	ND	5.0	
Barium	ND	5.0	
Beryllium	ND	2.0	
Cadmium	ND	5.0	
Chromium	ND	5.0	
Cobalt	ND	5.0	
Copper	ND	5.0	
Lead	2.1 J	5.0	0.85
Molybdenum	ND	5.0	
Nickel	ND	5.0	
Selenium	ND	10	
Silver	ND	5.0	
Thallium	ND	10	
Vanadium	ND	5.0	
Zinc	ND	20	

J= Estimated value
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Matrix:	Filtrate	Batch#:	204944
Units:	ug/L	Prepared:	11/11/13
Diln Fac:	1.000	Analyzed:	11/12/13

Type: BS Lab ID: QC715685

Analyte	Spiked	Result	%REC	Limits
Antimony	500.0	487.4	97	75-120
Arsenic	100.0	98.71	99	78-120
Barium	2,000	1,937	97	80-120
Beryllium	50.00	50.91	102	80-120
Cadmium	50.00	52.38	105	80-120
Chromium	200.0	194.0	97	80-120
Cobalt	500.0	478.0	96	79-120
Copper	250.0	232.8	93	77-120
Lead	100.0	98.37	98	78-120
Molybdenum	400.0	391.7	98	80-120
Nickel	500.0	487.6	98	80-120
Selenium	100.0	100.7	101	75-120
Silver	50.00	48.68	97	77-120
Thallium	100.0	103.9	104	79-120
Vanadium	500.0	489.5	98	80-120
Zinc	500.0	505.5	101	80-120

Type: BSD Lab ID: QC715686

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	490.2	98	75-120	1	20
Arsenic	100.0	100.8	101	78-120	2	22
Barium	2,000	1,970	98	80-120	2	20
Beryllium	50.00	51.73	103	80-120	2	20
Cadmium	50.00	52.50	105	80-120	0	20
Chromium	200.0	197.4	99	80-120	2	20
Cobalt	500.0	487.4	97	79-120	2	20
Copper	250.0	237.7	95	77-120	2	20
Lead	100.0	98.12	98	78-120	0	20
Molybdenum	400.0	393.8	98	80-120	1	20
Nickel	500.0	496.4	99	80-120	2	20
Selenium	100.0	102.5	102	75-120	2	25
Silver	50.00	48.45	97	77-120	0	20
Thallium	100.0	105.1	105	79-120	1	23
Vanadium	500.0	499.5	100	80-120	2	20
Zinc	500.0	514.9	103	80-120	2	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	204944
MSS Lab ID:	250590-001	Sampled:	11/06/13
Matrix:	Filtrate	Received:	11/06/13
Units:	ug/L	Prepared:	11/11/13
Diln Fac:	1.000	Analyzed:	11/12/13

Type: MS Lab ID: QC715687

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	2.771	500.0	493.9	98	74-120
Arsenic	1.079	100.0	102.6	101	74-130
Barium	38.87	2,000	1,946	95	75-120
Beryllium	<0.1508	50.00	49.90	100	80-123
Cadmium	<0.2578	50.00	48.30	97	72-121
Chromium	<0.6859	200.0	187.5	94	74-120
Cobalt	0.6756	500.0	468.2	93	73-120
Copper	1.818	250.0	231.4	92	73-121
Lead	<0.8472	100.0	95.24	95	68-120
Molybdenum	9.208	400.0	398.0	97	78-120
Nickel	2.923	500.0	473.7	94	73-120
Selenium	<3.205	100.0	102.6	103	67-129
Silver	0.5238	50.00	42.81	85	62-124
Thallium	<2.337	100.0	93.54	94	67-120
Vanadium	4.632	500.0	482.4	96	80-120
Zinc	<2.612	500.0	503.0	101	72-123

Type: MSD Lab ID: QC715688

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	506.2	101	74-120	2	20
Arsenic	100.0	106.9	106	74-130	4	23
Barium	2,000	1,971	97	75-120	1	23
Beryllium	50.00	51.33	103	80-123	3	20
Cadmium	50.00	50.22	100	72-121	4	20
Chromium	200.0	193.4	97	74-120	3	20
Cobalt	500.0	480.3	96	73-120	3	20
Copper	250.0	239.2	95	73-121	3	21
Lead	100.0	97.15	97	68-120	2	24
Molybdenum	400.0	406.5	99	78-120	2	20
Nickel	500.0	490.7	98	73-120	4	20
Selenium	100.0	106.8	107	67-129	4	39
Silver	50.00	42.11	83	62-124	2	20
Thallium	100.0	97.18	97	67-120	4	24
Vanadium	500.0	497.1	98	80-120	3	20
Zinc	500.0	520.6	104	72-123	3	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC715689	Batch#:	204944
Matrix:	Filtrate	Prepared:	11/11/13
Units:	ug/L	Analyzed:	11/12/13

Analyte	Result	RL	MDL
Antimony	ND	10	
Arsenic	ND	5.0	
Barium	ND	5.0	
Beryllium	ND	2.0	
Cadmium	ND	5.0	
Chromium	ND	5.0	
Cobalt	ND	5.0	
Copper	ND	5.0	
Lead	ND	5.0	0.85
Molybdenum	ND	5.0	
Nickel	ND	5.0	
Selenium	ND	10	
Silver	ND	5.0	
Thallium	ND	10	
Vanadium	ND	5.0	
Zinc	ND	20	

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	204971
Matrix:	Water	Prepared:	11/12/13
Units:	ug/L	Analyzed:	11/12/13
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC715784	2.500	2.715	109	80-120		
BSD	QC715785	2.500	2.688	108	80-120	1	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	204971
Field ID:	ZZZZZZZZZZ	Sampled:	10/29/13
MSS Lab ID:	250443-003	Received:	11/01/13
Matrix:	Water	Prepared:	11/12/13
Units:	ug/L	Analyzed:	11/12/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC715786	0.1436	2.500	2.716	103	62-124		
MSD	QC715787		2.500	2.723	103	62-124	0	35

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	250703	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	204971
Lab ID:	QC715789	Prepared:	11/12/13
Matrix:	Filtrate	Analyzed:	11/12/13
Units:	ug/L		

Result	RL
ND	0.20

ND= Not Detected
RL= Reporting Limit


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250732
ANALYTICAL REPORT

PES Environmental, Inc.	Project : 1386.001.01.003
1682 Novato Boulevard	Location : 6701 Shellmound, Emeryville
Novato, CA 94947	Level : II

Sample ID	Lab ID
SB14-11.5	250732-001
SB14-8.5	250732-002
SB14-3.5	250732-003
SB15-11.5	250732-004
SB15-7.5	250732-005
SB15-2.5	250732-006
SB16-10.5	250732-007
SB16-7.5	250732-008
SB16-2.5	250732-009
SB17-9.5	250732-010
SB17-5.0	250732-011
SB17-2.0	250732-012
SB18-10.0	250732-013
SB18-5.0	250732-014
SB18-2.0	250732-015

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 12/02/2013

Will S Rice
Project Manager
will.rice@ctberk.com

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250732**
Client:	**PES Environmental, Inc.**
Project:	**1386.001.01.003**
Location:	**6701 Shellmound, Emeryville**
Request Date:	**11/15/13**
Samples Received:	**11/12/13**

This data package contains sample and QC results for fifteen soil samples, requested for the above referenced project on 11/15/13. The samples were received cold and intact. Revised 12/02/13 to include full list of PCB aroclors.

PCBs (EPA 8082):
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. High response was observed for Aroclor-1016 in the CCV analyzed 11/20/13 03:45; affected data was qualified with "b". No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A) Soil:
Low recovery was observed for barium in the MS of SB14-11.5 (lab # 250732-001); the BS/BSD were within limits, and the associated RPD was within limits. High recoveries were observed for lead in the MS/MSD of SB14-11.5 (lab # 250732-001); the BS/BSD were within limits, and the associated RPD was within limits. High recovery was observed for mercury in the MSD of SB14-3.5 (lab # 250732-003); the BS/BSD were within limits. High RPD was also observed for mercury in the MS/MSD of SB14-3.5 (lab # 250732-003); the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

Metals (EPA 6010B) TCLP Leachate:
No analytical problems were encountered.

Metals (EPA 6010B) WET Leachate:
No analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T
SAMPLERS: M. Butters
JOB NUMBER: 138e.00.01.003
NAME / LOCATION: 6701 Shellmound, Emeryville
PROJECT MANAGER: K. Flory
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	09	1000	SB14-11.5			X		1					
2				1015	SB14-8.5			X		1					
3				1030	SB14-3.5			X		1					
4				1100	SB15-11.5			X		1					
5				1110	SB15-7.5			X		1					
6				1120	SB15-2.5			X		1					
7				1130	SB16-10.5			X		1					
8				1140	SB16-7.5			X		1					
9				1150	SB16-2.5			X		1					
10				1040	SB17-1.5			X		1					
11				1045	SB17-5.0			X		1					
12				1050	SB17-2.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Field
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X

NOTES

Turn Around Time:

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	970
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tyna Karkar	11/12/13	1215
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

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PES Environmental, Inc.
Engineering & Environmental Services

250732

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M. Buttress

JOB NUMBER: 1386 001-01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	07	1200	SB18-10.0			X		1					
14				1210	SB18-5.0			X		1					
15				1220	SB18-2.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)
							X
							X
							X

NOTES

Turn Around Time:

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tina Rakka	11/12/13	1205
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

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PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T
JOB NUMBER: 1380.001.01.003
NAME / LOCATION: 6701 Shellmound, Emeryville
PROJECT MANAGER: K. Fay
SAMPLERS: U Butterer
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sed/m't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	09	1000	SB14-11.5			X		1					
2				1015	SB14-8.5			X		1					
3				0730	SB14-3.5			X		1					
4				1000	SB15-11.5			X		1					
5				1110	SB15-7.5			X		1					
6				1120	SB15-2.5			X		1					
7				1130	SB16-10.5			X		1					
8				1140	SB16-7.5			X		1					
9				1150	SB16-2.5			X		1					
10				1040	SB17-9.5			X		1					
11				1045	SB17-5.0			X		1					
12				1050	SB17-2.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B**	Title 22 Metals** by 6010B/7471A
								X	X				
								X		X			
								X			X		
								X				X	
								X					X
								X					X
								X					X
								X					X
								X					X
								X					X
								X					X
								Y					X
								Y					X

NOTES

Turn Around Time: *24-Hour TAT for Lead Analysis
**72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)		11/8/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Uma Rarkia	11/12/13	1215
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

analyst on receipt pl

request received 11/12/13

PES Environmental, Inc.
Engineering & Environmental Services

250732

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M. Britcss

JOB NUMBER: 1386 001.01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K Flory

RECORDER: MJ

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	07	1200	SB18-10.0			X							
14				1210	SB18-5.0			X		1					
15				1220	SB18-2.0			X		1					

ANALYSIS REQUESTED

	EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B*	Title 22 metals by 6010B/7471A**
13								X				X	
14								X				X	
15								X				X	

13
14
15

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 2 of 2

CHAIN OF CUSTODY RECORD

	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)		11/7/13	930
RELINQUISHED BY: (Signature)	Tina Rocha	11/12/13	1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

intact & ice cold RC

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T
SAMPLERS: M Butterer
JOB NUMBER: 138.001.01.003
NAME / LOCATION: 6701 Shellmound, Emeryville
PROJECT MANAGER: K. Flynn
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	09	1000	SB14-1.5			X		1					
2				1015	SB14-4.5			X		1					
3				0930	SB14-3.5			X		1					
4				1000	SB15-1.5			X		1					
5				1110	SB15-7.5			X		1					
6				1120	SB15-2.5			X		1					
7				1130	SB16-10.5			X		1					
8				1140	SB16-7.5			X		1					
9				1150	SB16-2.5			X		1					
10				1040	SB17-9.5			X		1					
11				1045	SB17-5.0			X		1					
12				1050	SB17-2.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B**	Title 22 Metals** by 6010B/7471A	STLC Lead	TCLP Lead
								X				⊗			
								X				⊗			
								X			⊗	⊗			
								X				⊗			
								X					⊗		
								X				⊗			
								X					⊗		
								X				⊗		X	X
								X				⊗			
								X				⊗			
								X				⊗			
								X					⊗		

NOTES

Turn Around Time: * 24-Hour TAT for Lead Analysis
** 72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Lina Rarkia	11/12/13	1215
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Received 11/20

Received 11/20

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250732 Date Received 11/12/13 Number of coolers 2
Client PES Project 6701 SHELLMOUND (1386.001.01.003)

Date Opened 11/12/13 By (print) YR (sign) Tina Ravka
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.8, 5.1

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Field ID:	SB14-3.5	Batch#:	205200
Matrix:	Soil	Sampled:	11/09/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Diln Fac:	1.000	Analyzed:	11/19/13

Type: SAMPLE Lab ID: 250732-003

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	13	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	95	66-142
Decachlorobiphenyl	74	43-139

Type: BLANK Lab ID: QC716687

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	78	43-139

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC716688	Batch#:	205200
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	167.8	177.2	106	64-143
Aroclor-1260	167.8	175.0	104	58-146

Surrogate	%REC	Limits
TCMX	102	66-142
Decachlorobiphenyl	83	43-139

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Field ID:	SB14-3.5	Batch#:	205200
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716689

