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August 15, 2017

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, PG, CEG, Senior Hazardous Materials Specialist

TRANSMITTAL LETTER
FOCUSED SOURCE AREA SOIL AND
LIMITED SOIL VAPOR INVESTIGATION REPORT
6701, 6705, and 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
Fuel Leak Case No. RO0000548
Geotracker Global ID T0600100894

Dear Mr. Detterman:

Submitted herewith for your review is the Focused Source Area Soil and Limited Soil Vapor Investigation Report, 6701, 6705, and 6707 Shellmound Street, Emeryville, California dated August 11, 2017, prepared by PES Environmental, Inc.

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Very truly yours,

ANTON EMERYVILLE, LLC

R. Green

Rachel Green
Senior Development Manager

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared For:

Anton Emeryville, LLC
950 Tower Lane, Suite 1225
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FOCUSED SOURCE AREA SOIL AND LIMITED SOIL VAPOR INVESTIGATION REPORT 6701, 6705, AND 6707 SHELLMOUND STREET EMERYVILLE, CALIFORNIA FUEL LEAK CASE NO. RO0000548 GEOTRACKER GLOBAL ID T0600100894

AUGUST 11, 2017

By:

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1448.001.03.003

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1.0 INTRODUCTION

This report has been prepared by PES Environmental, Inc. (PES) on behalf of Anton Emeryville, LLC (Anton) to present the results of a focused source area soil and limited soil vapor subsurface investigation conducted in the southwestern portion at 6701, 6705, and 6707 Shellmound Street in Emeryville, California (collectively, the subject property or site). The site location is shown on Plate 1. The investigation activities described herein were conducted in accordance with PES' *Draft Corrective Action Plan* (CAP) dated July 21, 2017 (PES, 2017b). The scope of work for the focused source soil investigation was verbally approved by Alameda County Environmental Health (ACEH) during a meeting at ACEH offices on April 24, 2017.

The subject property is currently listed as an open Spills, Leaks, Investigation and Cleanup (SLIC) case with ACEH as the lead environmental regulatory agency. The case is listed under Mike Roberts Color Production (6707 Bay Street), and the database lists other solvents and non-petroleum hydrocarbons as the potential contaminants of concern. PES is assisting Anton in working with ACEH to obtain SLIC case closure as part of the site redevelopment process.

PES understands Anton is seeking to acquire the site for redevelopment purposes and the development plans include demolition of existing buildings; grading and soil excavation for utilities and building foundations; and construction of a new multi-story multi-use building and associated parking, driveway, and landscaped areas.

Implementation of soil vapor extraction (SVE) as an interim remedial measure (IRM) commenced November 8, 2016 under a Bay Area Air Quality Management District (BAAQMD) permit and ACEH approval of operation of the SVE system (ACEH, 2016b). The SVE system consists of a total of 19 SVE and 10 air inlet wells (installed in July 2016) and located in the western portion of the on-site warehouse building. The SVE system was shut down in February 2017, and rebound testing of vinyl chloride concentrations in vapor was conducted on June 1, 2017 (PES, 2017a).

The focused soil sampling described in this report is a necessary component required by the CAP and intended to support potential focused source area soil removal in the southwestern portion of the site that may be conducted during CAP implementation.

As described in the CAP, the primary objective of the focused soil source area and limited soil vapor sampling subsurface investigation, which was conducted on July 13 and 14, 2017, was to: (1) collect co-located soil matrix samples adjacent to prior sample locations SB51, SB55, SB59, SV60, and SV61 to assess potential reduction of chlorinated VOC concentrations in soil as a result of implementation of SVE; and (2) generate lateral characterization data for chlorinated VOC-affected soil previously identified in the southwestern portion of the site. Additionally, as requested by ACEH in an October 28, 2016 conference call, to provide additional lateral characterization of vinyl chloride in soil vapor, one soil vapor sample was collected approximately 30 feet west of prior on-site sample location SV61. Pertinent tables and plates from previous investigations are presented in Appendix A.

2.0 BACKGROUND INFORMATION

2.1 Current Site and Vicinity Characteristics

The site is located at 6701, 6705, and 6707 Shellmound Street (previously known as Bay Street), in a mixed industrial, commercial, and residential area of Emeryville, Alameda County, California. The site consists of a single legal parcel covering approximately 2.27 acres and identified by Alameda County Assessor's Parcel Number (APN) 049-1490-002. The site buildings consist of a two-story office building and a warehouse building (Plate 2). A second story mezzanine-level is located in the northern portion of the warehouse. The warehouse and office building are connected by a 1-story lobby/receptionist area. The footprints of the office and warehouse buildings occupy approximately 7,470 and 43,850 square feet, respectively, and both buildings have concrete slab-on grade floors. The exterior of the subject property consists of landscaped areas and asphalt paved parking and driving areas.

The site is bounded to the west and north by the Ashby Avenue off-ramp from Interstate 80, to the south by a commercial building, and to the east by Shellmound Street and a railroad right-of-way. The site buildings and adjacent areas are shown on Plate 2.

According to the United States Geological Survey (USGS) Oakland West, California Quadrangle 7.5-minute series topographic map dated 1993, the site is situated at an elevation of approximately 18 feet above mean sea level. The site is relatively flat, but the vicinity slopes gently to the west/southwest. The nearest surface water body is San Francisco Bay, located approximately 1,000 feet west of the subject property.

2.2 Historical Site Use

A detailed discussion of historical site use may be found in PES' *Site Management and Contingency Plan for Redevelopment Construction* (SMP) dated May 19, 2015.

2.3 Redevelopment Overview

A detailed discussion of redevelopment plans may be found in the CAP. The redevelopment plans for the subject property include construction of a new multi-unit multi-use residential building. Redevelopment construction activities will include: (1) removal of existing building foundations/slabs, surface parking, curbs, sidewalks, trees, planting areas, and light poles; (2) grading; (3) installation of drilled displacement piers; (4) excavation and construction of the mat building foundations; (5) trench excavation and underground utility installation; and (6) installation of new curbs, sidewalks, landscape/planting areas, trees, and new pole-mounted lights.

2.4 Site Geology and Hydrogeology

Based on the results of investigations performed on the subject property and in the vicinity, the site is underlain by non-native fill material overlying deposits of native silts and clays known locally as Old Bay Mud. The fill, generally most abundant on the western half of the site, has been encountered throughout the site and ranges in thickness from approximately 10 to 19 feet below ground surface (bgs). The fill consists primarily of coarse-grained sands and gravels that contain varying amounts of fines, and fine-grained silts and clays. The fill contains abundant debris (e.g., brick, concrete, metal, asphalt, glass, wood, fabric, and rubber). Fine-grained soils are present directly below the fill material. These soils generally consist of dark-colored clays and occasional silts with organic material that represent Old Bay Mud deposits.

Depth to groundwater varies locally across the site. Groundwater in the southwestern portion of the site has historically been encountered at depths ranging from approximately 12.75 to 13.5 feet bgs (PES, 2016b). Recent depth to groundwater measurements collected from select SVE wells in July 2017, indicated groundwater was present beneath the southwestern portion of the site at approximately 9 to 9.5 feet bgs. Based on topography and the results of historical groundwater investigations, the predominant groundwater flow direction beneath the site is to the south-southwest toward the San Francisco Bay.

Previous investigations have shown that the fill materials at the site and other similarly filled properties in the vicinity can contain residual contamination. Contamination found and attributed to the non-native fill materials originally used to create the land along the bay-shore area of Emeryville includes total petroleum hydrocarbons (TPH), VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals.

While groundwater is considered a drinking water source (in accordance with the Basin Plan [RWQCB, 2010]), groundwater in this area is prohibited by City of Emeryville Ordinance No. 07-006 for extraction or use.

3.0 INVESTIGATION METHODS

Soil and soil vapor sample locations are shown on Plate 2. Soil and soil vapor sampling activities were conducted using direct push drilling methods at 17 locations at the site, as shown on Plate 2, and comprised of one soil vapor sampling location and 16 soil sampling locations.

The sampling and analysis program used during the investigation, including location and depth rationales, are presented on Table 1. Any significant deviations from the original proposed scope of work necessitated by conditions encountered in the field are detailed in Sections 3.2 and 3.3. The preliminary field activities, sampling and analytical methods, and investigation results are discussed below. Drilling and sampling activities were conducted with oversight by a licensed California Professional Geologist.

3.1 Field Preparation Activities

Prior to initiating drilling and sampling activities, PES' Site-specific Health and Safety Plan conforming to applicable federal, California Occupational Safety and Health Administration (OSHA) and Title 29 CFR 1910.120 guidelines was updated. Drilling permits were obtained from the Alameda County Public Works Agency, Water Resources Section (ACPWA). Copies of the drilling permits are presented in Appendix B.

PES contacted Underground Service Alert (USA North) before beginning drilling activities to locate and mark utilities at the site. C.Cruz Subsurface Locating of San Jose, California was retained to clear the boring locations for subsurface utilities, and Pacific Coast Cutters, Inc. of Petaluma, California was retained to core the concrete slab at interior sample locations in advance of drilling activities.

Environmental Control Associates (ECA) of Aptos, California, a drilling contractor possessing a valid C-57 water well contractor's license issued by the State of California, was retained to install the temporary soil vapor probe and perform soil sampling.

3.2 Soil Sampling Activities

On July 13 and 14, 2017, ECA utilized a track-mounted direct push drilling rig to advance 16 soil borings (SB63 through SB78) to target depths between 5 and 10 feet bgs for soil sample collection.

Continuous soil cores were collected from each of the borings for lithologic description and soil sample analysis by driving a 4-foot long by 2.25-inch outside diameter open-tube sampler into undisturbed soil. The open-tube sampler was lined with a new 4-foot long, clear acetate sample sleeve. Soil samples were collected in accordance with U.S. Environmental Protection Agency (U.S. EPA) Method 5035 using Terracore™ samplers. Due to an increase in the groundwater elevation surface, deeper vadose zone soil matrix samples at SB64, SB65, SB66, SB67, SB68, SB70, SB72, SB74 were collected at shallower depths (ranging from 6.0 to 8.5 feet bgs) than originally targeted (10 feet bgs).

Soil cores were periodically field-screened for volatile organics using a photoionization detector (PID) with a 10.6 electron volt (eV) lamp and recorded on the soil boring logs. PES observed the borehole drilling and prepared a lithologic log for the continuously cored borings using the Unified Soil Classification System (USCS) and Munsell Color Index.