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.942	164.1	172.5 b	105	58-155
Aroclor-1260	12.74	164.1	214.3	123	35-159

Surrogate	%REC	Limits
TCMX	110	66-142
Decachlorobiphenyl	83	43-139

Type: MSD Lab ID: QC716690

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	166.7	176.6 b	106	58-155	1	44
Aroclor-1260	166.7	192.9	108	35-159	12	53

Surrogate	%REC	Limits
TCMX	106	66-142
Decachlorobiphenyl	84	43-139

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205158
Matrix:	Soil	Sampled:	11/09/13
Units:	mg/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/16/13
Diln Fac:	1.000	Analyzed:	11/18/13

Field ID	Type	Lab ID	Result	RL
SB14-11.5	SAMPLE	250732-001	250	0.26
SB14-8.5	SAMPLE	250732-002	100	0.24
SB15-11.5	SAMPLE	250732-004	130	0.23
SB15-2.5	SAMPLE	250732-006	8.2	0.26
SB16-7.5	SAMPLE	250732-008	280	0.27
SB16-2.5	SAMPLE	250732-009	19	0.24
SB17-9.5	SAMPLE	250732-010	150	0.25
SB17-5.0	SAMPLE	250732-011	27	0.24
SB18-5.0	SAMPLE	250732-014	34	0.27
SB18-2.0	SAMPLE	250732-015	30	0.26
	BLANK	QC716520	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250732	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB14-3.5	Basis:	as received
Lab ID:	250732-003	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/09/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.46	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	7.7	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Barium	170	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.54	0.093	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.67	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	140	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	19	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Copper	33	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Lead	11	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.060	0.018	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	190	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	4.5	0.46	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.46	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	53	0.23	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	63	0.93	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250732	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB15-7.5	Basis:	as received
Lab ID:	250732-005	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	3.8	0.50	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	4.6	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Barium	250	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.27	0.099	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	13	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	43	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.6	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Copper	450	0.26	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Lead	870	2.5	10.00	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.14	0.015	1.000	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.43	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	48	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.50	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.50	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	40	2.5	10.00	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	1,700	9.9	10.00	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250732	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB16-10.5	Basis:	as received
Lab ID:	250732-007	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/09/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	1.4	0.52	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	11	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Barium	180	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.34	0.10	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.89	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	53	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.7	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Copper	51	0.27	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Lead	210	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.24	0.018	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	34	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	3.4	0.52	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	41	0.26	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	510	1.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250732	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB17-2.0	Basis:	as received
Lab ID:	250732-012	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/09/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.47	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	7.8	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Barium	150	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.46	0.094	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.61	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	41	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	12	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Copper	32	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Lead	54	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.12	0.015	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	43	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.47	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.47	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	53	0.24	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	87	0.94	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250732	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB18-10.0	Basis:	as received
Lab ID:	250732-013	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.48	1.000	205158	11/16/13	11/20/13	EPA 3050B	EPA 6010B
Arsenic	49	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Barium	640	24	100.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.47	0.096	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	5.5	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	43	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	13	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Copper	450	24	100.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Lead	650	24	100.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.41	0.015	1.000	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	5.1	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	190	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	2.8	0.48	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.24	1.000	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.48	1.000	205158	11/16/13	11/20/13	EPA 3050B	EPA 6010B
Vanadium	11,000	24	100.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	2,500	96	100.0	205158	11/16/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716520	Batch#:	205158
Matrix:	Soil	Prepared:	11/16/13
Units:	mg/Kg	Analyzed:	11/18/13

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	1.000
Field ID:	SB14-11.5	Batch#:	205158
MSS Lab ID:	250732-001	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/16/13
Basis:	as received	Analyzed:	11/18/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716521		100.0	98.58	99	80-120		
BSD	QC716522		100.0	99.71	100	80-120	1	22
MS	QC716523	248.3	96.15	387.3	145 *	52-120		
MSD	QC716524		101.0	391.1	141 *	52-120	0	51

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	205158
Units:	mg/Kg	Prepared:	11/16/13
Diln Fac:	1.000	Analyzed:	11/18/13

Type: BS Lab ID: QC716521

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	98.81	99	80-120
Arsenic	50.00	49.95	100	80-120
Barium	100.0	99.76	100	80-120
Beryllium	2.500	2.365	95	80-120
Cadmium	10.00	10.21	102	80-120
Chromium	100.0	98.54	99	80-120
Cobalt	25.00	24.83	99	80-120
Copper	12.50	12.41	99	80-120
Lead	100.0	98.58	99	80-120
Molybdenum	20.00	19.97	100	80-120
Nickel	25.00	25.16	101	80-120
Selenium	50.00	49.54	99	80-120
Silver	10.00	9.609	96	80-120
Thallium	50.00	49.15	98	80-120
Vanadium	25.00	24.52	98	80-120
Zinc	25.00	25.11	100	80-120

Type: BSD Lab ID: QC716522

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	100.3	100	80-120	1	20
Arsenic	50.00	50.63	101	80-120	1	20
Barium	100.0	101.0	101	80-120	1	20
Beryllium	2.500	2.408	96	80-120	2	20
Cadmium	10.00	10.32	103	80-120	1	20
Chromium	100.0	99.41	99	80-120	1	20
Cobalt	25.00	24.94	100	80-120	0	20
Copper	12.50	12.55	100	80-120	1	20
Lead	100.0	99.71	100	80-120	1	22
Molybdenum	20.00	20.22	101	80-120	1	20
Nickel	25.00	25.35	101	80-120	1	20
Selenium	50.00	50.15	100	80-120	1	20
Silver	10.00	9.637	96	80-120	0	20
Thallium	50.00	49.63	99	80-120	1	20
Vanadium	25.00	24.70	99	80-120	1	20
Zinc	25.00	25.40	102	80-120	1	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Field ID:	SB14-11.5	Batch#:	205158
MSS Lab ID:	250732-001	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/16/13
Basis:	as received	Analyzed:	11/18/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716523

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	1.324	96.15	52.48	53	8-120
Arsenic	48.71	48.08	105.3	118	71-121
Barium	215.4	96.15	255.3	41 *	48-133
Beryllium	0.2371	2.404	2.327	87	78-120
Cadmium	1.702	9.615	10.12	88	69-120
Chromium	60.76	96.15	162.6	106	60-122
Cobalt	8.581	24.04	28.11	81	61-120
Copper	881.1	12.02	1,272 >LR	3249 NM	44-151
Lead	248.3	96.15	387.3	145 *	52-120
Molybdenum	2.395	19.23	19.29	88	67-120
Nickel	45.56	24.04	65.84	84	45-134
Selenium	<0.1492	48.08	44.75	93	67-120
Silver	<0.07628	9.615	7.427	77	66-120
Thallium	<0.1664	48.08	37.40	78	62-120
Vanadium	32.29	24.04	47.24	62	55-137
Zinc	724.8	24.04	708.6 >LR	-67 NM	38-146

Type: MSD Lab ID: QC716524

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	101.0	56.99	55	8-120	3	29
Arsenic	50.51	103.5	108	71-121	4	34
Barium	101.0	264.1	48	48-133	2	45
Beryllium	2.525	2.494	89	78-120	2	20
Cadmium	10.10	10.68	89	69-120	1	23
Chromium	101.0	154.7	93	60-122	8	34
Cobalt	25.25	29.95	85	61-120	3	37
Copper	12.63	1,065 >LR	1453 NM	44-151	NC	35
Lead	101.0	391.1	141 *	52-120	0	51
Molybdenum	20.20	20.18	88	67-120	0	20
Nickel	25.25	65.95	81	45-134	2	38
Selenium	50.51	49.04	97	67-120	4	27
Silver	10.10	8.217	81	66-120	5	30
Thallium	50.51	40.79	81	62-120	4	20
Vanadium	25.25	50.94	74	55-137	5	30
Zinc	25.25	676.8 >LR	-190 NM	38-146	NC	36

*= Value outside of QC limits; see narrative
NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	205271
Lab ID:	QC716952	Prepared:	11/20/13
Matrix:	Soil	Analyzed:	11/20/13
Units:	mg/Kg		

Result	RL
ND	0.017

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	205271
Matrix:	Soil	Prepared:	11/20/13
Units:	mg/Kg	Analyzed:	11/20/13
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716953	0.2083	0.2012	97	80-120		
BSD	QC716954	0.2083	0.2047	98	80-120	2	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	SB14-3.5	Batch#:	205271
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/20/13
Basis:	as received	Analyzed:	11/20/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC716955	0.06011	0.2016	0.2371	88	72-135		
MSD	QC716956		0.2049	0.3893	161 *	72-135	47 *	42

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205380
Field ID:	SB16-7.5	Sampled:	11/09/13
Matrix:	TCLP Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/21/13
Diln Fac:	10.00	Analyzed:	11/22/13

Type	Lab ID	Result	RL
SAMPLE	250732-008	1,800	50
BLANK	QC717362	ND	50

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205380
Field ID:	SB16-7.5	Sampled:	11/09/13
MSS Lab ID:	250732-008	Received:	11/12/13
Matrix:	TCLP Leachate	Prepared:	11/21/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717363		2,000	2,062	103	78-120			1.000
BSD	QC717364		2,000	2,056	103	78-120	0	20	1.000
MS	QC717365	1,840	2,000	4,024	109	68-120			10.00
MSD	QC717366		2,000	4,042	110	68-120	0	24	10.00

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205421
Field ID:	SB16-7.5	Sampled:	11/09/13
Matrix:	WET Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/22/13
Diln Fac:	10.00	Analyzed:	11/22/13

Type	Lab ID	Result	RL
SAMPLE	250732-008	14,000	250
BLANK	QC717527	ND	250

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250732	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205421
Field ID:	ZZZZZZZZZZ	Sampled:	11/07/13
MSS Lab ID:	250978-001	Received:	11/07/13
Matrix:	WET Leachate	Prepared:	11/22/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717528		2,000	1,930	97	78-120			1.000
BSD	QC717529		2,000	1,961	98	78-120	2	20	1.000
MS	QC717530	13,640	10,000	23,020	94	68-120			10.00
MSD	QC717531		10,000	22,360	87	68-120	3	24	10.00

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250733
ANALYTICAL REPORT

PES Environmental, Inc.
1682 Novato Boulevard
Novato, CA 94947

Project : 1386.001.01.003
Location : 6701 Shellmound, Emeryville
Level : II

Sample ID	Lab ID
SB1-11.75	250733-001
SB1-1.0	250733-002
SB1-5.5	250733-003
SB2-10.75	250733-004
SB2-7.5	250733-005
SB2-4.0	250733-006
SB3-11.0	250733-007
SB3-7.5	250733-008
SB3-1.5	250733-009
SB4-10.0	250733-010
SB4-5.0	250733-011
SB4-1.5	250733-012
SB5-11.5	250733-013
SB5-8.0	250733-014
SB5-3.0	250733-015
SB6-10.0	250733-016
SB6-8.0	250733-017
SB6-4.0	250733-018

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/25/2013

Will S Rice
Project Manager
will.rice@ctberk.com

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250733**
Client:	**PES Environmental, Inc.**
Project:	**1386.001.01.003**
Location:	**6701 Shellmound, Emeryville**
Request Date:	**11/15/13**
Samples Received:	**11/12/13**

This data package contains sample and QC results for eighteen soil samples, requested for the above referenced project on 11/15/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C):
Low recoveries were observed for pyrene in the MS/MSD of SB2-7.5 (lab # 250733-005); the LCS was within limits, and the associated RPD was within limits. SB2-7.5 (lab # 250733-005) and SB6-4.0 (lab # 250733-018) were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

PCBs (EPA 8082):
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. High response was observed for Aroclor-1016 in the CCV analyzed 11/20/13 03:45; affected data was qualified with "b". Low surrogate recoveries were observed for decachlorobiphenyl in a number of samples; the corresponding TCMX surrogate recoveries were within limits. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A) Soil:
Low recoveries were observed for barium and beryllium in the MS/MSD of SB4-1.5 (lab # 250733-012); the BS/BSD were within limits, and the associated RPDs were within limits. High recovery was observed for copper in the MS of SB4-1.5 (lab # 250733-012); the BS/BSD were within limits, and the associated RPD was within limits. High recovery was observed for mercury in the MSD of SB14-3.5 (lab # 250732-003); the BS/BSD were within limits. High RPD was also observed for mercury in the MS/MSD of SB14-3.5 (lab # 250732-003); the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

Metals (EPA 6010B) TCLP Leachate:
No analytical problems were encountered.

Metals (EPA 6010B) WET Leachate:
No analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T
SAMPLERS: M. Bottoms
JOB NUMBER: 1386.001.003
NAME / LOCATION: 6701 Shellmound, Emeryville
PROJECT MANAGER: K. Flory
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	07	0930	SB1-11.75			X		1					
2				0945	SB1-1.0			X		1					
3				0950	SB1-5.5			X		1					
4				1130	SB2-10.75			X		1					
5				1140	SB2-7.5			X		1					
6				1150	SB2-4.0			X		1					
7				1315	SB3-11.0			X		1					
8				1320	SB3-7.5			X		1					
9				1330	SB3-1.5			X		1					
10				1430	SB4-10.0			X		1					
11				1445	SB4-5.0			X		1					
12				1500	SB4-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	HOLD
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X

NOTES

Turn Around Time:

Page 1 of 2

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE 11/12/13 TIME 930
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature) Tina Rourke	DATE 11/12/13 TIME 1245
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE TIME
DISPATCHED BY: (Signature)	DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Intact on ice cold RC

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250-732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T

SAMPLERS: M. Butters

JOB NUMBER: 1386.001.01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	07	1600	SB5-11.5			X		1					
14				1610	SB5-8.0			X		1					
15				1615	SB5-3.0			X		1					
16				1630	SB6-10.0			X		1					
17				1645	SB6-8.0			X		1					
18				1700	SB6-4.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	HOLD
								X
								X
								X
								X
								X
								X

NOTES

Turn Around Time:

Page 2 of 2

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 11/12/13	TIME 930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Silvia Rankin	DATE 11/12/13	TIME 1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

start on ice cold RC

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M Sullivan

JOB NUMBER: 138.0001.003

NAME / LOCATION: 5701 Redwood Emeryville

PROJECT MANAGER: K Fleming

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	12	0730	SB1-11.75			X		1					
2				0945	SB1-1.0			X		1					
3				0750	SB1-5.5			X		1					
4				1130	SB2-10.75			X		1					
5				1140	SB2-7.5			X		1					
6				1150	SB2-4.0			X		1					
7				1315	SB3-11.0			X		1					
8				1320	SB3-7.5			X		1					
9				1530	SB3-1.5			X		1					
10				1430	SB4-10.0			X		1					
11				1445	SB4-5.0			X		1					
12				1500	SB4-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B*	Title 22 metals by 6010B/7471A**
								X				⊗	
								X					⊗
								X				⊗	
								X				⊗	
								X	⊗	⊗	⊗	⊗	
								X	⊗	⊗	⊗		⊗
								X				⊗	
								X				⊗	
								X					⊗
								X				⊗	
								X				⊗	
								X				⊗	

Analysis Requested
Turnaround Time
Received 11/5/13

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	11/7/13	930
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature) Tina Ronkin	11/12/13	1245
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE / TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:				

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Must on re cold RC

PES Environmental, Inc.
Engineering & Environmental Services

250-732

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T

JOB NUMBER: 1386.001.01.003

NAME / LOCATION: 6701 Shellmound Emeryville

PROJECT MANAGER: K. Flory

SAMPLERS: M. Butters

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	07	1600	SB5-11.5			X		1					
14				1610	SB5-8.0			X		1					
15				1615	SB5-3.0			X		1					
16				1630	SB6-10.0			X		1					
17				1645	SB6-8.0			X		1					
18				1700	SB6-4.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	
							X	Hold
							X	VOCs by 8260B**
							X	SVOCs by 8270C**
							X	PCBs by 8082**
							X	Lead by 6010B**
							X	TTLC Metals** by 6010B/7471A

NOTES

Turn Around Time: *24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Silvia Rankin	11/12/13	1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

start on ice cold PC

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M Bottorff

JOB NUMBER: 138 ccinl.003

NAME / LOCATION: 6701 Shellmound Emeryville

PROJECT MANAGER: K Fahey

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	07	0930	SB1-1'-7.5			X		1					
2				0945	SB1-1.0			X		1					
3				0950	SB1-5.5			X		1					
4				1130	SB2-10.5			X		1					
5				1140	SB2-7.5			X		1					
6				1150	SB2-4.0			X		1					
7				1315	SB3-11.0			X		1					
8				1320	SB3-7.5			X		1					
9				1330	SB3-1.5			X		1					
10				1430	SB4-10.0			X		1					
11				1445	SB4-5.0			X		1					
12				1500	SB4-1.5			X		1					

ANALYSIS REQUESTED *

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	HOLD	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B*	Title 22 metals** by 6010B/7471A	STLC Lead	TCLP Lead
							X					⊗			X
							X						⊗		
							X					⊗			X
							X					⊗		X	
							X		⊗	⊗	⊗	⊗			
							X		⊗	⊗	⊗	⊗			
							X					⊗		X	X
							X					⊗			
							X					⊗		X	X
							X					⊗			
							X					⊗			X
							X					⊗		X	

received 11/20

Received 11/26

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Ilinca Ronica	11/12/13	1345
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

waiting on ice cold RC

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

250-732

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T
JOB NUMBER: 1386.001.01.003
NAME / LOCATION: 6701 Hollmond, Emeryville
PROJECT MANAGER: K. Flory
SAMPLERS: M. Butzer
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	07	1600	SB5-11.5			X		1					
14				1610	SB5-8.0			X		1					
15				1615	SB5-3.0			X		1					
16				1630	SB6-10.0			X		1					
17				1645	SB6-8.0			X		1					
18				1700	SB6-4.0			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B ***	SVOCs by 8270C **	PCBs by 8082 **	Lead by 6010B **	TPH 22 Metals ** by 6010B/7471A	STLC Lead	TCLP Lead
								X							X
								X							
								X						X	X
								X							
								X							
								X							

received 11/12

received 11/12

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tina Rankin	11/12/13	1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)		
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

start on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250733 Date Received 11/12/13 Number of coolers 2
Client PES Project 6701 SHELLMOUND (1386.001.01.003)

Date Opened 11/12/13 By (print) IR (sign) Tina Ranica
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.8, 5.1

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Field ID:	SB2-7.5	Diln Fac:	0.9488
Lab ID:	250733-005	Batch#:	205234
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Analyzed:	11/19/13

Analyte	Result	RL
Freon 12	ND	9.5
Chloromethane	ND	9.5
Vinyl Chloride	ND	9.5
Bromomethane	ND	9.5
Chloroethane	ND	9.5
Trichlorofluoromethane	ND	4.7
Acetone	35	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.5
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.5
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.5
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Field ID:	SB2-7.5	Diln Fac:	0.9488
Lab ID:	250733-005	Batch#:	205234
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Analyzed:	11/19/13

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	97	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Field ID:	SB2-4.0	Diln Fac:	0.9940
Lab ID:	250733-006	Batch#:	205234
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Analyzed:	11/19/13

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Field ID:	SB2-4.0	Diln Fac:	0.9940
Lab ID:	250733-006	Batch#:	205234
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Analyzed:	11/19/13

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716823	Batch#:	205234
Matrix:	Soil	Analyzed:	11/19/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716823	Batch#:	205234
Matrix:	Soil	Analyzed:	11/19/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	103	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1386.001.01.003	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	205234
Units:	ug/Kg	Analyzed:	11/19/13
Diln Fac:	1.000		

Type: BS Lab ID: QC716824

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	22.55	113	67-132
Benzene	20.00	22.53	113	77-126
Trichloroethene	20.00	23.07	115	76-127
Toluene	20.00	22.86	114	76-124
Chlorobenzene	20.00	23.44	117	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	103	79-127

Type: BSD Lab ID: QC716825

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	19.71	99	67-132	13	27
Benzene	20.00	20.25	101	77-126	11	20
Trichloroethene	20.00	19.68	98	76-127	16	22
Toluene	20.00	20.66	103	76-124	10	26
Chlorobenzene	20.00	20.17	101	76-120	15	21

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	99	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-7.5	Batch#:	205211
Lab ID:	250733-005	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	2.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	660
Phenol	ND	660
bis(2-Chloroethyl)ether	ND	660
2-Chlorophenol	ND	660
1,3-Dichlorobenzene	ND	660
1,4-Dichlorobenzene	ND	660
Benzyl alcohol	ND	660
1,2-Dichlorobenzene	ND	660
2-Methylphenol	ND	660
bis(2-Chloroisopropyl) ether	ND	660
4-Methylphenol	ND	660
N-Nitroso-di-n-propylamine	ND	660
Hexachloroethane	ND	660
Nitrobenzene	ND	660
Isophorone	ND	660
2-Nitrophenol	ND	1,300
2,4-Dimethylphenol	ND	660
Benzoic acid	ND	3,300
bis(2-Chloroethoxy)methane	ND	660
2,4-Dichlorophenol	ND	660
1,2,4-Trichlorobenzene	ND	660
Naphthalene	ND	130
4-Chloroaniline	ND	660
Hexachlorobutadiene	ND	660
4-Chloro-3-methylphenol	ND	660
2-Methylnaphthalene	ND	130
Hexachlorocyclopentadiene	ND	1,300
2,4,6-Trichlorophenol	ND	660
2,4,5-Trichlorophenol	ND	660
2-Chloronaphthalene	ND	660
2-Nitroaniline	ND	1,300
Dimethylphthalate	ND	660
Acenaphthylene	270	130
2,6-Dinitrotoluene	ND	660
3-Nitroaniline	ND	1,300
Acenaphthene	ND	130
2,4-Dinitrophenol	ND	1,300
4-Nitrophenol	ND	1,300
Dibenzofuran	ND	660
2,4-Dinitrotoluene	ND	660
Diethylphthalate	ND	660
Fluorene	210	130
4-Chlorophenyl-phenylether	ND	660
4-Nitroaniline	ND	1,300
4,6-Dinitro-2-methylphenol	ND	1,300
N-Nitrosodiphenylamine	ND	660
Azobenzene	ND	660
4-Bromophenyl-phenylether	ND	660
Hexachlorobenzene	ND	660
Pentachlorophenol	ND	1,300
Phenanthrene	2,400	130
Anthracene	630	130
Di-n-butylphthalate	ND	660

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-7.5	Batch#:	205211
Lab ID:	250733-005	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	2.000		

Analyte	Result	RL
Fluoranthene	2,100	130
Pyrene	2,300	130
Butylbenzylphthalate	ND	660
3,3'-Dichlorobenzidine	ND	1,300
Benzo(a)anthracene	1,200	130
Chrysene	1,400	130
bis(2-Ethylhexyl)phthalate	ND	660
Di-n-octylphthalate	ND	660
Benzo(b)fluoranthene	970	130
Benzo(k)fluoranthene	360	130
Benzo(a)pyrene	970	130
Indeno(1,2,3-cd)pyrene	340	130
Dibenz(a,h)anthracene	ND	130
Benzo(g,h,i)perylene	330	130

Surrogate	%REC	Limits
2-Fluorophenol	64	35-120
Phenol-d5	65	39-120
2,4,6-Tribromophenol	89	39-120
Nitrobenzene-d5	73	49-120
2-Fluorobiphenyl	99	52-120
Terphenyl-d14	86	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-4.0	Batch#:	205211
Lab ID:	250733-006	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	67
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	670
Dimethylphthalate	ND	330
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	330

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-4.0	Batch#:	205211
Lab ID:	250733-006	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	52	35-120
Phenol-d5	54	39-120
2,4,6-Tribromophenol	76	39-120
Nitrobenzene-d5	57	49-120
2-Fluorobiphenyl	78	52-120
Terphenyl-d14	72	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB6-10.0	Batch#:	205211
Lab ID:	250733-016	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	67
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	670
Dimethylphthalate	ND	330
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	330

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB6-10.0	Batch#:	205211
Lab ID:	250733-016	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	49	35-120
Phenol-d5	52	39-120
2,4,6-Tribromophenol	77	39-120
Nitrobenzene-d5	54	49-120
2-Fluorobiphenyl	75	52-120
Terphenyl-d14	68	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB6-4.0	Batch#:	205211
Lab ID:	250733-018	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	10.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	3,300
Phenol	ND	3,300
bis(2-Chloroethyl)ether	ND	3,300
2-Chlorophenol	ND	3,300
1,3-Dichlorobenzene	ND	3,300
1,4-Dichlorobenzene	ND	3,300
Benzyl alcohol	ND	3,300
1,2-Dichlorobenzene	ND	3,300
2-Methylphenol	ND	3,300
bis(2-Chloroisopropyl) ether	ND	3,300
4-Methylphenol	ND	3,300
N-Nitroso-di-n-propylamine	ND	3,300
Hexachloroethane	ND	3,300
Nitrobenzene	ND	3,300
Isophorone	ND	3,300
2-Nitrophenol	ND	6,600
2,4-Dimethylphenol	ND	3,300
Benzoic acid	ND	17,000
bis(2-Chloroethoxy)methane	ND	3,300
2,4-Dichlorophenol	ND	3,300
1,2,4-Trichlorobenzene	ND	3,300
Naphthalene	2,900	660
4-Chloroaniline	ND	3,300
Hexachlorobutadiene	ND	3,300
4-Chloro-3-methylphenol	ND	3,300
2-Methylnaphthalene	ND	660
Hexachlorocyclopentadiene	ND	6,600
2,4,6-Trichlorophenol	ND	3,300
2,4,5-Trichlorophenol	ND	3,300
2-Chloronaphthalene	ND	3,300
2-Nitroaniline	ND	6,600
Dimethylphthalate	ND	3,300
Acenaphthylene	ND	660
2,6-Dinitrotoluene	ND	3,300
3-Nitroaniline	ND	6,600
Acenaphthene	ND	660
2,4-Dinitrophenol	ND	6,600
4-Nitrophenol	ND	6,600
Dibenzofuran	ND	3,300
2,4-Dinitrotoluene	ND	3,300
Diethylphthalate	ND	3,300
Fluorene	810	660
4-Chlorophenyl-phenylether	ND	3,300
4-Nitroaniline	ND	6,600
4,6-Dinitro-2-methylphenol	ND	6,600
N-Nitrosodiphenylamine	ND	3,300
Azobenzene	ND	3,300
4-Bromophenyl-phenylether	ND	3,300
Hexachlorobenzene	ND	3,300
Pentachlorophenol	ND	6,600
Phenanthrene	5,500	660
Anthracene	1,200	660