Upon completion of soil sampling activities, the sampler and rods were removed from the borehole and each boring was filled to the ground surface with neat cement grout, and the surface was restored using concrete to match the surrounding material.

3.3 Soil Vapor Sampling Activities

Soil vapor sampling activities were conducted in accordance with procedures outlined in the guidance document titled *Advisory – Active Soil Gas Investigations* (ASGI; DTSC, 2015), as well as the Soil Vapor Probe Installation and Sampling Plan presented in the CAP.

On July 13, 2017, ECA utilized a track-mounted direct push drilling rig to install one temporary soil vapor probe (SV68) at the site at a depth of 8 feet bgs.

The Soil core was collected continuously and periodically field-screened for volatile organics using the PID) and recorded on the soil boring logs. PES observed the borehole drilling and prepared a lithologic log for the continuously cored boring using the Unified Soil Classification System (USCS) and Munsell Color Index.

Due to saturated conditions identified at approximately 9.5 feet bgs at SV68, the soil vapor probe was installed at 8 feet bgs rather than 10 feet bgs as planned. A new ceramic soil vapor probe was placed at approximately 8 feet bgs within a #2/12 sand pack extending 3 inches above and below the sampling interval, and attached to new ¼-inch diameter Nylaflow™ tubing extending to ground surface. One-foot of dry granular bentonite was placed on top of the sand pack to preclude the infiltration of hydrated bentonite grout into the sand pack. The borehole annular space between approximately 7.75 and 4.25 feet bgs was filled with hydrated bentonite.

The soil vapor probe was allowed to equilibrate with the surrounding formation for a minimum of two hours prior to purging and sampling on July 14, 2017. Prior to purging and the collection of soil vapor samples, shut-in leak testing was performed. The shut-in test consisted of assembling the above-ground sampling apparatus (e.g., valves, lines and fittings downstream from the top of the probe), and evacuating the lines to a measured vacuum of approximately 100 inches of water column (in-H2O), then shutting the vacuum in with closed valves on opposite ends of the sampling train. A vacuum gauge was then used to assess if there was any observable loss of vacuum (for at least one minute) prior to purging and the collection of soil vapor samples. If observable vacuum loss was noted, the sample train was re-assembled and the shut-in test was repeated as necessary until a successful shut-in test was performed.

A default of three probe volumes was purged prior to collection of each soil vapor sample. The purge volume was calculated using the volumes of: (1) the internal volume of the tubing; (2) the void space of the sand pack around the probe tip; and (3) the void space of the dry bentonite in the borehole annulus. The stagnant air was purged using vapor-tight syringe or Gilair air sampling pump set to a flow rate of approximately 200 milliliters per minute (mL/min).

Following completion of the shut-in leak test and purging, sample train leak testing was performed using helium gas as a tracer in combination with a shroud box. The shroud box consisted of a polycarbonate box equipped with a sampling port. The bottom of the shroud

box was positioned over the wellhead with the sample collection tubing passing through the bottom. Once in position, the sample train was connected to a batch-certified clean 1-liter Summa™ canister and the shroud box was placed over the entire sample train. Prior to opening the Summa™ canisters, the shroud box was charged by discharging helium into the shroud box via an access port. The shroud box was allowed to remain in place for the duration of sampling. Helium concentrations in the shroud were maintained at approximately two orders of magnitude above the expected laboratory reporting limit for helium and monitored in real time for the duration of sampling using a Radiodetection MGD-2000 helium gas detector.

The soil vapor sample was transported to TestAmerica Laboratories, Inc. (TestAmerica) of Pleasanton, California, a state-certified analytical laboratory, under chain-of-custody protocol for analysis for vinyl chloride using U.S. EPA Test Method TO-15 and helium using ASTM Test Method D1946.

Upon completion of soil vapor sampling activities, the probe and annular materials were removed via over-drilling using a push drilling rig, the borehole was filled to the ground surface with neat cement grout, and the surface was restored to match the surrounding material.

3.4 Laboratory Analysis

Sample containers were labeled to indicate project location, job number, sample location and identification number, and time and date collected. The samples were immediately placed in a thermally-insulated cooler containing ice and transported under chain-of-custody protocol to TestAmerica. The soil vapor and soil samples were submitted for analysis of target VOCs shown on Table 1 (U.S. EPA Test Method 8260B for soil, and TO-15 for vapor). Additionally, the soil vapor sample was analyzed by ASTM 1946D for the tracer gas (helium).

Laboratory analytical reports and chain-of-custody documentation are presented in Appendix D.

3.5 Decontamination and Waste Management

Reusable downhole drilling and sampling equipment were cleaned using an Alconox™ wash and triple rinsed before collecting each soil and grab groundwater sample. Upon completion of soil sampling activities, each borehole was grouted to the ground surface with neat cement grout in accordance with ACPWA requirements, and the surface was restored using concrete dyed to match the surrounding material. Investigation-derived waste (IDW) from the drilling activities was stored on-site in secured, labeled 55-gallon steel drums pending profiling and off-site disposal.

4.0 RESULTS

The results of the subsurface investigation activities conducted on July 13 and 14, 2017 are summarized below. The sampling and analysis program implemented during the investigation is presented on Table 1.

4.1 Subsurface Physical Conditions

The investigation identified subsurface soil generally consistent with the findings of previous investigations at the site.

Sandy and gravelly clay and sandy and gravelly silt were encountered across the site to depths between 3 and 10 feet bgs, underlain in portions of the site by dark green to black clay of medium to high plasticity, extending to the maximum explored depth of 10 feet bgs. Intervals of fine- to coarse-grained sand and gravelly sand were also observed interbedded with the fine-grained material in some borings. Variable amounts of wood debris, asphaltic or tar-like material, and fragments of glass, brick, and concrete were encountered at various depths across the site. Observations of site soil encountered during the investigation are consistent with the presence of artificial fill containing abundant quantities of debris.

Shallow groundwater in the southwestern portion of the site was encountered at depths as shallow as 7.0 feet bgs.

4.2 Soil Analytical Results

Laboratory analytical reports and chain-of-custody forms are presented in Appendix D. A summary of laboratory analytical results for select VOCs for soil samples are presented on Plate 3 and in Table 2. The results are compared against the conservative Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) February 2016 Environmental Screening Levels (ESLs) for residential as well as construction worker direct exposure (Table S-1 of the 2016 ESLs) in Table 2. The residential direct exposure ESL is the proposed cleanup level for soil presented in the CAP.

As summarized below and presented in Table 2, cis-1,2-dichlorethylene (cis-1,2-DCE), trans-1,2-dichlorethylene (trans-1,2-DCE), and vinyl chloride were detected in soil samples collected from borings SB63 through SB78. Trichloroethylene (TCE) was not detected in any soil samples.

Vinyl chloride was the only VOC detected at concentrations greater than the respective residential direct exposure ESL (in 10 out of the 24 soil samples analyzed for vinyl chloride). All detected VOC concentrations were below construction worker exposure ESLs.

4.3 Soil Vapor Analytical Results

Analytical results for the soil vapor sample are presented on Table 3. The soil vapor sampling location is shown on Plate 2 and laboratory analytical result for vinyl chloride in soil vapor is presented on Plate 4. Laboratory analytical reports and chain-of-custody documents for the soil vapor sample are presented in Appendix D. The soil vapor analytical result is compared with the Target Cleanup Levels (TCLs) presented in the CAP. The conservative TCLs were developed in the Human Health Risk Assessment (HHRA; SCR, 2016) to be protective of human health.

Vinyl chloride was not detected at or above the laboratory reporting limit of 1.7 micrograms per cubic meter of air (μg/m3), and well below the most conservative TCL of 47 μg/m3.

As indicated on Table 4, the leak check compound (helium) was not detected at or above the laboratory reporting limit in the soil vapor sample. Real-time field monitoring detected helium within the shroud during sampling ranged from approximately 7 %volume to 13.4 %volume. As such, the result does not indicate a concern with respect to sample train leaking or atmospheric dilution for the SV68 vapor sample.

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Discussion of Findings

A summary of the findings of the soil source area and limited soil vapor subsurface investigation is presented below.

The primary objectives of the investigation included: (1) collect co-located soil matrix samples adjacent to prior sample locations SB51, SB55, SB59, SV60, and SV61 to assess potential reductions in chlorinated VOC concentrations in soil as a result of implementation of SVE; (2) generate lateral characterization data for chlorinated VOC-affected soil previously identified in the southwestern portion of the site; and (3) collect a soil vapor sample approximately 30 feet west of prior on-site sample location SV61 to provide additional lateral characterization of vinyl chloride in soil vapor.

The focused soil source area and limited soil vapor investigation was conducted in accordance with PES' CAP dated July 21, 2017. Implementation of the scope of reported herein was verbally approved by ACEH in April 2017.

5.1.1 Soil

Soil matrix sampling was conducted on July 13 and 14, 2017. Soil samples were submitted for analysis by the project laboratory for select VOCs by U.S. EPA Test Method 8260B, as shown in Table 2.

Key findings of the focused source area soil sampling include the following:

- The soil sample results were consistent with previous investigations, which indicated the presence of cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride in vadose zone soil in the southwestern portion of the site at approximate depths of 5 and 10 feet bgs beneath the western portion of the unpaved alleyway (immediately south of the warehouse) and beneath the southwestern portion of the warehouse;

- Concentrations of target VOCs (including vinyl chloride) appear to have been reduced in soil matrix samples co-located with pre-SVE soil sample locations, including at SB65, SB68, and SB73 (pre-SVE soil sample results are presented in Appendix A). The observed reduction in chlorinated VOCs in the focused source area soil samples is likely a beneficial effect from operation of the SVE system between November 2016 and February 2017; and

- The on-site lateral and vertical extent of VOCs in vadose zone soil above the residential ESLs within the vinyl chloride source area are defined and provide suitable data in support of developing focused on-site soil excavation planning, also described in the CAP. PES recommends incorporating these results into the soil excavation planning, procedures, and excavation extent that will be presented in a CAP Implementation Plan.