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB6-4.0	Batch#:	205211
Lab ID:	250733-018	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	10.00		

Analyte	Result	RL
Di-n-butylphthalate	ND	3,300
Fluoranthene	4,400	660
Pyrene	4,500	660
Butylbenzylphthalate	ND	3,300
3,3'-Dichlorobenzidine	ND	6,600
Benzo(a)anthracene	2,400	660
Chrysene	2,900	660
bis(2-Ethylhexyl)phthalate	ND	3,300
Di-n-octylphthalate	ND	3,300
Benzo(b)fluoranthene	3,700	660
Benzo(k)fluoranthene	1,500	660
Benzo(a)pyrene	3,000	660
Indeno(1,2,3-cd)pyrene	1,300	660
Dibenz(a,h)anthracene	ND	660
Benzo(g,h,i)perylene	1,400	660

Surrogate	%REC	Limits
2-Fluorophenol	DO	35-120
Phenol-d5	DO	39-120
2,4,6-Tribromophenol	DO	39-120
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716731	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330
Fluoranthene	ND	66

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716731	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Result	RL
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	56	35-120
Phenol-d5	57	39-120
2,4,6-Tribromophenol	68	39-120
Nitrobenzene-d5	61	49-120
2-Fluorobiphenyl	80	52-120
Terphenyl-d14	81	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC716732	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Spiked	Result	%REC	Limits
Phenol	2,653	2,176	82	48-120
2-Chlorophenol	2,653	2,098	79	51-120
1,4-Dichlorobenzene	2,653	2,122	80	54-120
N-Nitroso-di-n-propylamine	2,653	1,892	71	35-120
1,2,4-Trichlorobenzene	2,653	2,403	91	56-120
4-Chloro-3-methylphenol	2,653	2,304	87	61-120
Acenaphthene	995.0	828.6	83	57-120
4-Nitrophenol	2,653	2,350	89	54-120
2,4-Dinitrotoluene	2,653	2,427	91	58-120
Pentachlorophenol	2,653	2,139	81	42-120
Pyrene	995.0	988.8	99	60-120

Surrogate	%REC	Limits
2-Fluorophenol	75	35-120
Phenol-d5	78	39-120
2,4,6-Tribromophenol	100	39-120
Nitrobenzene-d5	74	49-120
2-Fluorobiphenyl	80	52-120
Terphenyl-d14	86	48-120

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-7.5	Batch#:	205211
MSS Lab ID:	250733-005	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	2.000		

Type: MS Lab ID: QC716733

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<13.95	2,664	2,094	79	51-120
2-Chlorophenol	<14.52	2,664	1,998	75	52-120
1,4-Dichlorobenzene	<15.20	2,664	1,811	68	55-120
N-Nitroso-di-n-propylamine	<15.52	2,664	2,062	77	45-120
1,2,4-Trichlorobenzene	<15.58	2,664	2,321	87	57-120
4-Chloro-3-methylphenol	<16.45	2,664	2,240	84	60-120
Acenaphthene	35.29	999.0	800.5	77	58-120
4-Nitrophenol	<140.7	2,664	2,158	81	49-120
2,4-Dinitrotoluene	<18.98	2,664	2,248	84	58-120
Pentachlorophenol	<252.4	2,664	1,753	66	23-120
Pyrene	2,286	999.0	1,257	-103 *	53-122

Surrogate	%REC	Limits
2-Fluorophenol	63	35-120
Phenol-d5	69	39-120
2,4,6-Tribromophenol	86	39-120
Nitrobenzene-d5	69	49-120
2-Fluorobiphenyl	82	52-120
Terphenyl-d14	81	48-120

Type: MSD Lab ID: QC716734

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,704	2,032	75	51-120	4	32
2-Chlorophenol	2,704	1,967	73	52-120	3	32
1,4-Dichlorobenzene	2,704	1,622	60	55-120	12	35
N-Nitroso-di-n-propylamine	2,704	1,998	74	45-120	5	35
1,2,4-Trichlorobenzene	2,704	2,191	81	57-120	7	31
4-Chloro-3-methylphenol	2,704	2,210	82	60-120	3	30
Acenaphthene	1,014	768.9	72	58-120	5	36
4-Nitrophenol	2,704	2,054	76	49-120	6	39
2,4-Dinitrotoluene	2,704	2,137	79	58-120	7	28
Pentachlorophenol	2,704	1,293	48	23-120	32	47
Pyrene	1,014	1,344	-93 *	53-122	6	44

Surrogate	%REC	Limits
2-Fluorophenol	63	35-120
Phenol-d5	69	39-120
2,4,6-Tribromophenol	79	39-120
Nitrobenzene-d5	67	49-120
2-Fluorobiphenyl	79	52-120
Terphenyl-d14	80	48-120

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB5-11.5	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250733-013		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	140	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	113	66-142
Decachlorobiphenyl	30 *	43-139

Field ID:	SB5-8.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250733-014		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	180	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	96	66-142
Decachlorobiphenyl	42 *	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB5-3.0	Diln Fac:	20.00
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250733-015		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	ND	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	10,000	170
Aroclor-1262	ND	170
Aroclor-1268	ND	170

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

Field ID:	SB6-10.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250733-016		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	48	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	108	66-142
Decachlorobiphenyl	34 *	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID: SB6-8.0
Type: SAMPLE
Lab ID: 250733-017

Diln Fac: 1.000
Analyzed: 11/20/13

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	160	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	87	66-142
Decachlorobiphenyl	41 *	43-139

Field ID: SB6-4.0
Type: SAMPLE
Lab ID: 250733-018

Diln Fac: 1.000
Analyzed: 11/19/13

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	570	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	91	66-142
Decachlorobiphenyl	53	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/07/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716687	Analyzed:	11/19/13

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	78	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC716688	Batch#:	205200
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	167.8	177.2	106	64-143
Aroclor-1260	167.8	175.0	104	58-146

Surrogate	%REC	Limits
TCMX	102	66-142
Decachlorobiphenyl	83	43-139

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Field ID:	SB14-3.5	Batch#:	205200
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716689

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.942	164.1	172.5 b	105	58-155
Aroclor-1260	12.74	164.1	214.3	123	35-159

Surrogate	%REC	Limits
TCMX	110	66-142
Decachlorobiphenyl	83	43-139

Type: MSD Lab ID: QC716690

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	166.7	176.6 b	106	58-155	1	44
Aroclor-1260	166.7	192.9	108	35-159	12	53

Surrogate	%REC	Limits
TCMX	106	66-142
Decachlorobiphenyl	84	43-139

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13
Batch#:	205159		

Field ID	Type	Lab ID	Result	RL	Diln Fac
SB1-11.75	SAMPLE	250733-001	2,400	2.5	10.00
SB1-5.5	SAMPLE	250733-003	1,300	2.5	10.00
SB2-10.75	SAMPLE	250733-004	240	0.23	1.000
SB2-7.5	SAMPLE	250733-005	120	0.25	1.000
SB2-4.0	SAMPLE	250733-006	20	0.25	1.000
SB3-7.5	SAMPLE	250733-008	340	0.24	1.000
SB4-10.0	SAMPLE	250733-010	10,000	25	100.0
SB4-5.0	SAMPLE	250733-011	110	0.27	1.000
SB4-1.5	SAMPLE	250733-012	18	0.27	1.000
SB5-11.5	SAMPLE	250733-013	1,100	2.5	10.00
SB5-3.0	SAMPLE	250733-015	430	0.28	1.000
SB6-8.0	SAMPLE	250733-017	58	0.25	1.000
SB6-4.0	SAMPLE	250733-018	140	0.25	1.000
	BLANK	QC716525	ND	0.25	1.000

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250733	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB1-1.0	Basis:	as received
Lab ID:	250733-002	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/07/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.51	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	5.9	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	160	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.39	0.10	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.94	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	86	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	13	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	52	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	81	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.22	0.018	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	100	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	51	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	190	1.0	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250733	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB3-11.0	Basis:	as received
Lab ID:	250733-007	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	3.3	0.50	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	7.5	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	810	2.5	10.00	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.39	0.10	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	4.3	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	46	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	10	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	170	0.26	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	460	2.5	10.00	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.17	0.015	1.000	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	4.6	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	38	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.50	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.50	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	42	0.25	1.000	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	920	10	10.00	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250733	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB3-1.5	Basis:	as received
Lab ID:	250733-009	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/07/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.46	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	3.4	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	150	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.59	0.093	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.44	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	16	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.9	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	16	0.24	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	14	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.39	0.015	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	23	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.46	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.46	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	26	0.23	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	46	0.93	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250733	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB5-8.0	Basis:	as received
Lab ID:	250733-014	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/07/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	3.1	0.50	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	6.7	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	100	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.21	0.10	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.77	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	39	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.3	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	100	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	100	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.19	0.015	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.34	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	38	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.50	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.50	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	29	0.25	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	170	1.0	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250733	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB6-10.0	Basis:	as received
Lab ID:	250733-016	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/07/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	7.5	0.52	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	5.6	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	140	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.27	0.10	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	1.9	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	140	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	16	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	390	0.27	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	160	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.13	0.016	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	4.9	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	190	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	6.0	0.52	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	41	0.26	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	270	1.0	205159	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716525	Batch#:	205159
Matrix:	Soil	Prepared:	11/17/13
Units:	mg/Kg	Analyzed:	11/18/13

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	1.000
Field ID:	SB4-1.5	Batch#:	205159
MSS Lab ID:	250733-012	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716526		100.0	102.6	103	80-120		
BSD	QC716527		100.0	101.0	101	80-120	2	22
MS	QC716528	17.98	90.91	112.8	104	52-120		
MSD	QC716529		98.04	90.20	74	52-120	29	51

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	205159
Units:	mg/Kg	Prepared:	11/17/13
Diln Fac:	1.000	Analyzed:	11/18/13

Type: BS Lab ID: QC716526

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	102.9	103	80-120
Arsenic	50.00	51.87	104	80-120
Barium	100.0	103.9	104	80-120
Beryllium	2.500	2.475	99	80-120
Cadmium	10.00	10.65	107	80-120
Chromium	100.0	101.9	102	80-120
Cobalt	25.00	25.68	103	80-120
Copper	12.50	12.92	103	80-120
Lead	100.0	102.6	103	80-120
Molybdenum	20.00	20.54	103	80-120
Nickel	25.00	26.25	105	80-120
Selenium	50.00	51.37	103	80-120
Silver	10.00	9.895	99	80-120
Thallium	50.00	50.69	101	80-120
Vanadium	25.00	25.48	102	80-120
Zinc	25.00	26.65	107	80-120

Type: BSD Lab ID: QC716527

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	100.9	101	80-120	2	20
Arsenic	50.00	51.14	102	80-120	1	20
Barium	100.0	101.6	102	80-120	2	20
Beryllium	2.500	2.410	96	80-120	3	20
Cadmium	10.00	10.46	105	80-120	2	20
Chromium	100.0	99.67	100	80-120	2	20
Cobalt	25.00	25.09	100	80-120	2	20
Copper	12.50	12.63	101	80-120	2	20
Lead	100.0	101.0	101	80-120	2	22
Molybdenum	20.00	20.04	100	80-120	2	20
Nickel	25.00	25.67	103	80-120	2	20
Selenium	50.00	50.61	101	80-120	1	20
Silver	10.00	9.741	97	80-120	2	20
Thallium	50.00	49.65	99	80-120	2	20
Vanadium	25.00	25.03	100	80-120	2	20
Zinc	25.00	26.03	104	80-120	2	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Field ID:	SB4-1.5	Batch#:	205159
MSS Lab ID:	250733-012	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716528

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<0.1746	90.91	32.09	35	8-120
Arsenic	3.505	45.45	41.80	84	71-121
Barium	235.9	90.91	268.2	36 *	48-133
Beryllium	0.6852	2.273	2.489	79	78-120
Cadmium	0.3272	9.091	8.479	90	69-120
Chromium	14.58	90.91	92.09	85	60-122
Cobalt	7.653	22.73	25.99	81	61-120
Copper	16.17	11.36	33.65	154 *	44-151
Lead	17.98	90.91	112.8	104	52-120
Molybdenum	0.1276	18.18	15.17	83	67-120
Nickel	22.23	22.73	47.11	109	45-134
Selenium	<0.1607	45.45	37.26	82	67-120
Silver	<0.08215	9.091	6.727	74	66-120
Thallium	<0.1792	45.45	35.37	78	62-120
Vanadium	28.55	22.73	44.19	69	55-137
Zinc	43.57	22.73	66.80	102	38-146

Type: MSD Lab ID: QC716529

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	98.04	32.37	33	8-120	7	29
Arsenic	49.02	41.78	78	71-121	7	34
Barium	98.04	223.6	-13 *	48-133	20	45
Beryllium	2.451	2.508	74 *	78-120	5	20
Cadmium	9.804	8.667	85	69-120	5	23
Chromium	98.04	91.00	78	60-122	8	34
Cobalt	24.51	25.54	73	61-120	7	37
Copper	12.25	26.63	85	44-151	26	35
Lead	98.04	90.20	74	52-120	29	51
Molybdenum	19.61	15.43	78	67-120	6	20
Nickel	24.51	38.12	65	45-134	25	38
Selenium	49.02	37.63	77	67-120	7	27
Silver	9.804	7.405	76	66-120	2	30
Thallium	49.02	36.74	75	62-120	4	20
Vanadium	24.51	43.24	60	55-137	6	30
Zinc	24.51	53.57	41	38-146	25	36

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	205271
Lab ID:	QC716952	Prepared:	11/20/13
Matrix:	Soil	Analyzed:	11/20/13
Units:	mg/Kg		

Result	RL
ND	0.017

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	205271
Matrix:	Soil	Prepared:	11/20/13
Units:	mg/Kg	Analyzed:	11/20/13
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716953	0.2083	0.2012	97	80-120		
BSD	QC716954	0.2083	0.2047	98	80-120	2	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	SB14-3.5	Batch#:	205271
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/20/13
Basis:	as received	Analyzed:	11/20/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC716955	0.06011	0.2016	0.2371	88	72-135		
MSD	QC716956		0.2049	0.3893	161 *	72-135	47 *	42

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	11/07/13
Matrix:	TCLP Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/21/13
Diln Fac:	10.00	Analyzed:	11/22/13
Batch#:	205380		

Field ID	Type	Lab ID	Result	RL
SB1-11.75	SAMPLE	250733-001	750	50
SB1-5.5	SAMPLE	250733-003	6,100	50
SB3-7.5	SAMPLE	250733-008	1,100	50
SB4-10.0	SAMPLE	250733-010	2,400	50
SB5-11.5	SAMPLE	250733-013	1,000	50
SB5-3.0	SAMPLE	250733-015	270	50
	BLANK	QC717362	ND	50

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205380
Field ID:	SB16-7.5	Sampled:	11/09/13
MSS Lab ID:	250732-008	Received:	11/12/13
Matrix:	TCLP Leachate	Prepared:	11/21/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717363		2,000	2,062	103	78-120			1.000
BSD	QC717364		2,000	2,056	103	78-120	0	20	1.000
MS	QC717365	1,840	2,000	4,024	109	68-120			10.00
MSD	QC717366		2,000	4,042	110	68-120	0	24	10.00

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	11/07/13
Matrix:	WET Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/22/13
Diln Fac:	10.00	Analyzed:	11/22/13
Batch#:	205421		

Field ID	Type	Lab ID	Result	RL
SB2-7.5	SAMPLE	250733-005	2,700	250
SB3-7.5	SAMPLE	250733-008	1,800	250
SB4-5.0	SAMPLE	250733-011	7,500	250
SB5-3.0	SAMPLE	250733-015	7,700	250
	BLANK	QC717527	ND	250

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250733	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205421
Field ID:	ZZZZZZZZZZ	Sampled:	11/07/13
MSS Lab ID:	250978-001	Received:	11/07/13
Matrix:	WET Leachate	Prepared:	11/22/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717528		2,000	1,930	97	78-120			1.000
BSD	QC717529		2,000	1,961	98	78-120	2	20	1.000
MS	QC717530	13,640	10,000	23,020	94	68-120			10.00
MSD	QC717531		10,000	22,360	87	68-120	3	24	10.00

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250734
ANALYTICAL REPORT

PES Environmental, Inc.
1682 Novato Boulevard
Novato, CA 94947

Project : 1386.001.01.003
Location : 6701 Shellmound, Emeryville
Level : II

Sample ID	Lab ID
SB7-12.5	250734-001
SB7-8.0	250734-002
SB7-2.5	250734-003
SB8-12.0	250734-004
SB8-8.0	250734-005
SB8-3.5	250734-006
SB9-10.0	250734-007
SB9-4.5	250734-008
SB10-10.0	250734-009
SB10-5.0	250734-010
SB10-2.0	250734-011
SB11-11.5	250734-012
SB11-5.5	250734-013
SB11-2.0	250734-014
SB12-10.0	250734-015
SB12-5.0	250734-016
SB12-2.0	250734-017
SB13-10.0	250734-018
SB13-5.0	250734-019
SB13-1.5	250734-020

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/25/2013

Will S Rice
Project Manager
will.rice@ctberk.com

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250734**
Client:	**PES Environmental, Inc.**
Project:	**1386.001.01.003**
Location:	**6701 Shellmound, Emeryville**
Request Date:	**11/15/13**
Samples Received:	**11/12/13**

This data package contains sample and QC results for twenty soil samples, requested for the above referenced project on 11/15/13. The samples were received cold and intact.

Semivolatile Organics by GC/MS (EPA 8270C):
Low recoveries were observed for pyrene in the MS/MSD of SB2-7.5 (lab # 250733-005); the LCS was within limits, and the associated RPD was within limits. SB11-5.5 (lab # 250734-013), SB11-2.0 (lab # 250734-014), and SB13-10.0 (lab # 250734-018) were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

PCBs (EPA 8082):
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. High response was observed for Aroclor-1016 in the CCV analyzed 11/20/13 03:45; affected data was qualified with "b". Low surrogate recoveries were observed for decachlorobiphenyl in SB11-2.0 (lab # 250734-014), SB12-5.0 (lab # 250734-016), and SB13-1.5 (lab # 250734-020); the corresponding TCMX surrogate recoveries were within limits. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A) Soil:
High recovery was observed for mercury in the MSD of SB14-3.5 (lab # 250732-003); the BS/BSD were within limits. High RPD was also observed for mercury in the MS/MSD of SB14-3.5 (lab # 250732-003); the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

Metals (EPA 6010B) TCLP Leachate:
No analytical problems were encountered.

Metals (EPA 6010B) WET Leachate:
No analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M. Batterer

JOB NUMBER: 1386.001 0.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	08	0900	SB7-1 2.5			X		1					
2				0715	SB7-8.0			X		1					
3				0730	SB7-2.5			X		1					
4				1100	SB8-12.0			X		1					
5				1115	SB8-8.0			X		1					
6				1130	SB8-3.5			X		1					
7				1330	SB9-10.0			X		1					
8				1245	SB9-4.5			X		1					
9				1500	SB10-10.0			X		1					
10				1510	SB10-5.0			X		1					
11				1520	SB10-2.0			X		1					
12				1545	SB11-11.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X
								X

NOTES

Turn Around Time:

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tina Ranka	11/12/13	1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

intact on ice cold AL

PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M. Butler

JOB NUMBER: 1336.001.01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	08	1600	SB11-5.5			X		1					
14				1610	SB11-20			X		1					
15				1620	SB12-10.0			X		1					
16				1630	SB12-5.0			X		1					
17				1640	SB12-2.0			X		1					
18				1650	SB13-10.5			X		1					
19				1700	SB13-5.0			X		1					
20				1710	SB13-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold
								X
								X
								X
								X
								X
								X
								X
								X

NOTES

Turn Around Time:

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	970
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tania Rankin	11/12/13	1045
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

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PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T

SAMPLERS: M. Batters

JOB NUMBER: 1386.001.01.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	08	0900	SB7-12.5			Y		1					
2				0915	SB7-8.0			Y		1					
3				0930	SB7-2.5			X		1					
4				1100	SB8-12.0			Y		1					
5				1115	SB8-8.0			X		1					
6				1130	SB8-3.5			X		1					
7				1330	SB9-10.0			Y		1					
8				1245	SB9-4.5			Y		1					
9				1500	SB10-10.0			X		1					
10				1510	SB10-5.0			Y		1					
11				1520	SB10-1.0			X		1					
12				1545	SB11-11.5			X		1					

ANALYSIS REQUESTED

	EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B*	Title 22 Metals by 6010B/7471A
1									X				⊗	
2									X		⊗	⊗	⊗	
3									X		⊗	⊗		⊗
4									X				⊗	
5									X					⊗
6									X				⊗	
7									X				⊗	
8									X					⊗
9									X				⊗	
10									X				⊗	
11									X					⊗
12									X				⊗	

1 2 3 4 5 6 7 8 9 10 11 12

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Irma Ranka	11/12/13	1245
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

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Rec'd rec'd 11/13/13

PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C T

JOB NUMBER: 1386 coi. 01 vo3

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flora

SAMPLERS: M. Burgess

RECORDER: MS

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sediment	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	08	1600	SB11-5.5			X		1					
14				1610	SB11-2.0			X		1					
15				1620	SB12-10.0			X		1					
16				1630	SB12-5.0			X		1					
17				1640	SB12-2.0			X		1					
18				1650	SB13-10.0			X		1					
19				1700	SB13-5.0			X		1					
20				1710	SB13-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Hold	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B**	Title 22 Metals by 6010B/7471A	
								X	X	X	X	X		13
								X	X	X	X			14
								X	X			X	X	15
								X	X					16
								X	X					17
								X	X	X	X			18
								X	X			X	X	19
								X	X	X	X			20

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	970
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tina Rankin	11/12/13	1045
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

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PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C + T
SAMPLERS: M. Batters
JOB NUMBER: 386.001 01.003
NAME / LOCATION: 6701 Shellmound, Emeryville
PROJECT MANAGER: K. Flory
RECORDER: MB

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
1	13	11	08	0900	SB7-1-2.5			X		1					
2				0915	SB7-3.0			X		1					
3				0930	SB7-2.5			X		1					
4				1100	SB8-1-2.0			X		1					
5				1115	SB8-8.0			X		1					
6				1130	SB8-3.5			X		1					
7				1330	SB9-1-2.0			X		1					
8				1245	SB7-4.5			X		1					
9				1500	SB1-0-1.0			X		1					
10				1510	SB10-5.0			X		1					
11				1530	SB11-2.0			X		1					
12				1545	SB11-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	HOLD	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B**	T.Ale 22 Metals by 6010B/7471A	STLC Lead	TCLP Lead
								X				X			
								X	X	X	X			X	
								X	X	X		X			
								X				X			
								X				X			
								X				X			
								X				X			
								X				X			
								X				X			
								X				X			
								X				X			
								X				X			

Received 11/20

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 1 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	930
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tina Ranka	11/12/13	1345
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

intact on ice cold PC

PES Environmental, Inc.
Engineering & Environmental Services

250734

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: C+T

SAMPLERS: M. Bittner

JOB NUMBER: 1386.001.003

NAME / LOCATION: 6701 Shellmound, Emeryville

PROJECT MANAGER: K. Flory

RECORDER: MS

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	DEPTH IN FEET
13	13	11	08	1600	SB11-5.5			X		1					
14				1610	SB14-2.0			X		1					
15				1620	SB12-10.0			X		1					
16				1630	SB12-5.0			X		1					
17				1640	SB12-2.0			X		1					
18				1650	SB13-10.0			X		1					
19				1700	SB13-5.0			X		1					
20				1710	SB13-1.5			X		1					

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Paramaters (see notes)	HOLD	VOCs by 8260B**	SVOCs by 8270C**	PCBs by 8082**	Lead by 6010B**	Title 22 Metals by 6010B/7471A	STLC Lead	TCLP Lead
								X	X	X	X	X	X		
								X	X	X	X	X			
								X	X	X	X	X			
								X	X	X	X	X			
								X	X	X	X	X	X	X	X
								X	X	X	X	X			
								X	X	X	X	X			
								X	X	X	X	X			

Received 11/12

NOTES

Turn Around Time: * 24-Hour TAT for Lead analysis
** 72-Hour TAT for remaining analyses

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	11/12/13	970
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Tonia Rankin	11/12/13	1045
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Want on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250734 Date Received 11/12/13 Number of coolers 2
Client PES Project 6701 SHELLMOUND (1386.001.01.0003)

Date Opened 11/12/13 By (print) TR (sign) Tina Ranker
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.8, 5.1

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB7-8.0	Batch#:	205211
Lab ID:	250734-002	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received		