5.1.2 Soil Vapor

Soil vapor sampling was conducted on July 14, 2017. Soil vapor probe SV68 was installed and sampled to assess the lateral (western) extent (pre-SVE) of vinyl chloride in deeper soil vapor (10 feet bgs) exceeding the TCL, approximately 30 feet west of soil vapor sample SV61. Due to the increase in the groundwater elevation surface the vapor probe was constructed at a shallower depth (8 feet bgs) than originally targeted (10 feet bgs).

As indicated on Plate 4, vinyl chloride was not detected at or above the laboratory RL, and the RL was less than the most conservative TCL. The soil vapor sample result at SV68 is also consistent with the observed reductions in vinyl chloride concentrations found in the SVE rebound sampling event conducted on June 1, 2017 (Plate 4).

6.0 REFERENCES

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TABLES

Table 1
Sampling and Analytical Program
Focused On-Site Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale	Sample Depth (feet bgs)	Analytical Program		Comments
			Select VOCs (TO-15 for air, 8260B for soil)	Helium (ASTM 1946D) - leak check compound	
Soil Vapor					
SV68	Assess westernmost extent of vinyl chloride in vicinity of SV61 and PSV1	10	X	X	Analytical reporting for vinyl chloride only
Soil					
SB63	Assess lateral extent of vinyl chloride in soil in vicinity of SV61	10	X		Analytical reporting for vinyl chloride only
SB64	Assess lateral extent of select VOCs in soil in vicinity of SV60	10	X		Analytical reporting for TCE, cis-1,2-DCE, and vinyl chloride only
SB65	Assess lateral extent of select VOCs in soil in vicinity of SV60	10	X		Analytical reporting for TCE, cis-1,2-DCE, and vinyl chloride only
SB66	Assess lateral extent of select VOCs in soil in vicinity of SV60	10	X		Analytical reporting for TCE, cis-1,2-DCE, and vinyl chloride only
SB67	Assess lateral extent of select VOCs in soil in vicinity of SB59	5 and 10	X		Analytical reporting for TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride only
SB68	Assess soil concentration of select VOCs at SB59	5 and 10	X		Analytical reporting for TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride only
SB69	Assess lateral extent of select VOCs in soil in vicinity of SB59	5 and 10	X		Analytical reporting for TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride only
SB70	Assess lateral extent of select VOCs in soil in vicinity of SV60	10	X		Analytical reporting for TCE, cis-1,2-DCE, and vinyl chloride only
SB71	Assess lateral extent of select VOCs in soil in vicinity of SB59 and SB55	5 and 10	X		Analytical reporting for TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride only
SB72	Assess lateral extent of select VOCs in soil in vicinity of SB59 and SB55	5 and 10	X		Analytical reporting for TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride only
SB73	Assess lateral extent of select VOCs in soil at SB55	5 and 10	X		Analytical reporting for cis-1,2-DCE and vinyl chloride only
SB74	Assess lateral extent of vinyl chloride in soil in vicinity of SB51 and SB55	5 and 10	X		Analytical reporting for vinyl chloride only
SB75	Assess lateral extent of vinyl chloride in soil in vicinity of SB51 and SB55	5 and 10	X		Analytical reporting for vinyl chloride only
SB76	Assess lateral extent of vinyl chloride in soil in vicinity of SB51	5	X		Analytical reporting for vinyl chloride only
SB77	Assess soil concentration of vinyl chloride at SB51	5	X		Analytical reporting for vinyl chloride only
SB78	Assess lateral extent of vinyl chloride in vicinity of SVP-6	5	X		Analytical reporting for vinyl chloride only

Notes:

bgs = Below ground surface.

X = Scheduled for Analytical.

VOCs = Volatile organic compounds

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-dichloroethene

trans-1,2-DCE - = trans-1,2-dichloroethene

Table 2
Summary of Soil Analytical Results - VOCs
Focused On-Site Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	TCE (µg/Kg)	cis-1,2-DCE (µg/Kg)	trans-1,2-DCE (µg/Kg)	Vinyl chloride (µg/Kg)
SB63	SB63-10	10	7/13/2017	--	--	--	ND(3.7)
SB64	SB64-8	8	7/13/2017	ND(3.1)	**4.8**	--	**18**
SB65	SB65-6	6	7/13/2017	ND(3.7)	ND(3.7)	--	ND(3.7)
SB66	SB66-6	6	7/13/2017	ND(3.7)	ND(3.7)	--	ND(3.7)
SB67	SB67-5	5	7/13/2017	ND(4.1)	ND(4.1)	ND(4.1)	ND(4.1)
	SB67-8.5	8.5	7/13/2017	ND(3.5)	ND(3.5)	ND(3.5)	**9.0**
SB68	SB68-5	5	7/13/2017	ND(4.2)	**200**	**38**	**79**
	SB68-9	9	7/13/2017	ND(4.7)	**74**	**32**	**130**
SB69	SB69-5	5	7/13/2017	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)
	SB69-10	10	7/13/2017	ND(4.6)	ND(4.6)	**4.7**	**33**
SB70	SB70-6.5	6.5	7/14/2017	ND(4.1)	ND(4.1)	--	ND(4.1)
SB71	SB71-5	5	7/14/2017	ND(4.2)	**150**	**26**	**7.5**
	SB71-10	10	7/14/2017	ND(3.7)	**44**	**11**	**23**
SB72	SB72-5	5	7/14/2017	ND(3.9)	ND(3.9)	ND(3.9)	ND(3.9)
	SB72-8	8	7/14/2017	ND(3.4)	**3.9**	ND(3.4)	ND(3.4)
SB73	SB73-5	5	7/14/2017	--	**120**	--	ND(4.0)
	SB73-10	10	7/14/2017	--	**6,600**	--	ND(380)
SB74	SB74-5	5	7/13/2017	--	--	--	**9.6**
	SB74-8.5	8.5	7/13/2017	--	--	--	**10**
SB75	SB75-5	5	7/14/2017	--	--	--	ND(3.3)
	SB75-10	10	7/14/2017	--	--	--	**18**
SB76	SB76-5	5	7/13/2017	--	--	--	ND(4.0)
SB77	SB77-5	5	7/13/2017	--	--	--	**56**
SB78	SB78-5	5	7/14/2017	--	--	--	ND(4.0)
Tier 2 Residential Land Use ESL (Shallow Soil)				*1,200*	*19,000*	*160,000*	*8.2*
Construction Worker Exposure ESL [2]				*23,000*	*82,000*	*680,000*	*3,400*

Notes:

Detections are shown in bold. Results equal to or exceeding applicable screening levels are shaded.

VOCs = Volatile organic compounds.

TCE = Trichloroethene.

DCE = Dichloroethene.

µg/kg = Micrograms per kilogram.

ND(3.7) = Not detected at or above the indicated laboratory method reporting limit.

-- = Not applicable/not analyzed.

1. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-1: Direct Exposure Human Health Risk Levels, Residential: Shallow Soil Exposure

2. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-1: Soil Direct Exposure Human Health Risk Screening Levels, Any Land Use, Construction Worker Shallow and Deep Soil Exposure Scenario.

Table 3
Summary of Soil Vapor Analytical Results
Focused On-Site Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Vinyl chloride (µg/m^3)	Helium (% v/v)
SV68	SV68-8	8.0	7/14/2017	<1.7	ND
Residential TCL(Target LECR = 10-6)				*47*	NE
Commercial/Industrial TCL(Target LECR = 10-6)				*400*	NE

Notes:
Detections are shown in bold. Results equal to or exceeding applicable regulatory screening levels are shaded.
bgs = Below ground surface.
µg/m^3 = Micrograms per cubic meter.
% v/v = Percent by volume.
< 1.7 = Not detected at or above the indicated laboratory method reporting limit.
ND = Not detected at or above the respective laboratory method reporting limits.
NE = Not established.

Table 3
Summary of Soil Vapor Analytical Results
Focused On-Site Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Vinyl chloride ($\mu g/m^3$)	Helium (% v/v)

TCL = Target Cleanup Level for Lifetime Excess Cancer Risk (LECR) presented in Table 40 of the November 2016 Human Health Risk Assessment Report.

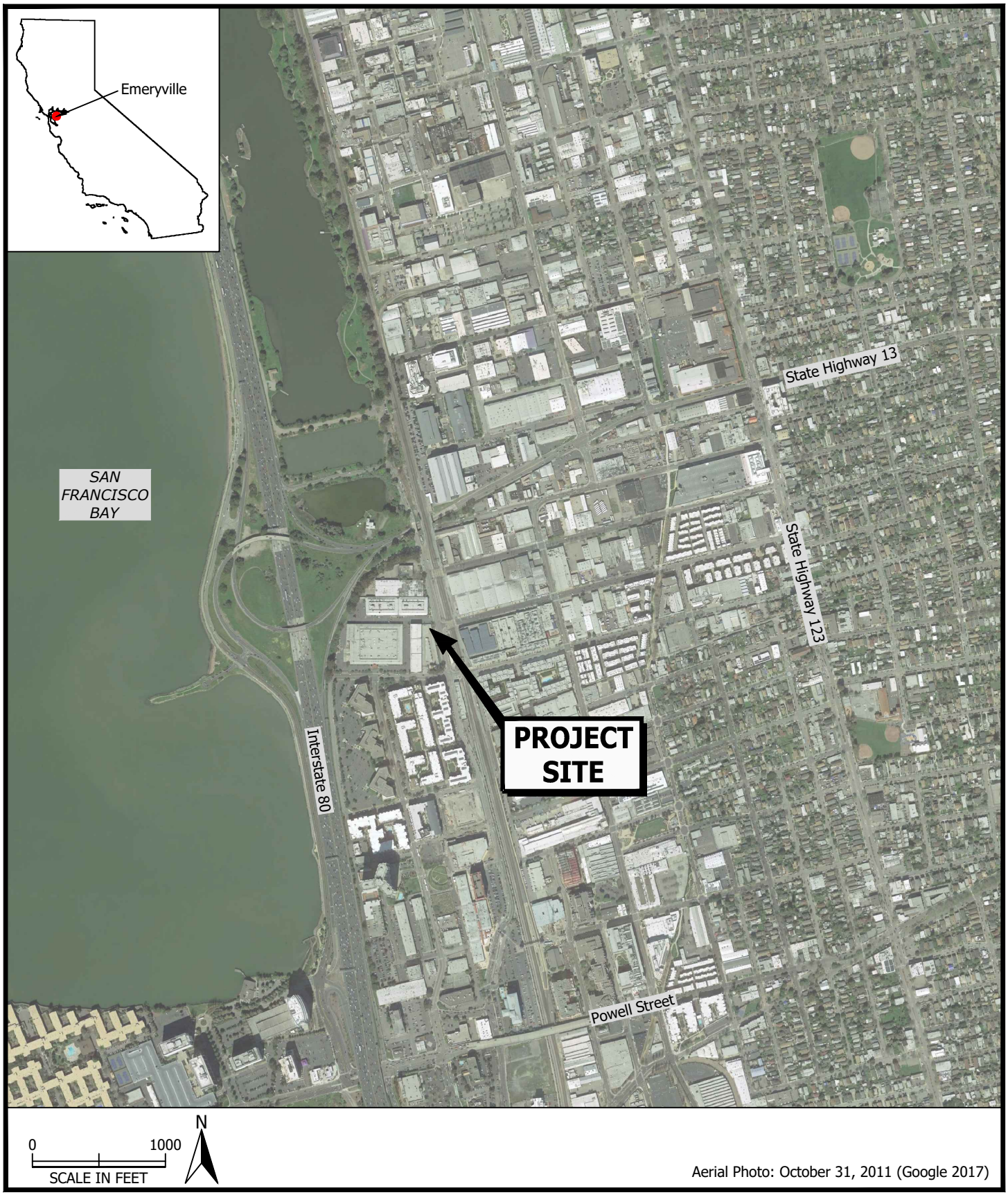
Table 4
Summary of Soil Vapor Leak Check Results
Focused On-Site Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Helium Detected in Sample (% v/v)	Helium Detected in Shroud (% v/v)	Breakthrough Factor (%)
SV68	SV68-8	8.0	7/14/2017	**0**	11	0.0
Acceptable Ambient Air Breakthrough Limit [1]				--	--	*5%*