Analyte	Result	RL	Diln Fac	Analyzed
N-Nitrosodimethylamine	ND	1,600	5.000	11/19/13
Phenol	ND	1,600	5.000	11/19/13
bis(2-Chloroethyl)ether	ND	1,600	5.000	11/19/13
2-Chlorophenol	ND	1,600	5.000	11/19/13
1,3-Dichlorobenzene	ND	1,600	5.000	11/19/13
1,4-Dichlorobenzene	ND	1,600	5.000	11/19/13
Benzyl alcohol	ND	1,600	5.000	11/19/13
1,2-Dichlorobenzene	ND	1,600	5.000	11/19/13
2-Methylphenol	ND	1,600	5.000	11/19/13
bis(2-Chloroisopropyl) ether	ND	1,600	5.000	11/19/13
4-Methylphenol	ND	1,600	5.000	11/19/13
N-Nitroso-di-n-propylamine	ND	1,600	5.000	11/19/13
Hexachloroethane	ND	1,600	5.000	11/19/13
Nitrobenzene	ND	1,600	5.000	11/19/13
Isophorone	ND	1,600	5.000	11/19/13
2-Nitrophenol	ND	3,300	5.000	11/19/13
2,4-Dimethylphenol	ND	1,600	5.000	11/19/13
Benzoic acid	ND	8,200	5.000	11/19/13
bis(2-Chloroethoxy)methane	ND	1,600	5.000	11/19/13
2,4-Dichlorophenol	ND	1,600	5.000	11/19/13
1,2,4-Trichlorobenzene	ND	1,600	5.000	11/19/13
Naphthalene	28,000	1,300	20.00	11/20/13
4-Chloroaniline	ND	1,600	5.000	11/19/13
Hexachlorobutadiene	ND	1,600	5.000	11/19/13
4-Chloro-3-methylphenol	ND	1,600	5.000	11/19/13
2-Methylnaphthalene	9,200	330	5.000	11/19/13
Hexachlorocyclopentadiene	ND	3,300	5.000	11/19/13
2,4,6-Trichlorophenol	ND	1,600	5.000	11/19/13
2,4,5-Trichlorophenol	ND	1,600	5.000	11/19/13
2-Chloronaphthalene	ND	1,600	5.000	11/19/13
2-Nitroaniline	ND	3,300	5.000	11/19/13
Dimethylphthalate	ND	1,600	5.000	11/19/13
Acenaphthylene	ND	330	5.000	11/19/13
2,6-Dinitrotoluene	ND	1,600	5.000	11/19/13
3-Nitroaniline	ND	3,300	5.000	11/19/13
Acenaphthene	500	330	5.000	11/19/13
2,4-Dinitrophenol	ND	3,300	5.000	11/19/13
4-Nitrophenol	ND	3,300	5.000	11/19/13
Dibenzofuran	ND	1,600	5.000	11/19/13
2,4-Dinitrotoluene	ND	1,600	5.000	11/19/13
Diethylphthalate	ND	1,600	5.000	11/19/13
Fluorene	680	330	5.000	11/19/13
4-Chlorophenyl-phenylether	ND	1,600	5.000	11/19/13
4-Nitroaniline	ND	3,300	5.000	11/19/13
4,6-Dinitro-2-methylphenol	ND	3,300	5.000	11/19/13
N-Nitrosodiphenylamine	1,700	1,600	5.000	11/19/13
Azobenzene	ND	1,600	5.000	11/19/13
4-Bromophenyl-phenylether	ND	1,600	5.000	11/19/13
Hexachlorobenzene	ND	1,600	5.000	11/19/13
Pentachlorophenol	ND	3,300	5.000	11/19/13
Phenanthrene	2,400	330	5.000	11/19/13
Anthracene	340	330	5.000	11/19/13
Di-n-butylphthalate	ND	1,600	5.000	11/19/13
Fluoranthene	1,100	330	5.000	11/19/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB7-8.0	Batch#:	205211
Lab ID:	250734-002	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received		

Analyte	Result	RL	Diln Fac	Analyzed
Pyrene	1,100	330	5.000	11/19/13
Butylbenzylphthalate	ND	1,600	5.000	11/19/13
3,3'-Dichlorobenzidine	ND	3,300	5.000	11/19/13
Benzo(a)anthracene	340	330	5.000	11/19/13
Chrysene	470	330	5.000	11/19/13
bis(2-Ethylhexyl)phthalate	ND	1,600	5.000	11/19/13
Di-n-octylphthalate	ND	1,600	5.000	11/19/13
Benzo(b)fluoranthene	ND	330	5.000	11/19/13
Benzo(k)fluoranthene	ND	330	5.000	11/19/13
Benzo(a)pyrene	ND	330	5.000	11/19/13
Indeno(1,2,3-cd)pyrene	ND	330	5.000	11/19/13
Dibenz(a,h)anthracene	ND	330	5.000	11/19/13
Benzo(g,h,i)perylene	ND	330	5.000	11/19/13

Surrogate	%REC	Limits	Diln Fac	Analyzed
2-Fluorophenol	65	35-120	5.000	11/19/13
Phenol-d5	65	39-120	5.000	11/19/13
2,4,6-Tribromophenol	82	39-120	5.000	11/19/13
Nitrobenzene-d5	71	49-120	5.000	11/19/13
2-Fluorobiphenyl	92	52-120	5.000	11/19/13
Terphenyl-d14	84	48-120	5.000	11/19/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB7-2.5	Batch#:	205211
Lab ID:	250734-003	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received		

Analyte	Result	RL	Diln Fac	Analyzed
N-Nitrosodimethylamine	ND	1,700	5.000	11/19/13
Phenol	ND	1,700	5.000	11/19/13
bis(2-Chloroethyl)ether	ND	1,700	5.000	11/19/13
2-Chlorophenol	ND	1,700	5.000	11/19/13
1,3-Dichlorobenzene	ND	1,700	5.000	11/19/13
1,4-Dichlorobenzene	ND	1,700	5.000	11/19/13
Benzyl alcohol	ND	1,700	5.000	11/19/13
1,2-Dichlorobenzene	ND	1,700	5.000	11/19/13
2-Methylphenol	ND	1,700	5.000	11/19/13
bis(2-Chloroisopropyl) ether	ND	1,700	5.000	11/19/13
4-Methylphenol	10,000	3,300	10.00	11/20/13
N-Nitroso-di-n-propylamine	ND	1,700	5.000	11/19/13
Hexachloroethane	ND	1,700	5.000	11/19/13
Nitrobenzene	ND	1,700	5.000	11/19/13
Isophorone	ND	1,700	5.000	11/19/13
2-Nitrophenol	ND	3,300	5.000	11/19/13
2,4-Dimethylphenol	ND	1,700	5.000	11/19/13
Benzoic acid	ND	8,300	5.000	11/19/13
bis(2-Chloroethoxy)methane	ND	1,700	5.000	11/19/13
2,4-Dichlorophenol	ND	1,700	5.000	11/19/13
1,2,4-Trichlorobenzene	ND	1,700	5.000	11/19/13
Naphthalene	1,500	330	5.000	11/19/13
4-Chloroaniline	ND	1,700	5.000	11/19/13
Hexachlorobutadiene	ND	1,700	5.000	11/19/13
4-Chloro-3-methylphenol	ND	1,700	5.000	11/19/13
2-Methylnaphthalene	ND	330	5.000	11/19/13
Hexachlorocyclopentadiene	ND	3,300	5.000	11/19/13
2,4,6-Trichlorophenol	ND	1,700	5.000	11/19/13
2,4,5-Trichlorophenol	ND	1,700	5.000	11/19/13
2-Chloronaphthalene	ND	1,700	5.000	11/19/13
2-Nitroaniline	ND	3,300	5.000	11/19/13
Dimethylphthalate	ND	1,700	5.000	11/19/13
Acenaphthylene	ND	330	5.000	11/19/13
2,6-Dinitrotoluene	ND	1,700	5.000	11/19/13
3-Nitroaniline	ND	3,300	5.000	11/19/13
Acenaphthene	ND	330	5.000	11/19/13
2,4-Dinitrophenol	ND	3,300	5.000	11/19/13
4-Nitrophenol	ND	3,300	5.000	11/19/13
Dibenzofuran	ND	1,700	5.000	11/19/13
2,4-Dinitrotoluene	ND	1,700	5.000	11/19/13
Diethylphthalate	ND	1,700	5.000	11/19/13
Fluorene	ND	330	5.000	11/19/13
4-Chlorophenyl-phenylether	ND	1,700	5.000	11/19/13
4-Nitroaniline	ND	3,300	5.000	11/19/13
4,6-Dinitro-2-methylphenol	ND	3,300	5.000	11/19/13
N-Nitrosodiphenylamine	ND	1,700	5.000	11/19/13
Azobenzene	ND	1,700	5.000	11/19/13
4-Bromophenyl-phenylether	ND	1,700	5.000	11/19/13
Hexachlorobenzene	ND	1,700	5.000	11/19/13
Pentachlorophenol	ND	3,300	5.000	11/19/13
Phenanthrene	450	330	5.000	11/19/13
Anthracene	ND	330	5.000	11/19/13
Di-n-butylphthalate	ND	1,700	5.000	11/19/13
Fluoranthene	ND	330	5.000	11/19/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB7-2.5	Batch#:	205211
Lab ID:	250734-003	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received		

Analyte	Result	RL	Diln Fac	Analyzed
Pyrene	ND	330	5.000	11/19/13
Butylbenzylphthalate	ND	1,700	5.000	11/19/13
3,3'-Dichlorobenzidine	ND	3,300	5.000	11/19/13
Benzo(a)anthracene	ND	330	5.000	11/19/13
Chrysene	ND	330	5.000	11/19/13
bis(2-Ethylhexyl)phthalate	ND	1,700	5.000	11/19/13
Di-n-octylphthalate	ND	1,700	5.000	11/19/13
Benzo(b)fluoranthene	ND	330	5.000	11/19/13
Benzo(k)fluoranthene	ND	330	5.000	11/19/13
Benzo(a)pyrene	ND	330	5.000	11/19/13
Indeno(1,2,3-cd)pyrene	ND	330	5.000	11/19/13
Dibenz(a,h)anthracene	ND	330	5.000	11/19/13
Benzo(g,h,i)perylene	ND	330	5.000	11/19/13

Surrogate	%REC	Limits	Diln Fac	Analyzed
2-Fluorophenol	63	35-120	5.000	11/19/13
Phenol-d5	62	39-120	5.000	11/19/13
2,4,6-Tribromophenol	88	39-120	5.000	11/19/13
Nitrobenzene-d5	73	49-120	5.000	11/19/13
2-Fluorobiphenyl	100	52-120	5.000	11/19/13
Terphenyl-d14	86	48-120	5.000	11/19/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB11-5.5	Batch#:	205211
Lab ID:	250734-013	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	10.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	3,300
Phenol	ND	3,300
bis(2-Chloroethyl)ether	ND	3,300
2-Chlorophenol	ND	3,300
1,3-Dichlorobenzene	ND	3,300
1,4-Dichlorobenzene	ND	3,300
Benzyl alcohol	ND	3,300
1,2-Dichlorobenzene	ND	3,300
2-Methylphenol	ND	3,300
bis(2-Chloroisopropyl) ether	ND	3,300
4-Methylphenol	ND	3,300
N-Nitroso-di-n-propylamine	ND	3,300
Hexachloroethane	ND	3,300
Nitrobenzene	ND	3,300
Isophorone	ND	3,300
2-Nitrophenol	ND	6,700
2,4-Dimethylphenol	ND	3,300
Benzoic acid	ND	17,000
bis(2-Chloroethoxy)methane	ND	3,300
2,4-Dichlorophenol	ND	3,300
1,2,4-Trichlorobenzene	ND	3,300
Naphthalene	ND	670
4-Chloroaniline	ND	3,300
Hexachlorobutadiene	ND	3,300
4-Chloro-3-methylphenol	ND	3,300
2-Methylnaphthalene	ND	670
Hexachlorocyclopentadiene	ND	6,700
2,4,6-Trichlorophenol	ND	3,300
2,4,5-Trichlorophenol	ND	3,300
2-Chloronaphthalene	ND	3,300
2-Nitroaniline	ND	6,700
Dimethylphthalate	ND	3,300
Acenaphthylene	ND	670
2,6-Dinitrotoluene	ND	3,300
3-Nitroaniline	ND	6,700
Acenaphthene	ND	670
2,4-Dinitrophenol	ND	6,700
4-Nitrophenol	ND	6,700
Dibenzofuran	ND	3,300
2,4-Dinitrotoluene	ND	3,300
Diethylphthalate	ND	3,300
Fluorene	ND	670
4-Chlorophenyl-phenylether	ND	3,300
4-Nitroaniline	ND	6,700
4,6-Dinitro-2-methylphenol	ND	6,700
N-Nitrosodiphenylamine	ND	3,300
Azobenzene	ND	3,300
4-Bromophenyl-phenylether	ND	3,300
Hexachlorobenzene	ND	3,300
Pentachlorophenol	ND	6,700
Phenanthrene	750	670
Anthracene	ND	670

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB11-5.5	Batch#:	205211
Lab ID:	250734-013	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	10.00		

Analyte	Result	RL
Di-n-butylphthalate	ND	3,300
Fluoranthene	1,800	670
Pyrene	2,300	670
Butylbenzylphthalate	ND	3,300
3,3'-Dichlorobenzidine	ND	6,700
Benzo(a)anthracene	ND	670
Chrysene	820	670
bis(2-Ethylhexyl)phthalate	ND	3,300
Di-n-octylphthalate	ND	3,300
Benzo(b)fluoranthene	990	670
Benzo(k)fluoranthene	ND	670
Benzo(a)pyrene	900	670
Indeno(1,2,3-cd)pyrene	ND	670
Dibenz(a,h)anthracene	ND	670
Benzo(g,h,i)perylene	ND	670

Surrogate	%REC	Limits
2-Fluorophenol	DO	35-120
Phenol-d5	DO	39-120
2,4,6-Tribromophenol	DO	39-120
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB11-2.0	Batch#:	205211
Lab ID:	250734-014	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	20.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	6,600
Phenol	ND	6,600
bis(2-Chloroethyl)ether	ND	6,600
2-Chlorophenol	ND	6,600
1,3-Dichlorobenzene	ND	6,600
1,4-Dichlorobenzene	ND	6,600
Benzyl alcohol	ND	6,600
1,2-Dichlorobenzene	ND	6,600
2-Methylphenol	ND	6,600
bis(2-Chloroisopropyl) ether	ND	6,600
4-Methylphenol	ND	6,600
N-Nitroso-di-n-propylamine	ND	6,600
Hexachloroethane	ND	6,600
Nitrobenzene	ND	6,600
Isophorone	ND	6,600
2-Nitrophenol	ND	13,000
2,4-Dimethylphenol	ND	6,600
Benzoic acid	ND	33,000
bis(2-Chloroethoxy)methane	ND	6,600
2,4-Dichlorophenol	ND	6,600
1,2,4-Trichlorobenzene	ND	6,600
Naphthalene	ND	1,300
4-Chloroaniline	ND	6,600
Hexachlorobutadiene	ND	6,600
4-Chloro-3-methylphenol	ND	6,600
2-Methylnaphthalene	ND	1,300
Hexachlorocyclopentadiene	ND	13,000
2,4,6-Trichlorophenol	ND	6,600
2,4,5-Trichlorophenol	ND	6,600
2-Chloronaphthalene	ND	6,600
2-Nitroaniline	ND	13,000
Dimethylphthalate	ND	6,600
Acenaphthylene	ND	1,300
2,6-Dinitrotoluene	ND	6,600
3-Nitroaniline	ND	13,000
Acenaphthene	ND	1,300
2,4-Dinitrophenol	ND	13,000
4-Nitrophenol	ND	13,000
Dibenzofuran	ND	6,600
2,4-Dinitrotoluene	ND	6,600
Diethylphthalate	ND	6,600
Fluorene	ND	1,300
4-Chlorophenyl-phenylether	ND	6,600
4-Nitroaniline	ND	13,000
4,6-Dinitro-2-methylphenol	ND	13,000
N-Nitrosodiphenylamine	ND	6,600
Azobenzene	ND	6,600
4-Bromophenyl-phenylether	ND	6,600
Hexachlorobenzene	ND	6,600
Pentachlorophenol	ND	13,000
Phenanthrene	ND	1,300
Anthracene	ND	1,300

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB11-2.0	Batch#:	205211
Lab ID:	250734-014	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	20.00		

Analyte	Result	RL
Di-n-butylphthalate	ND	6,600
Fluoranthene	ND	1,300
Pyrene	1,300	1,300
Butylbenzylphthalate	ND	6,600
3,3'-Dichlorobenzidine	ND	13,000
Benzo(a)anthracene	ND	1,300
Chrysene	ND	1,300
bis(2-Ethylhexyl)phthalate	ND	6,600
Di-n-octylphthalate	ND	6,600
Benzo(b)fluoranthene	ND	1,300
Benzo(k)fluoranthene	ND	1,300
Benzo(a)pyrene	ND	1,300
Indeno(1,2,3-cd)pyrene	ND	1,300
Dibenz(a,h)anthracene	ND	1,300
Benzo(g,h,i)perylene	ND	1,300

Surrogate	%REC	Limits
2-Fluorophenol	DO	35-120
Phenol-d5	DO	39-120
2,4,6-Tribromophenol	DO	39-120
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB13-10.0	Batch#:	205211
Lab ID:	250734-018	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/20/13
Diln Fac:	25.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	8,300
Phenol	ND	8,300
bis(2-Chloroethyl)ether	ND	8,300
2-Chlorophenol	ND	8,300
1,3-Dichlorobenzene	ND	8,300
1,4-Dichlorobenzene	ND	8,300
Benzyl alcohol	ND	8,300
1,2-Dichlorobenzene	ND	8,300
2-Methylphenol	ND	8,300
bis(2-Chloroisopropyl) ether	ND	8,300
4-Methylphenol	ND	8,300
N-Nitroso-di-n-propylamine	ND	8,300
Hexachloroethane	ND	8,300
Nitrobenzene	ND	8,300
Isophorone	ND	8,300
2-Nitrophenol	ND	17,000
2,4-Dimethylphenol	ND	8,300
Benzoic acid	ND	42,000
bis(2-Chloroethoxy)methane	ND	8,300
2,4-Dichlorophenol	ND	8,300
1,2,4-Trichlorobenzene	ND	8,300
Naphthalene	2,100	1,700
4-Chloroaniline	ND	8,300
Hexachlorobutadiene	ND	8,300
4-Chloro-3-methylphenol	ND	8,300
2-Methylnaphthalene	2,000	1,700
Hexachlorocyclopentadiene	ND	17,000
2,4,6-Trichlorophenol	ND	8,300
2,4,5-Trichlorophenol	ND	8,300
2-Chloronaphthalene	ND	8,300
2-Nitroaniline	ND	17,000
Dimethylphthalate	ND	8,300
Acenaphthylene	ND	1,700
2,6-Dinitrotoluene	ND	8,300
3-Nitroaniline	ND	17,000
Acenaphthene	ND	1,700
2,4-Dinitrophenol	ND	17,000
4-Nitrophenol	ND	17,000
Dibenzofuran	ND	8,300
2,4-Dinitrotoluene	ND	8,300
Diethylphthalate	ND	8,300
Fluorene	ND	1,700
4-Chlorophenyl-phenylether	ND	8,300
4-Nitroaniline	ND	17,000
4,6-Dinitro-2-methylphenol	ND	17,000
N-Nitrosodiphenylamine	ND	8,300
Azobenzene	ND	8,300
4-Bromophenyl-phenylether	ND	8,300
Hexachlorobenzene	ND	8,300
Pentachlorophenol	ND	17,000
Phenanthrene	7,500	1,700
Anthracene	ND	1,700

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB13-10.0	Batch#:	205211
Lab ID:	250734-018	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/20/13
Diln Fac:	25.00		

Analyte	Result	RL
Di-n-butylphthalate	ND	8,300
Fluoranthene	4,200	1,700
Pyrene	4,000	1,700
Butylbenzylphthalate	ND	8,300
3,3'-Dichlorobenzidine	ND	17,000
Benzo(a)anthracene	2,000	1,700
Chrysene	2,100	1,700
bis(2-Ethylhexyl)phthalate	ND	8,300
Di-n-octylphthalate	ND	8,300
Benzo(b)fluoranthene	1,800	1,700
Benzo(k)fluoranthene	ND	1,700
Benzo(a)pyrene	ND	1,700
Indeno(1,2,3-cd)pyrene	ND	1,700
Dibenz(a,h)anthracene	ND	1,700
Benzo(g,h,i)perylene	ND	1,700

Surrogate	%REC	Limits
2-Fluorophenol	DO	35-120
Phenol-d5	DO	39-120
2,4,6-Tribromophenol	DO	39-120
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB13-1.5	Batch#:	205211
Lab ID:	250734-020	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	260	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	92	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB13-1.5	Batch#:	205211
Lab ID:	250734-020	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	79	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	55	35-120
Phenol-d5	55	39-120
2,4,6-Tribromophenol	78	39-120
Nitrobenzene-d5	62	49-120
2-Fluorobiphenyl	79	52-120
Terphenyl-d14	71	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716731	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330
Fluoranthene	ND	66

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716731	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Result	RL
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	56	35-120
Phenol-d5	57	39-120
2,4,6-Tribromophenol	68	39-120
Nitrobenzene-d5	61	49-120
2-Fluorobiphenyl	80	52-120
Terphenyl-d14	81	48-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC716732	Batch#:	205211
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Spiked	Result	%REC	Limits
Phenol	2,653	2,176	82	48-120
2-Chlorophenol	2,653	2,098	79	51-120
1,4-Dichlorobenzene	2,653	2,122	80	54-120
N-Nitroso-di-n-propylamine	2,653	1,892	71	35-120
1,2,4-Trichlorobenzene	2,653	2,403	91	56-120
4-Chloro-3-methylphenol	2,653	2,304	87	61-120
Acenaphthene	995.0	828.6	83	57-120
4-Nitrophenol	2,653	2,350	89	54-120
2,4-Dinitrotoluene	2,653	2,427	91	58-120
Pentachlorophenol	2,653	2,139	81	42-120
Pyrene	995.0	988.8	99	60-120

Surrogate	%REC	Limits
2-Fluorophenol	75	35-120
Phenol-d5	78	39-120
2,4,6-Tribromophenol	100	39-120
Nitrobenzene-d5	74	49-120
2-Fluorobiphenyl	80	52-120
Terphenyl-d14	86	48-120

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8270C
Field ID:	SB2-7.5	Batch#:	205211
MSS Lab ID:	250733-005	Sampled:	11/07/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	2.000		

Type: MS Lab ID: QC716733

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<13.95	2,664	2,094	79	51-120
2-Chlorophenol	<14.52	2,664	1,998	75	52-120
1,4-Dichlorobenzene	<15.20	2,664	1,811	68	55-120
N-Nitroso-di-n-propylamine	<15.52	2,664	2,062	77	45-120
1,2,4-Trichlorobenzene	<15.58	2,664	2,321	87	57-120
4-Chloro-3-methylphenol	<16.45	2,664	2,240	84	60-120
Acenaphthene	35.29	999.0	800.5	77	58-120
4-Nitrophenol	<140.7	2,664	2,158	81	49-120
2,4-Dinitrotoluene	<18.98	2,664	2,248	84	58-120
Pentachlorophenol	<252.4	2,664	1,753	66	23-120
Pyrene	2,286	999.0	1,257	-103 *	53-122

Surrogate	%REC	Limits
2-Fluorophenol	63	35-120
Phenol-d5	69	39-120
2,4,6-Tribromophenol	86	39-120
Nitrobenzene-d5	69	49-120
2-Fluorobiphenyl	82	52-120
Terphenyl-d14	81	48-120

Type: MSD Lab ID: QC716734

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,704	2,032	75	51-120	4	32
2-Chlorophenol	2,704	1,967	73	52-120	3	32
1,4-Dichlorobenzene	2,704	1,622	60	55-120	12	35
N-Nitroso-di-n-propylamine	2,704	1,998	74	45-120	5	35
1,2,4-Trichlorobenzene	2,704	2,191	81	57-120	7	31
4-Chloro-3-methylphenol	2,704	2,210	82	60-120	3	30
Acenaphthene	1,014	768.9	72	58-120	5	36
4-Nitrophenol	2,704	2,054	76	49-120	6	39
2,4-Dinitrotoluene	2,704	2,137	79	58-120	7	28
Pentachlorophenol	2,704	1,293	48	23-120	32	47
Pyrene	1,014	1,344	-93 *	53-122	6	44

Surrogate	%REC	Limits
2-Fluorophenol	63	35-120
Phenol-d5	69	39-120
2,4,6-Tribromophenol	79	39-120
Nitrobenzene-d5	67	49-120
2-Fluorobiphenyl	79	52-120
Terphenyl-d14	80	48-120

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB7-8.0	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-002		

Analyte	Result	RL
Aroclor-1016	ND	42
Aroclor-1221	ND	84
Aroclor-1232	ND	42
Aroclor-1242	ND	42
Aroclor-1248	ND	42
Aroclor-1254	ND	42
Aroclor-1260	ND	42
Aroclor-1262	1,500	42
Aroclor-1268	ND	42

Surrogate	%REC	Limits
TCMX	79	66-142
Decachlorobiphenyl	43	43-139

Field ID:	SB7-2.5	Diln Fac:	10.00
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-003		

Analyte	Result	RL
Aroclor-1016	ND	82
Aroclor-1221	ND	160
Aroclor-1232	ND	82
Aroclor-1242	ND	82
Aroclor-1248	ND	82
Aroclor-1254	ND	82
Aroclor-1260	1,900	82
Aroclor-1262	ND	82
Aroclor-1268	ND	82

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB11-5.5	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-013		

Analyte	Result	RL
Aroclor-1016	ND	42
Aroclor-1221	ND	83
Aroclor-1232	ND	42
Aroclor-1242	ND	42
Aroclor-1248	ND	42
Aroclor-1254	ND	42
Aroclor-1260	1,200	42
Aroclor-1262	ND	42
Aroclor-1268	1,400	42

Surrogate	%REC	Limits
TCMX	73	66-142
Decachlorobiphenyl	50	43-139

Field ID:	SB11-2.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/19/13
Lab ID:	250734-014		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	380	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	98	66-142
Decachlorobiphenyl	42 *	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB12-10.0	Diln Fac:	10.00
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-015		

Analyte	Result	RL
Aroclor-1016	ND	83
Aroclor-1221	ND	170
Aroclor-1232	ND	83
Aroclor-1242	ND	83
Aroclor-1248	ND	83
Aroclor-1254	ND	83
Aroclor-1260	ND	83
Aroclor-1262	6,500	83
Aroclor-1268	ND	83

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

Field ID:	SB12-5.0	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-016		

Analyte	Result	RL
Aroclor-1016	ND	41
Aroclor-1221	ND	82
Aroclor-1232	ND	41
Aroclor-1242	ND	41
Aroclor-1248	ND	41
Aroclor-1254	ND	41
Aroclor-1260	ND	41
Aroclor-1262	1,200	41
Aroclor-1268	ND	41

Surrogate	%REC	Limits
TCMX	79	66-142
Decachlorobiphenyl	39 *	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB12-2.0	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-017		

Analyte	Result	RL
Aroclor-1016	ND	42
Aroclor-1221	ND	85
Aroclor-1232	ND	42
Aroclor-1242	ND	42
Aroclor-1248	ND	42
Aroclor-1254	ND	42
Aroclor-1260	2,000	42
Aroclor-1262	ND	42
Aroclor-1268	ND	42

Surrogate	%REC	Limits
TCMX	115	66-142
Decachlorobiphenyl	97	43-139

Field ID:	SB13-10.0	Diln Fac:	10.00
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-018		