Notes:
bgs = Below ground surface.
% v/v = Percent by volume.
-- = Not applicable.

1. In accordance with California Environmental Protection Agency/Department of Toxic Substances Control Advisory - Active Soil Gas Investigations, July 2015 - Appendix C: Quantitative Leak Testing Using a Tracer Gas.

ILLUSTRATIONS



PES Environmental, Inc.
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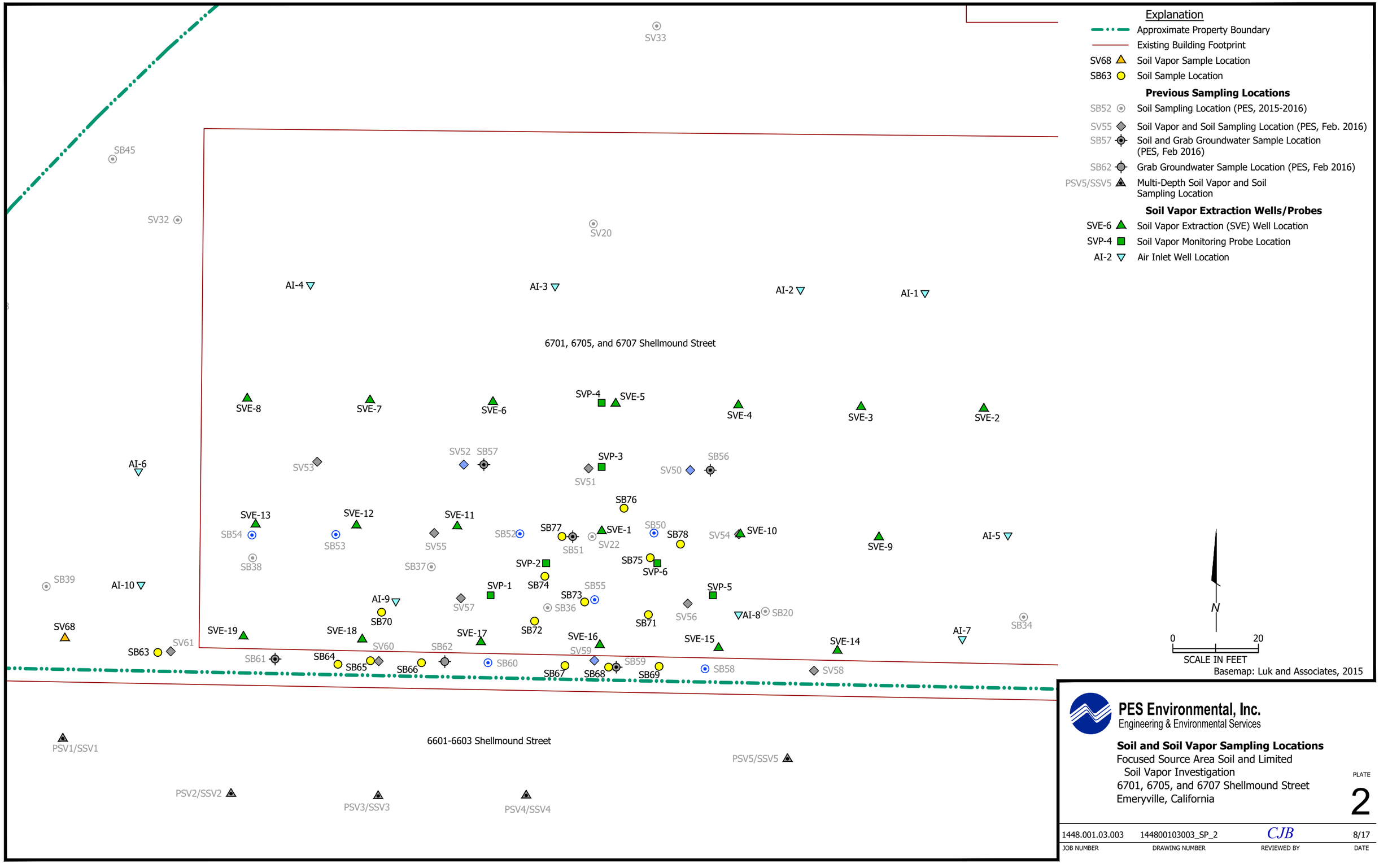
Site Location
Focused Source Area Soil and
Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
1

1448.001.03.003	144800103003_SP_1	CJB	8/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

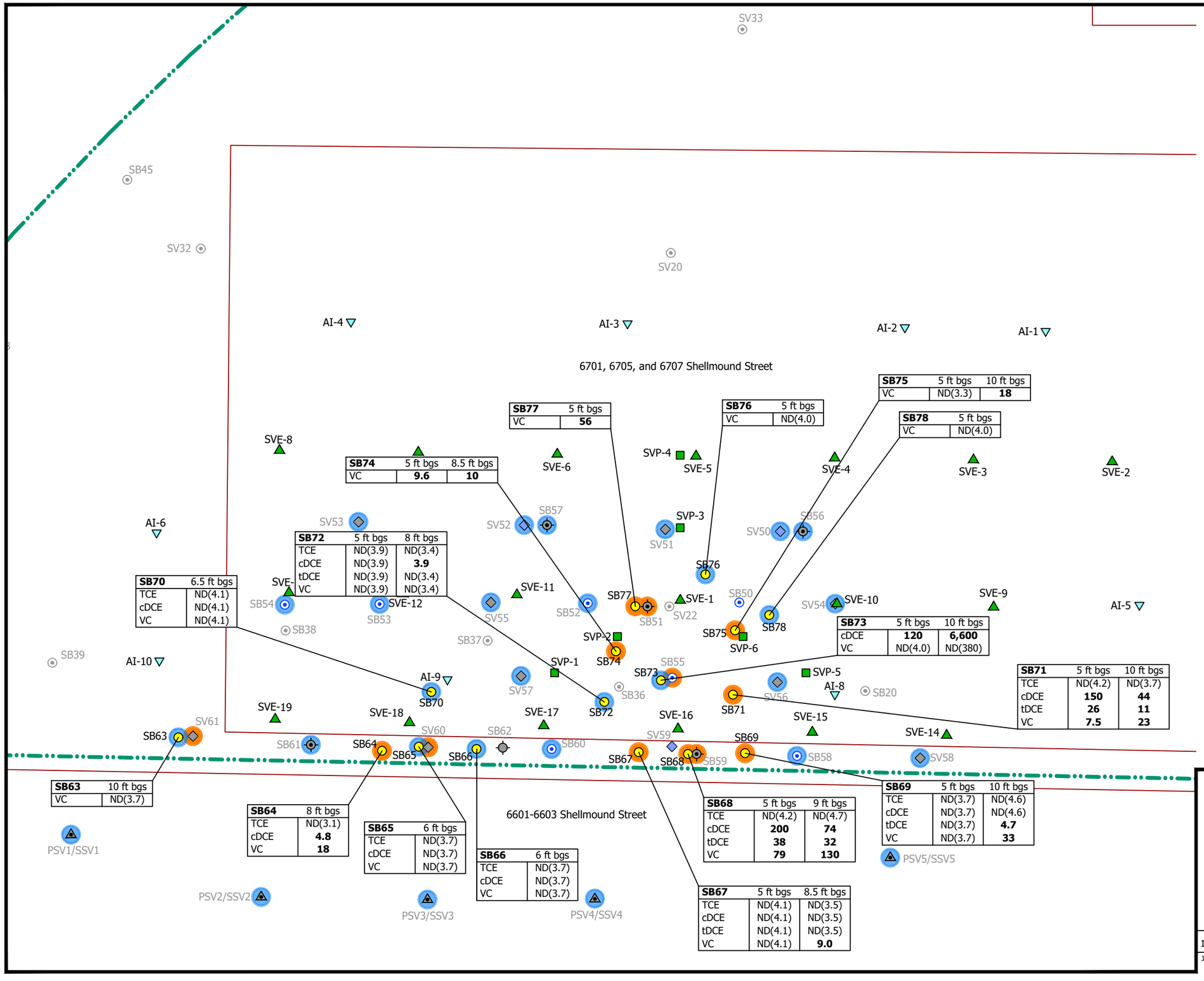


PES Environmental, Inc.
Engineering & Environmental Services

Soil and Soil Vapor Sampling Locations
Focused Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
2

1448.001.03.003	144800103003_SP_2	CJB	8/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- Existing Building Footprint
- SB63 — Supplemental Soil Sample Location