Analyte	Result	RL
Aroclor-1016	ND	84
Aroclor-1221	ND	170
Aroclor-1232	ND	84
Aroclor-1242	ND	84
Aroclor-1248	ND	84
Aroclor-1254	ND	84
Aroclor-1260	3,300	84
Aroclor-1262	ND	84
Aroclor-1268	1,900	84

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Field ID:	SB13-5.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-019		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	18	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	118	66-142
Decachlorobiphenyl	108	43-139

Field ID:	SB13-1.5	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	11/20/13
Lab ID:	250734-020		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	270	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	93	66-142
Decachlorobiphenyl	37 *	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	11/08/13
Units:	ug/Kg	Received:	11/12/13
Basis:	as received	Prepared:	11/18/13
Batch#:	205200		

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716687	Analyzed:	11/19/13

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Aroclor-1262	ND	12
Aroclor-1268	ND	12

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	78	43-139

*= Value outside of QC limits; see narrative
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC716688	Batch#:	205200
Matrix:	Soil	Prepared:	11/18/13
Units:	ug/Kg	Analyzed:	11/19/13

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	167.8	177.2	106	64-143
Aroclor-1260	167.8	175.0	104	58-146

Surrogate	%REC	Limits
TCMX	102	66-142
Decachlorobiphenyl	83	43-139

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1386.001.01.003	Analysis:	EPA 8082
Field ID:	SB14-3.5	Batch#:	205200
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	ug/Kg	Prepared:	11/18/13
Basis:	as received	Analyzed:	11/19/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716689

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.942	164.1	172.5 b	105	58-155
Aroclor-1260	12.74	164.1	214.3	123	35-159

Surrogate	%REC	Limits
TCMX	110	66-142
Decachlorobiphenyl	83	43-139

Type: MSD Lab ID: QC716690

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	166.7	176.6 b	106	58-155	1	44
Aroclor-1260	166.7	192.9	108	35-159	12	53

Surrogate	%REC	Limits
TCMX	106	66-142
Decachlorobiphenyl	84	43-139

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13
Batch#:	205160		

Field ID	Type	Lab ID	Result	RL	Diln Fac
SB7-12.5	SAMPLE	250734-001	2.1	0.25	1.000
SB7-8.0	SAMPLE	250734-002	250	0.24	1.000
SB8-12.0	SAMPLE	250734-004	3.0	0.24	1.000
SB8-3.5	SAMPLE	250734-006	200	0.26	1.000
SB9-10.0	SAMPLE	250734-007	50	0.26	1.000
SB10-10.0	SAMPLE	250734-009	21	0.27	1.000
SB10-5.0	SAMPLE	250734-010	49	0.28	1.000
SB11-11.5	SAMPLE	250734-012	1.7	0.24	1.000
SB11-2.0	SAMPLE	250734-014	28	0.24	1.000
SB12-5.0	SAMPLE	250734-016	320	0.27	1.000
SB12-2.0	SAMPLE	250734-017	130	0.28	1.000
SB13-10.0	SAMPLE	250734-018	3,300	2.4	10.00
SB13-1.5	SAMPLE	250734-020	68	0.24	1.000
	BLANK	QC716530	ND	0.25	1.000

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB7-2.5	Basis:	as received
Lab ID:	250734-003	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/08/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.75	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	5.0	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	160	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.25	0.093	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	1.2	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	34	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	9.0	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	74	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	120	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.19	0.015	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.69	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	49	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	0.66	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	35	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	220	0.93	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB8-8.0	Basis:	as received
Lab ID:	250734-005	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/08/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.51	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	2.3	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	32	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	ND	0.10	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	33	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	4.4	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	4.7	0.26	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	3.1	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	ND	0.016	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	24	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	26	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	19	1.0	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB9-4.5	Basis:	as received
Lab ID:	250734-008	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/08/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.49	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	5.4	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	120	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.32	0.097	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.81	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	45	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	10	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	46	0.25	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	41	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.12	0.016	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	1.5	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	38	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.49	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.49	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	36	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	110	0.97	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB10-2.0	Basis:	as received
Lab ID:	250734-011	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.47	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	6.9	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	550	2.3	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.33	0.093	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.58	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	38	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.9	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	27	2.4	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	45	2.3	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.15	0.017	1.000	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.61	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	36	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.47	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.47	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	34	0.23	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	90	0.93	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB11-5.5	Basis:	as received
Lab ID:	250734-013	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/08/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.62	0.54	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	9.2	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	140	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.26	0.11	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	1.2	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	160	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	10	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	260	0.28	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	170	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.17	0.018	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	21	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	170	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.54	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.54	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	36	0.27	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	300	1.1	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB12-10.0	Basis:	as received
Lab ID:	250734-015	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.49	1.000	205160	11/17/13	11/19/13	EPA 3050B	EPA 6010B
Arsenic	5.9	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	210	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.27	0.098	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	1.3	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	31	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	6.6	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	44	2.5	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	290	2.5	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.18	0.016	1.000	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.28	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	29	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	ND	0.49	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.49	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	30	0.25	1.000	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	1,900	9.8	10.00	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	250734	Project#:	1386.001.01.003
Client:	PES Environmental, Inc.	Location:	6701 Shellmound, Emeryville
Field ID:	SB13-5.0	Basis:	as received
Lab ID:	250734-019	Diln Fac:	1.000
Matrix:	Soil	Sampled:	11/08/13
Units:	mg/Kg	Received:	11/12/13

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Arsenic	8.4	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Barium	270	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Beryllium	0.42	0.093	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cadmium	0.70	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Chromium	23	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Cobalt	26	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Copper	30	0.24	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Lead	54	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Mercury	0.070	0.018	205271	11/20/13	11/20/13	METHOD	EPA 7471A
Molybdenum	0.37	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Nickel	27	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Selenium	1.6	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Thallium	ND	0.47	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Vanadium	45	0.23	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B
Zinc	100	0.93	205160	11/17/13	11/18/13	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC716530	Batch#:	205160
Matrix:	Soil	Prepared:	11/17/13
Units:	mg/Kg	Analyzed:	11/18/13

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	1.000
Field ID:	SB7-12.5	Batch#:	205160
MSS Lab ID:	250734-001	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716531		100.0	100.6	101	80-120		
BSD	QC716532		100.0	99.84	100	80-120	1	22
MS	QC716533	2.081	106.4	97.49	90	52-120		
MSD	QC716534		104.2	96.30	90	52-120	1	51

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	205160
Units:	mg/Kg	Prepared:	11/17/13
Diln Fac:	1.000	Analyzed:	11/18/13

Type: BS Lab ID: QC716531

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	103.6	104	80-120
Arsenic	50.00	52.27	105	80-120
Barium	100.0	103.1	103	80-120
Beryllium	2.500	2.429	97	80-120
Cadmium	10.00	10.63	106	80-120
Chromium	100.0	101.2	101	80-120
Cobalt	25.00	25.51	102	80-120
Copper	12.50	12.97	104	80-120
Lead	100.0	100.6	101	80-120
Molybdenum	20.00	20.81	104	80-120
Nickel	25.00	26.02	104	80-120
Selenium	50.00	51.44	103	80-120
Silver	10.00	9.800	98	80-120
Thallium	50.00	50.35	101	80-120
Vanadium	25.00	25.22	101	80-120
Zinc	25.00	26.16	105	80-120

Type: BSD Lab ID: QC716532

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	101.8	102	80-120	2	20
Arsenic	50.00	51.45	103	80-120	2	20
Barium	100.0	103.2	103	80-120	0	20
Beryllium	2.500	2.434	97	80-120	0	20
Cadmium	10.00	10.65	106	80-120	0	20
Chromium	100.0	101.4	101	80-120	0	20
Cobalt	25.00	25.49	102	80-120	0	20
Copper	12.50	12.97	104	80-120	0	20
Lead	100.0	99.84	100	80-120	1	22
Molybdenum	20.00	20.51	103	80-120	1	20
Nickel	25.00	26.10	104	80-120	0	20
Selenium	50.00	50.62	101	80-120	2	20
Silver	10.00	9.799	98	80-120	0	20
Thallium	50.00	49.58	99	80-120	2	20
Vanadium	25.00	25.20	101	80-120	0	20
Zinc	25.00	26.33	105	80-120	1	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Field ID:	SB7-12.5	Batch#:	205160
MSS Lab ID:	250734-001	Sampled:	11/08/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/17/13
Basis:	as received	Analyzed:	11/18/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716533

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.2139	106.4	71.11	67	8-120
Arsenic	2.167	53.19	53.09	96	71-121
Barium	36.47	106.4	129.5	87	48-133
Beryllium	0.1016	2.660	2.391	86	78-120
Cadmium	0.1963	10.64	10.26	95	69-120
Chromium	33.59	106.4	130.2	91	60-122
Cobalt	4.758	26.60	28.45	89	61-120
Copper	4.566	13.30	17.34	96	44-151
Lead	2.081	106.4	97.49	90	52-120
Molybdenum	<0.05505	21.28	19.82	93	67-120
Nickel	28.68	26.60	51.09	84	45-134
Selenium	<0.1434	53.19	47.97	90	67-120
Silver	<0.07329	10.64	9.149	86	66-120
Thallium	<0.1598	53.19	45.92	86	62-120
Vanadium	25.83	26.60	49.21	88	55-137
Zinc	18.04	26.60	48.74	115	38-146

Type: MSD Lab ID: QC716534

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	104.2	65.66	63	8-120	6	29
Arsenic	52.08	52.62	97	71-121	1	34
Barium	104.2	130.2	90	48-133	2	45
Beryllium	2.604	2.379	87	78-120	2	20
Cadmium	10.42	10.27	97	69-120	2	23
Chromium	104.2	134.1	96	60-122	5	34
Cobalt	26.04	28.38	91	61-120	2	37
Copper	13.02	17.92	103	44-151	5	35
Lead	104.2	96.30	90	52-120	1	51
Molybdenum	20.83	19.69	94	67-120	1	20
Nickel	26.04	52.36	91	45-134	3	38
Selenium	52.08	47.37	91	67-120	1	27
Silver	10.42	9.176	88	66-120	2	30
Thallium	52.08	45.29	87	62-120	1	20
Vanadium	26.04	48.99	89	55-137	1	30
Zinc	26.04	42.33	93	38-146	13	36

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	205271
Lab ID:	QC716952	Prepared:	11/20/13
Matrix:	Soil	Analyzed:	11/20/13
Units:	mg/Kg		

Result	RL
ND	0.017

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	205271
Matrix:	Soil	Prepared:	11/20/13
Units:	mg/Kg	Analyzed:	11/20/13
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC716953	0.2083	0.2012	97	80-120		
BSD	QC716954	0.2083	0.2047	98	80-120	2	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	METHOD
Project#:	1386.001.01.003	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	SB14-3.5	Batch#:	205271
MSS Lab ID:	250732-003	Sampled:	11/09/13
Matrix:	Soil	Received:	11/12/13
Units:	mg/Kg	Prepared:	11/20/13
Basis:	as received	Analyzed:	11/20/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC716955	0.06011	0.2016	0.2371	88	72-135		
MSD	QC716956		0.2049	0.3893	161 *	72-135	47 *	42

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205380
Field ID:	SB12-2.0	Sampled:	11/08/13
Matrix:	TCLP Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/21/13
Diln Fac:	10.00	Analyzed:	11/22/13

Type	Lab ID	Result	RL
SAMPLE	250734-017	1,100	50
BLANK	QC717362	ND	50

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	EPA 3010A
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205380
Field ID:	SB16-7.5	Sampled:	11/09/13
MSS Lab ID:	250732-008	Received:	11/12/13
Matrix:	TCLP Leachate	Prepared:	11/21/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717363		2,000	2,062	103	78-120			1.000
BSD	QC717364		2,000	2,056	103	78-120	0	20	1.000
MS	QC717365	1,840	2,000	4,024	109	68-120			10.00
MSD	QC717366		2,000	4,042	110	68-120	0	24	10.00

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	11/08/13
Matrix:	WET Leachate	Received:	11/12/13
Units:	ug/L	Prepared:	11/22/13
Diln Fac:	10.00	Analyzed:	11/22/13
Batch#:	205421		

Field ID	Type	Lab ID	Result	RL
SB7-8.0	SAMPLE	250734-002	39,000	250
SB12-2.0	SAMPLE	250734-017	12,000	250
	BLANK	QC717527	ND	250

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	250734	Location:	6701 Shellmound, Emeryville
Client:	PES Environmental, Inc.	Prep:	WET
Project#:	1386.001.01.003	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	205421
Field ID:	ZZZZZZZZZZ	Sampled:	11/07/13
MSS Lab ID:	250978-001	Received:	11/07/13
Matrix:	WET Leachate	Prepared:	11/22/13
Units:	ug/L	Analyzed:	11/22/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC717528		2,000	1,930	97	78-120			1.000
BSD	QC717529		2,000	1,961	98	78-120	2	20	1.000
MS	QC717530	13,640	10,000	23,020	94	68-120			10.00
MSD	QC717531		10,000	22,360	87	68-120	3	24	10.00

RPD= Relative Percent Difference

DISTRIBUTION

SUPPLEMENTAL SUBSURFACE INVESTIGATION REPORT
6701, 6705, and 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA

JANUARY 13, 2014

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