Previous Soil Sampling Locations

- SB52 — Soil Sampling Location (PES, 2015-2016)
- SV55 — Soil Vapor and Soil Sampling Location (PES, Feb. 2016)
- SB57 — Soil and Grab Groundwater Sample Location (PES, Feb 2016)
- SB62 — Grab Groundwater Sample Location (PES, Feb 2016)
- PSV5/SSV5 — Multi-Depth Soil Vapor and Soil Sampling Location

Soil Vapor Extraction Wells/Probes

- SVE-6 — Soil Vapor Extraction (SVE) Well Location
- SVP-4 — Soil Vapor Monitoring Probe Location
- AI-2 — Air Inlet Well Location

Soil Sample Screening Criteria

- CVOC Detected in soil sample at a concentration greater than residential land use direct exposure ESL of 8.2 µg/kg
- CVOC Not Detected in soil sample or detected at a concentration lower than residential land use direct exposure ESL of 8.2 µg/kg

ESL = February 2016 San Francisco Bay Region Water Quality Control Board Environmental Screening Level

CVOC = Chlorinated Volatile Organic Compound

Notes

Only detected analtyes are shown
Detections are shown in **bold**
ND(4.2) = not detected at or above the indicated laboratory reporting limit
All results presented in micrograms per kilogram
TCE = trichloroethene
cDCE = cis-1,2-dichloroethene
tDCE = trans-1,2-dichloroethene
VC = vinyl chloride
ft bgs = sample depth in feet below ground surface

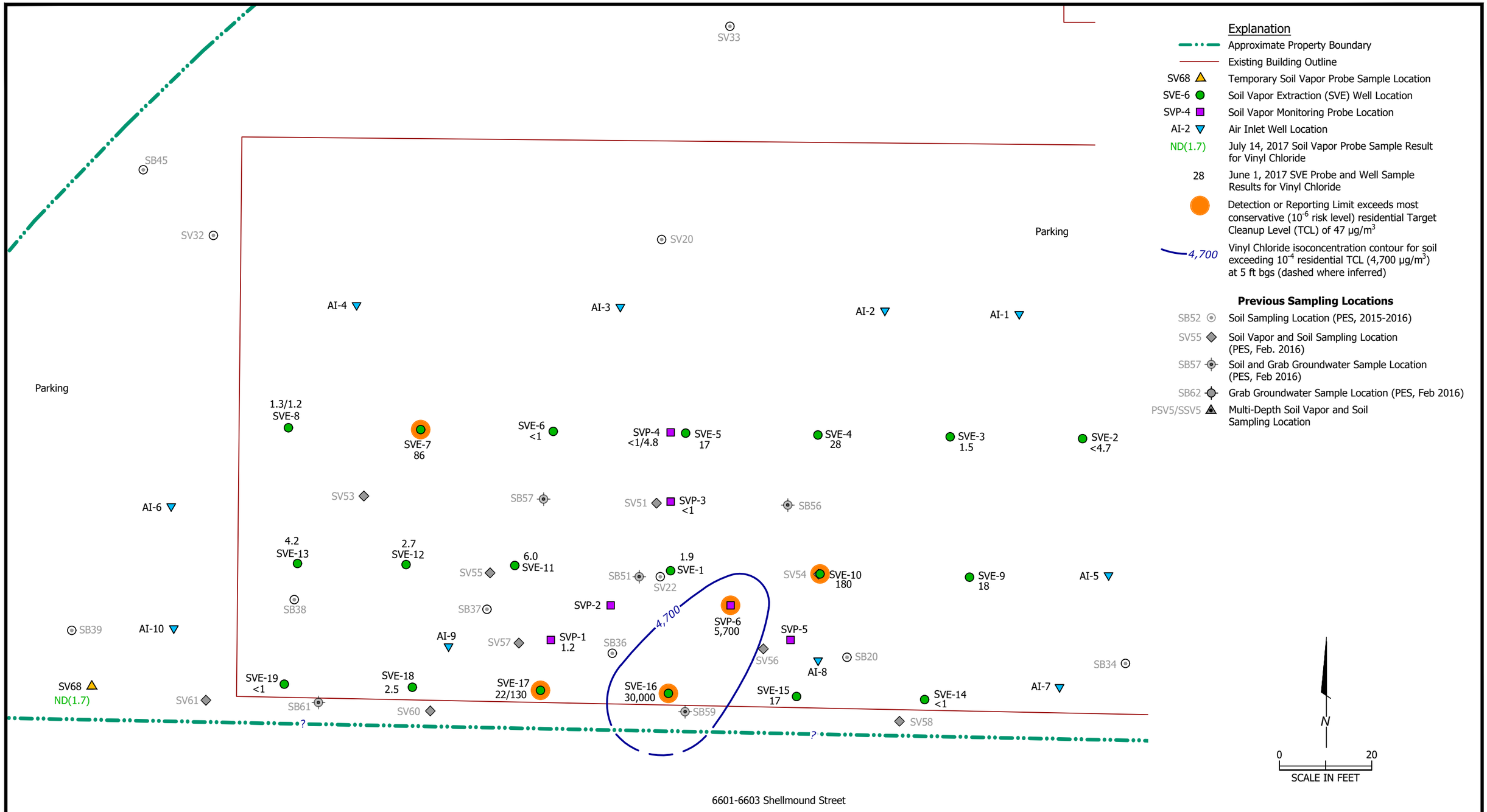
Basemap: Luk and Associates, 2015

PES Environmental, Inc.
Engineering & Environmental Services

Soil Analytical Results - VOCs
Focused Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 3

1448.001.03.003	144800103003_SP_3	CJB	8/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



6601-6603 Shellmound Street

PES Environmental, Inc.
Engineering & Environmental Services

Soil Vapor Analytical Results - Vinyl Chloride
Focused Source Area Soil and Limited Soil Vapor Investigation
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
4

1448.001.03.003	144800103003_SP_4	CJB	8/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX A

PERTINENT DATA FROM PREVIOUS INVESTIGATION REPORTS

Pertinent Data from April 8, 2016 *Pre-Construction Subsurface Investigation Report*

Table 1
Sampling and Analysis Program
Supplemental Pre-Construction Subsurface Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale/Feature of Interest	Sample Depth (feet bgs)	Approximate Existing Ground Elevation (feet msl)	Approximate Future Grade Elevation (feet msl)	Approximate Sample Elevation (feet msl)	Approximate Sample Depth Beneath Future Grade (feet bgs)	Analysis Program										Comments
							VOCs including MIBK, MEK, and naphthalene (TO-15 for air, 8260B for soil and GW)	1,4-dioxane (TO-15 for air, 8270 SIM for GW)	TPH quantified as diesel and motor oil	PCBs	SVOCs	Total Lead	Title 22 metals	Asbestos	Methane, Carbon Dioxide, and Oxygen (ASTM 1946D)	Helium (ASTM 1946D) - leak check compound	
Soil Vapor																	
SV5	Future ground-floor common and amenity areas	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X								X (5)	X	
SV6	Future ground-floor common and amenity areas	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X									X	
SV7	Confirmation of previous soil gas sample SV3 elevated reporting limit for vinyl chloride	10	18	20 [1]	8	12	X									X	
SV7R	Confirmation of previous soil gas samples SV3 and SV7 with elevated reporting limits for vinyl chloride	10	18	20 [1]	8	12	X	X							X	X	Sample *analyzed at low calibration range to achieve target reporting limit of 18 ug/m3 for vinyl chloride.*
SV8	Future ground-floor common and amenity areas	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV9	Future ground-floor common and amenity areas	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X									X	
SV10	Future ground-floor common and amenity areas	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV11	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV12	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X									X	
SV13	Existing warehouse, shifted near edge of future building foundation	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV14	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV15	Existing warehouse	5 and 8	18.5	20 [1]	13.5 and 10.5	6.5 and 9.5	X									X	Refusal encountered at 8 feet bgs
SV16	Existing warehouse, shifted near edge of future building foundation	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV17	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X									X	
SV18	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X									X	
SV19	Existing warehouse, shifted near edge of future building foundation	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV20	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV21	Existing warehouse	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X									X	
SV22	Existing warehouse, shifted near edge of future building foundation	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV23	Existing warehouse, future ground-floor common and amenity areas	5 and 10	18.5	20 [1]	13.5 and 8.5	6.5 and 11.5	X								X	X	
SV24	Confirmation of previous sub-slab vapor sample SSV1 result for PCE; existing warehouse; future ground-floor residential units	5 and 10	18.5	20.5	13.5 and 8.5	7 and 12	X									X	
SV25	Existing warehouse, shifted near edge of future building foundation	5 and 10	18.5	20.5	13.5 and 8.5	7 and 12	X									X	
SV26	Future ground-floor common and amenity areas	5 and 10	16.5	19.5	11.5 and 6.5	8 and 13	X								X	X	
SV27	Inferred former drain pipe from mezzanine sump	5 and 10	18	20 [1]	13 and 8	7 and 12	X									X	
SV28R	Inferred former drain pipe from mezzanine sump	5 and 10	18	20 [1]	13 and 8	7 and 12	X								X	X	Sample SV28-5 and SV28-10 were compromised following collection, therefore a new nested probe SV28R was installed approx. 5 feet west, and samples SV28R-5 and SV28R-10 were submitted for analysis.
SV29	Inferred former drain pipe from mezzanine sump	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X									X	
SV30	Inferred former drain pipe from mezzanine sump	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X									X	
SV31	Inferred former drain pipe from mezzanine sump	5 and 10	17.5	19.5	12.5 and 7.5	7 and 12	X									X	
SV32	Former sump excavation area	5 and 10	17.5	19.5	12.5 and 7.5	7 and 12	X									X	
SV33	Confirmation of previous soil gas sample SG-3 result for PCE	5 and 10	17	20 [1]	12 and 7	8 and 13	X									X	
SV36	Future ground-floor residential units	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X								X	X	
SV38	Former drum storage area; future ground-floor residential units	5 and 10	17.5	20 [1]	12.5 and 7.5	7.5 and 12.5	X								X	X	
SV39	Former drum storage area; future ground-floor residential units	5 and 10	16.5	20 [1]	11.5 and 6.5	8.5 and 13.5	X								X	X	

Table 1
Sampling and Analysis Program
Supplemental Pre-Construction Subsurface Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale/Feature of Interest	Sample Depth (feet bgs)	Approximate Existing Ground Elevation (feet msl)	Approximate Future Grade Elevation (feet msl)	Approximate Sample Elevation (feet msl)	Approximate Sample Depth Beneath Future Grade (feet bgs)	Analysis Program										Comments
							VOCs including MIBK, MEK, and naphthalene (TO-15 for air, 8260B for soil and GW)	1,4-dioxane (TO-15 for air, 8270 SIM for GW)	TPH quantified as diesel and motor oil	PCBs	SVOCs	Total Lead	Title 22 metals	Asbestos	Methane, Carbon Dioxide, and Oxygen (ASTM 1946D)	Helium (ASTM 1946D) - leak check compound	
SV40	Future ground-floor common and amenity areas	5 and 10	17	20 [1]	12 and 7	8 and 13	X									X	
SV43	Future ground-floor residential units	5 and 10	18	20 [1]	13 and 8	7 and 12	X									X	
SV44	Future ground-floor residential units	5 and 10	18	20 [1]	13 and 8	7 and 12	X								X	X	
SV45	Future ground-floor residential units	5 and 10	18	20 [1]	13 and 8	7 and 12	X								X	X	
SV47	Existing sand-filled sump on south side of building	5	18.5	20 [1]	13.5	6.5	X									X	PES attempted to collect a vapor sample at 10 feet bgs, however water was observed entrained in the probe during purging, therefore the 10-foot sample was not collected.
SV48	Lateral definition of VC and benzene in soil gas	5 and 10	16	19.5	11 and 6	8.5 and 13.5	X	X							X	X	
SV49	Lateral definition of benzene in soil gas	5	17.5	19.5	12.5	7	X	X							X	X	
SV50	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV51	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV52	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV53	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV54	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV55	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X								X	
SV56	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV57	Potential VC source area beneath warehouse	5	18.5	20 [1]	13.5	6.5	X	X							X	X	
SV58	Potential VC source area beneath alleyway	5 and 10	18	19	13 and 8	6 and 11	X	X							X	X	
SV59	Potential VC source area beneath alleyway	5 and 10	18	19	13 and 8	6 and 11	X	X							X	X	
SV60	Potential VC source area beneath alleyway	5 and 10	18	19	13 and 8	6 and 11	X	X							X	X	
SV61	Potential VC source area beneath former drum storage area, alleyway drainage area	5 and 10	18	19	13 and 8	6 and 11	X	X							X	X	
Soil																	
SB19	Future utility alignment; future pavement section	0.5	16	19.5	15.5	4			X	C		X					
SB20	Future utility alignment; future pavement section	1 and 2.5	18.5	20	17.5 and 16	2.5 and 4			X	C		X					
SB21	Future utility alignment; future pavement section	0.5	16.5	19.5	16	3.5			X	C		X					
SB22	Future utility alignment; future pavement section	0.5	17	19.5	16.5	3			X	C		X					
SB23	Future utility alignment; future pavement section	0.5	17.5	19	17	2			X	C	X		X	X			
SB24	Future utility alignment; future pavement section	0.5	17.5	19.5	17	2.5			X	C		X					
SB25	Future utility alignment; future pavement section	1	17.5	19.5	16.5	3			X	C		X					
SB26	Future utility alignment; future pavement section	1.5	17.5	18.5	16	2.5			X	C		X					
SB27	Future utility alignment; future pavement section	2.5	17.5	18	15	3			X	C		X					
SB28	Confirmation of previous soil gas sample SV2 result for benzene; future utility alignment	0.5 and 4.5	17	19	16.5 and 12.5	2.5 and 6.5	X (4.5)		X	C		X					
SB29	Future utility alignment; future pavement section	2.5	17	18.5	14.5	4			X	C	X		X	X			
SB30	Future utility alignment; future pavement section	1 and 4	17	18	16 and 13	2 and 5			X	C		X					
SB31	Future utility alignment; future pavement section	2 and 6	17.5	18.5	15.5 and 11.5	3 and 7			X	C		X					
SB32	Future utility alignment; future pavement section	1.5	18.5	20	17	3			X	C		X					Refusal encountered at 3 feet bgs, therefore only the 1.5-foot sample was collected.
SB34	Future utility alignment; future landscape area	4	18.5	20	14.5	5.5			X	C	X		X	X			

Table 1
Sampling and Analysis Program
Supplemental Pre-Construction Subsurface Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale/Feature of Interest	Sample Depth (feet bgs)	Approximate Existing Ground Elevation (feet msl)	Approximate Future Grade Elevation (feet msl)	Approximate Sample Elevation (feet msl)	Approximate Sample Depth Beneath Future Grade (feet bgs)	Analysis Program										Comments
							VOCs including MIBK, MEK, and naphthalene (TO-15 for air, 8260B for soil and GW)	1,4-dioxane (TO-15 for air, 8270 SIM for GW)	TPH quantified as diesel and motor oil	PCBs	SVOCs	Total Lead	Title 22 metals	Asbestos	Methane, Carbon Dioxide, and Oxygen (ASTM 1946D)	Helium (ASTM 1946D) - leak check compound	
SB35	Future infiltration gallery	0.5	16.5	19.5	16	3.5			X	C		X					
SB36	Future utility alignment; future pavement section	1.5	18.5	20	17	3			X	C		X					
SB37	Future infiltration gallery	0.5	18.5	20	18	2			X	C		X					
SB38	Future utility alignment; future pavement section	1.5	18.5	20.5	17	3.5			X	C		X					
SB39	Future utility alignment; future pavement section	0.5	16.5	19.5	16	3.5			X	C		X		X			
SB40	Future infiltration gallery; future playground/dog park area	1	15.5	18.5	14.5	4			X	C		X					
SB41	Future pavement section	1	16	19.5	15	4.5			X	C		X					
SB42	Future playground/dog park area	1	15.5	18.5	14.5	4			X	C	X		X	X			
SB43	Future utility alignment; future pavement section	1.5	16	19.5	14.5	5			X	C		X					
SB45	Future utility alignment; future pavement section	1.5	16.5	19	15	4			X	C		X					
SB46	Future outdoor fitness area	0.5	17	18.5	16.5	2			X	C	X		X	X			
SB48	Future utility alignment; future pavement section	1	16	19.5	15	4.5			X	C	X		X	X			
SB49	Future pavement section	0.5	16.5	19.5	16	3.5			X	C		X					
SB50	Potential VC source identification in vadose zone soil	0.5, 5.0, and 10	18.5	20 [1]	18, 13.5, and 8.5	2, 6.5, and 11.5	X (0.5 and 5)										
SB51	Potential VC source identification in soil and groundwater	0.5, 4.5, 10, and 13.5	18.5	20 [1]	18, 14, 8.5, and 5	2, 6, 11.5, and 15	X (0.5, 4.5, and 10)										
SB52	Potential VC source identification in vadose zone soil	0.5, 4.5, and 11	18.5	20 [1]	18, 14, and 7.5	2, 6, and 12.5	X (0.5 and 4.5)										
SB53	Potential VC source identification in vadose zone soil	0.5, 5.0, and 10	18.5	20.5	18, 13.5, and 8.5	2.5, 7, and 12	X (0.5, 5, and 10)										
SB54	Potential VC source identification in vadose zone soil	0.5 and 5.0	18.5	20.5	18 and 13.5	2.5 and 7	X (0.5 and 5)										
SB55	Potential VC source identification in vadose zone soil	0.5, 5.5, and 10	18.5	20 [1]	18, 13, and 8.5	2, 7, and 11.5	X (0.5, 5.5 and 10)										
SB56	Potential VC source identification in soil and groundwater	10 and 13	18.5	20 [1]	8.5 and 5.5	11.5 and 14.5	X (10 and 13)										
SB57	Potential VC source identification in soil and groundwater	10 and 12.5	18.5	20 [1]	8.5 and 6	11.5 and 14	X (10 and 12.5)										
SB58	Potential VC source identification in vadose zone soil	0.5 and 5.0	18	19	17.5 and 13	1.5 and 6	X (0.5 and 5)										
SB59	Potential VC source identification in soil and groundwater	0.5, 5, 10, and 13.5	18	19	17.5, 13, 8, and 4.5	1.5, 6, 11, and 14.5	X (0.5, 5, and 10)										
SB60	Potential VC source identification in vadose zone soil	0.5 and 5.0	18	19	17.5 and 13	1.5 and 6	X (0.5 and 5)										
SB61	Potential VC source identification in soil and groundwater	0.5, 5, 10, and 12.5	18	19	17.5, 13, 8, and 5.5	1.5, 6, 11, and 13.5	X (0.5, 5, and 10)										
SV6	Future building foundation	0.5	17.5	20 [1]	17	3			X	C	X		X	X			
SV8	Future building foundation	0.5	18.5	20 [1]	18	3			X	C		X					
SV10	Future building foundation	0.5	18.5	20 [1]	18	3			X	C	X		X	X			
SV14	Future building foundation	0.5	18.5	20 [1]	18	3			X	C	X		X	X			
SV16	Future building foundation	0.5	18.5	20 [1]	18	3			X	C		X					
SV20	Future building foundation	0.5	18.5	20 [1]	18	3			X	C	X		X	X			
SV22	Future building foundation	0.5	18.5	20 [1]	18	3			X	C		X					
SV32	Former sump excavation; future infiltration gallery	1 and 7	17.5	19.5	16.5 and 10.5	3 and 9	X (7)		X	C	X		X	X			
SV33	Confirmation of previous soil gas sample SG-3 result for PCE; future building foundation	0.5 and 4.5	17	20 [1]	16.5 and 12.5	3.5 and 7.5	X (4.5)		X	C		X					
SV38	Future building foundation	1	17.5	20 [1]	16.5	3.5			X	C	X		X				
SV43	Future building foundation	1	18	20 [1]	17	3			X	C		X					
SV45	Future building foundation	1	18	20 [1]	17	3			X	C		X					

Table 1
Sampling and Analysis Program
Supplemental Pre-Construction Subsurface Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale/Feature of Interest	Sample Depth (feet bgs)	Approximate Existing Ground Elevation (feet msl)	Approximate Future Grade Elevation (feet msl)	Approximate Sample Elevation (feet msl)	Approximate Sample Depth Beneath Future Grade (feet bgs)	Analysis Program										Comments
							VOCs including MIBK, MEK, and naphthalene (TO-15 for air, 8260B for soil and GW)	1,4-dioxane (TO-15 for air, 8270 SIM for GW)	TPH quantified as diesel and motor oil	PCBs	SVOCs	Total Lead	Title 22 metals	Asbestos	Methane, Carbon Dioxide, and Oxygen (ASTM 1946D)	Helium (ASTM 1946D) - leak check compound	
SV47	Existing sand-filled sump on south side of building; future utility alignment; future pavement section	1.5, 2.5, 6	18.5	19.5	17, 16 and 12.5	2.5, 3.5, and 7	X (2.5)		X (1.5)	C							Boring SB33 replaced with SV47.
SV50	Potential VC source identification in vadose zone soil	0.5, 4.5	18.5	20 [1]	18 and 14	2 and 6	X (0.5 and 4.5)										
SV51	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20 [1]	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV52	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20 [1]	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV53	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20.5	18 and 13.5	2.5 and 7	X (0.5 and 5)										
SV54	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20 [1]	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV55	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20 [1]	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV56	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV57	Potential VC source identification in vadose zone soil	0.5, 5.0	18.5	20	18 and 13.5	2 and 6.5	X (0.5 and 5)										
SV58	Potential VC source identification in vadose zone soil	0.5, 5, 10	18	19	17.5, 13, and 8	1.5, 6, and 11	X (0.5, 5 and 10)										
SV60	Potential VC source identification in vadose zone soil	0.5, 5, 10	18	19	17.5, 13, and 8	1.5, 6, and 11	X (0.5, 5 and 10)										
SV61	Potential VC source identification in vadose zone soil	0.5, 5, 10	18	19	17.5, 13, and 8	1.5, 6, and 11	X (0.5, 5 and 10)										
Groundwater																	
SB51	Initial characterization of VC impacts to groundwater	First encountered GW	18.5	20 [1]	5.5	14.5	X	X									
SB56	Initial characterization of VC impacts to groundwater	First encountered GW	18.5	20 [1]	5	15	X	X									
SB57	Initial characterization of VC impacts to groundwater	First encountered GW	18.5	20 [1]	5.5	14.5	X	X									
SB59	Initial characterization of VC impacts to groundwater	First encountered GW	18	19	4	15	X	X									
SB61	Initial characterization of VC impacts to groundwater	First encountered GW	18	19	5	14	X	X									
SB62	Initial characterization of VC impacts to groundwater	First encountered GW	18	19	5	14	X	X									

Notes:
bgs = Below ground surface.
msl = Mean sea level.
VOCs = Volatile organic compounds.
MIBK = Methyl isobutyl ketone or 4-methyl-2-pentanone.
MEK = Methyl ethyl ketone or 2-butanone.
TPH = Total petroleum hydrocarbons.
PCBs = Polychlorinated Biphenyls.
SVOCs = Semi-volatile organic compounds.
VC = Vinyl Chloride
X = Scheduled for analysis.
X (2.0) = Scheduled for analysis only at the indicated depth below existing ground surface, in feet bgs.
C = To be analyzed contingent upon detection of TPH at a concentration or 100 milligrams per kilogram or greater.
1 = Elevation of planned concrete building mat foundation is actually 19.9 feet above msl. Elevation rounded to 20 feet above msl for discussion purposes.

Table 2
Summary of Soil Vapor Analytical Results
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	cis-1,2-DCE ($\mu g/m^3$)	trans-1,2-DCE ($\mu g/m^3$)	Vinyl chloride ($\mu g/m^3$)	1,1,1-TCA ($\mu g/m^3$)	1,1,2,2-PCA ($\mu g/m^3$)	MEK ($\mu g/m^3$)	MIBK ($\mu g/m^3$)	Acetone ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	o-Xylene ($\mu g/m^3$)	1,2,4-TMB ($\mu g/m^3$)	1,3,5-TMB ($\mu g/m^3$)	4-Ethyltoluene ($\mu g/m^3$)	Carbon disulfide ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Other VOCs ($\mu g/m^3$)	Carbon Dioxide (% v/v)	Methane (% v/v)	Oxygen (% v/v)	Helium (% v/v)
SV5	SV5-5	5.0	12/2/2015	< 2.7	< 2.1	< 1.6	< 1.6	< 1	< 1.6	< 2.7	**55**	< 1.6	**120**	**12**	**8.9**	**2.6**	**25**	**3.8**	**8.5**	**3.2**	< 2	**3.9**	**7.2**	ND	**4.1**	< 0.96	**17**	**1.5**
	SV5-10	10.0	12/2/2015	< 4.6	< 3.6	< 2.7	< 2.7	< 1.7	< 2.8	< 4.6	**43**	< 2.8	**76**	< 2.1	**2.9**	< 2.9	< 5.8	< 2.9	< 6.6	< 3.3	< 3.3	< 4.2	**10**	ND	--	--	--	< 0.17
SV6	SV6-5	5.0	12/2/2015	< 4.6	< 3.7	**5.4**	< 2.7	< 1.7	< 2.8	< 4.7	**73**	< 2.8	**270**	**31**	**16**	**3.2**	**9.3**	< 3	< 6.7	< 3.4	< 3.4	**120**	**21**	**3.9 (Freon 21)**	--	--	--	< 0.17
	SV6-10	10.0	12/2/2015	< 6.2	< 4.9	< 3.6	< 3.6	< 2.3	< 3.7	< 6.3	**12**	< 3.8	**37**	< 2.9	< 3.5	< 4	< 8	< 4	< 9	< 4.5	< 4.5	< 5.7	< 3.4	**4.8 (Freon 21)**	--	--	--	**0.57**
SV7	SV7-10	10.0	12/2/2015	< 2,100	< 1,700	< 1,300	< 1,300	< 810	< 1,300	< 2,200	< 1,900	**88,000**	< 9,400	< 1,000	< 1,200	< 1,400	< 2,700	< 1,400	< 3,100	< 1,600	< 1,600	< 2,000	< 1,200	ND	--	--	--	< 0.17
SV7R	SV7R-10	10.0	2/4/2016	< 7.5	< 6.0	< 4.4	< 4.4	< 2.8	< 4.5	< 7.6	**17**	**250**	**43**	**18**	**39**	**5.3**	**22**	**9.1**	< 11	< 5.4	< 5.4	< 6.9	< 4.1	**8.8 (Freon 12), 4.2 (MC)**	**8.2**	< 0.86	**5.9**	< 0.17
SV8	SV8-5	5.0	12/3/2015	**7.8**	< 2.1	**7.0**	**9.1**	**110**	< 1.6	< 2.7	**4.0**	< 1.6	**76**	**11**	**13**	< 1.7	**5.4**	**1.9**	< 3.9	< 2	< 2	**33**	< 1.5	**2.9 (CM), 3.2 (MC)**	**1.0**	**0.69**	**1.4**	< 0.1
	SV8-10	10.0	12/3/2015	< 8.6	< 6.8	< 5	< 5	**7.8**	< 5.2	< 8.7	**35**	< 5.2	**200**	**4.8**	**9.7**	< 5.5	< 11	< 5.5	< 12	< 6.2	< 6.2	**18**	< 4.6	ND	**2.2**	**1.6**	**4.3**	< 0.19
SV9	SV9-5	5.0	12/2/2015	< 12	< 9.9	< 7.3	< 7.3	< 4.7	< 7.5	< 13	**100**	**840**	**500**	**8.2**	**23**	< 8	**20**	< 8	< 18	< 9	< 9	< 11	< 6.7	ND	--	--	--	**0.93**
	SV9-10	10.0	12/2/2015	< 5.4	< 4.3	< 3.2	< 3.2	< 2	< 3.3	< 5.5	**48**	**140**	**160**	< 2.6	**3.9**	< 3.5	**7.5**	**3.9**	< 7.9	< 3.9	< 3.9	< 5	< 2.9	ND	--	--	--	**0.67**
SV10	SV10-5	5.0	12/2/2015	< 21	< 16	**22**	< 12	< 7.8	< 12	< 21	**67**	**300**	**630**	**30**	**26**	< 13	< 26	< 13	< 30	< 15	< 15	< 19	< 11	ND	**3.3**	**2.4**	**1.8**	**0.76**
	SV10-10	10.0	12/2/2015	**59**	< 6.6	**4.8**	< 4.9	< 3.1	< 5	< 8.5	**41**	**68**	**180**	**150**	**11**	< 5.3	< 11	**5.9**	< 12	**7.1**	< 6.1	< 7.7	< 4.5	ND	**5.3**	< 0.96	**1.7**	**0.71**
SV11	SV11-5	5.0	12/3/2015	< 16	< 13	**43**	< 9.5	< 6.1	< 9.8	< 16	**81**	< 9.8	**330**	**84**	**13**	< 10	**27**	< 10	< 24	< 12	< 12	**170**	< 8.8	ND	**3.6**	**2.5**	**2.3**	**0.44**
	SV11-10	10.0	12/3/2015	< 42	< 33	< 24	< 24	< 16	< 25	< 42	**140**	< 25	**770**	**900**	**85**	< 27	< 53	< 27	< 61	< 30	< 30	< 38	< 23	ND	**1.7**	**6.1**	**1.9**	< 0.19
SV12	SV12-5	5.0	12/3/2015	< 13	< 10	< 7.7	< 7.7	< 5.0	< 8	< 13	**37**	< 8	**300**	**40**	**15**	< 8.4	< 17	< 8.4	< 19	< 9.6	< 9.6	**63**	< 7.1	ND	--	--	--	**0.56**
	SV12-10	10.0	12/3/2015	< 11	< 8.3	< 6.2	< 6.2	< 4.0	< 6.4	< 11	**58**	< 6.4	**190**	**7.1**	**7.8**	< 6.7	< 13	< 6.7	< 15	< 7.6	< 7.6	**26**	< 5.7	ND	--	--	--	**0.64**
SV13	SV13-5	5.0	12/2/2015	< 19	< 15	< 11	< 11	< 7.3	< 12	< 20	**65**	< 12	**380**	**17**	**48**	< 12	**160**	< 12	< 28	< 14	< 14	**31**	< 10	ND	**1.1**	**13**	**1.6**	**0.90**
	SV13-10	10.0	12/2/2015	< 12	< 9.8	< 7.3	< 7.3	< 4.7	< 7.5	< 13	**55**	< 7.5	**420**	**36**	**67**	**8.4**	**27**	**8.5**	< 18	< 9	< 9	**44**	< 6.7	ND	< 1	**15**	**1.8**	< 0.2
SV14	SV14-5	5.0	12/2/2015	< 26	< 21	< 15	< 15	< 9.8	< 16	< 26	**96**	< 16	**590**	**83**	**32**	< 17	< 33	< 17	< 38	< 19	< 19	**140**	< 14	ND	**2.0**	< 0.96	**19**	< 0.19
	SV14-10	10.0	12/2/2015	< 26	< 20	< 15	< 15	< 9.7	< 16	< 26	**64**	< 16	**530**	**610**	**71**	**28**	**110**	**23**	< 37	< 19	< 19	< 24	< 14	ND	**1.9**	**13**	**1.7**	**1.2**
SV15	SV15-5	5.0	12/2/2015	< 62	< 49	< 36	< 36	< 23	< 37	< 63	**56**	**310**	**2,400**	**39**	< 34	< 40	< 79	< 40	< 90	< 45	< 45	**71**	< 33	ND	--	--	--	< 0.18
	SV15-8	8.0	12/2/2015	< 18	< 14	**24**	< 10	< 6.6	< 11	< 18	< 15	< 11	**460**	**120**	**49**	**19**	**54**	**22**	< 25	< 13	< 13	**190**	< 9.5	ND	--	--	--	< 0.19
SV16	SV16-5	5.0	12/2/2015	< 31	< 25	< 18	< 18	< 12	< 19	< 31	**64**	< 19	**630**	**59**	**43**	< 20	< 40	< 20	< 45	< 22	< 22	**28**	< 17	ND	**5.6**	**39**	**1.3**	< 0.18
	SV16-10	10.0	12/2/2015	< 12	< 9.5	**13**	< 7.0	**5.4**	< 7.2	< 12	**77**	< 7.2	**590**	< 5.6	**20**	**8.9**	**27**	**8.5**	< 17	< 8.7	< 8.7	< 11	< 6.4	**9 (1,1-DCA)**	**2.3**	**27**	**1.3**	**0.81**
SV17	SV17-5	5.0	12/1/2015	< 18	< 14	< 10	< 10	< 6.7	< 11	< 18	**93**	< 11	**400**	**130**	**120**	**24**	**130**	**26**	< 26	< 13	< 13	**120**	**31**	ND	--	--	--	< 0.2
	SV17-10	10.0	12/1/2015	< 67	< 53	< 39	< 39	< 25	< 40	**120**	< 58	< 40	< 290	**4,200**	**180**	< 43	< 86	< 43	< 97	< 49	< 49	< 62	< 36	ND	--	--	--	< 0.2
SV18	SV18-5	5.0	12/2/2015	< 17	< 14	**29**	< 10	**83**	< 10	< 18	**100**	< 11	**780**	**210**	**32**	< 11	**43**	< 11	< 25	< 13	< 13	**120**	< 9.4	ND	--	--	--	< 0.18
	SV18-10	10.0	12/2/2015	< 11	< 8.9	< 6.6	< 6.6	**57**	< 6.8	< 11	**72**	< 6.8	**380**	**84**	**39**	**8.9**	**27**	**9.2**	< 16	< 8.2	< 8.2	**280**	< 6.1	**20 (CM)**	--	--	--	**0.29**
SV19	SV19-5	5.0	12/1/2015	< 19	< 15	**14**	< 11	**650**	< 11	< 19	**150**	< 11	**760**	**300**	**59**	< 12	**68**	**13**	< 28	< 14	< 14	**66**	< 10	ND	**9.7**	**52**	**0.96**	< 0.17
	SV19-10	10.0	12/1/2015	< 20	**34**	**170**	< 12	**47**	< 12	< 20	**44**	< 12	**180**	**760**	**53**	< 13	**45**	**12**	< 29	< 14	< 14	**110**	< 11	ND	**1.8**	**75**	**0.87**	< 0.18
SV20	SV20-5	5.0	12/1/2015	< 57	< 45	< 33	< 33	**23**	< 35	< 58	**110**	< 35	**960**	**120**	**58**	< 37	< 73	< 37	< 83	< 41	< 41	**120**	< 31	ND	**5.0**	**20**	**2.3**	< 0.17
	SV20-10	10.0	12/1/2015	< 13	< 11	**25**	< 7.9	**19**	< 8.1	< 14	**54**	< 8.1	**230**	**110**	**65**	**9.9**	**40**	**11**	< 19	< 9.7	< 9.7	**60**	< 7.3	**7.9 (MC)**	**5.1**	**22**	**1.6**	< 0.17
SV21	SV21-5	5.0	12/1/2015	< 20	**17**	**70**	< 12	**48**	< 12	< 20	**83**	< 12	**620**	**62**	**54**	< 13	< 26	< 13	< 29	< 14	< 14	**120**	**23**	ND	--	--	--	< 0.19
	SV21-10	10.0	12/1/2015	< 14	**20**	**75**	< 8.2	**140**	< 8.5	< 14	**64**	< 8.5	**290**	**42**	**48**	< 9	**67**	< 9	< 20	< 10	< 10	**260**	< 7.6	ND	--	--	--	< 0.17
SV22	SV22-5	5.0	12/1/2015	< 2,600	< 2,000	< 1,500	< 1,500	**83,000**	< 1,500	< 2,600	< 2,200	< 1,500	< 11,000	< 1,200	< 1,400	< 1,600	< 3,300	< 1,600	< 3,700	< 1,900	< 1,900	< 2,400	< 1,400	ND	**11**	**35**	**1.4**	< 0.19
	SV22-10	10.0	12/1/2015	< 1,200	< 940	**1,500**	**1,200**	**35,000**	< 710	< 1,200	< 1,000	< 710	< 5,200	< 560	< 660	< 760	< 1,500	< 760	< 1,700	< 860	< 860	< 1,100	< 640	ND	< 0.87	**44**	**1.3**	**0.41**
SV23	SV23-5	5.0	11/30/2015	< 17	< 13	**110**	**33**	**14**	< 10	< 17	**47**	< 10	**210**	**970**	**35**	**16**	**36**	**11**	< 25	< 12	< 12	**18**	< 9.1	**18 (1,4-DCB)**	**10**	< 1	**2.0**	< 0.2
	SV23-10	10.0	11/30/2015	< 9.8	< 7.7	< 5.7	< 5.7	< 3.7	< 5.9	< 9.9	**110**	< 5.9	**410**	**27**	**34**	< 6.3	**18**	**6.0**	< 14	< 7.1	< 7.1	**9.0**	**8.5**	ND	**5.2**	< 0.98	**11**	< 0.2
SV24	SV24-5	5.0	11/30/2015	< 12	< 9.5	< 7	< 7	< 4.5	< 7.3	< 12	**120**	< 7.3	**560**	**12**	**32**	< 7.7	**18**	< 7.7	< 17	< 8.7	< 8.7	< 11	< 6.5	ND	--	--	--	< 0.19
	SV24-10	10.0	11/30/2015	< 12	< 9.3	< 6.8	< 6.8	< 4.4	< 7.1	< 12	**100**	< 7.1	**490**	**100**	**110**	**95**	**280**	**180**	**190**	**76**	**61**	**74**	< 6.3	ND	--	--	--	< 0.19
SV25	SV25-5	5.0	12/1/2015	< 130	< 100	**130**	< 77	**7,300**	< 79	< 130	< 110	< 79	**1,200**	**110**	< 73	< 84	< 170	< 84	< 190	< 95	< 95	< 120	< 71	ND	--	--	--	< 0.19
	SV25-10	10.0	12/1/2015	< 260	**300**	**2,100**	**210**	**11,000**	< 160	< 270	< 230	< 160	< 1,200	**160**	< 150	< 170	< 340	< 170	< 380	< 190	< 190	< 240	< 140	ND	--	--	--	< 0.17
SV26	SV26-5	5.0	12/1/2015	< 6.4	**5.8**	**28**	< 3.7	**14**	< 3.9	< 6.5	**63**	< 3.9	**290**	**240**	**35**	**18**	**120**	**18**	**17**	**10**	< 4.6	**130**	< 3.5	ND	**1.4**	**2.3**	**9.5**	< 0.16
	SV26-10	10.0	12/1/2015	< 42	< 33	**26**	< 24	**72**	< 25	< 42	< 36	< 25	< 180	**30**	**25**	< 27	**110**	**45**	**180**	**82**	**38**	< 38	< 22	**56 (CB)**	**2.8**	**3.3**	**1.8**	< 0.18
SV27	SV27-5	5.0	11/30/2015	< 4.3	**5.3**	< 2.5	< 2.5	< 1.6	< 2.6	< 4.4	**26**	< 2.6	**180**	**7.8**	**44**	< 2.8	**15**	**2.8**	< 6.3	< 3.1	< 3.1	**9.8**	< 2.3	**4.7 (2-Hexanone)**	--	--	--	< 0.16
	SV27-10	10.0	11/30/2015	< 7.7	< 6.1	**8.2**	< 4.5	**10**	< 4.6	< 7.8	**11**	< 4.7	**110**	**9.8**	**15**	< 4.9	**10**	< 4.9	< 11	< 5.6	< 5.6	**16**	< 4.2	ND	--	--	--	< 0.16
SV28R	SV28R-5	5.0	12/3/2015	< 11	< 8.4	**11**	< 6.2	**23**	< 6.4	< 11	**33**	< 6.4	**220**	**18**	**110**	**82**	**420**	**64**	**46**	**35**	**8.3**	**17**	< 5.7	ND	**1.0**	**13**	**2.0**	**0.58**
	SV28R-10	10.0	12/3/2015	< 2.7	< 2.1	**1.7**	< 1.6	**83**	< 1.6	< 2.7	< 2.4	< 1.6	**27**	< 1.3	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2	< 2.5	< 1.5	**7.5 (DCFM)**	< 0.97	**21**	**1.4**	< 0.19
SV29	SV29-5	5.0	11/30/2015	< 5.1	< 4.0	< 3.0	< 3.0	< 1.9	< 3.1	< 5.2	**31**	< 3.1	**210**	**10**	**27**	**11**	**200**	**5.8**	**7.3**	< 3.7	< 3.7	**30**	**14**	ND	--	--	--	< 0.19
	SV29-10	10.0	11/30/2015	< 5.0	**6.2**	< 2.9	< 2.9	< 1.9	< 3	< 5	**30**	< 3	**160**	**35**	**21**	**8.0**	**47**	**7.8**	**7.1**	**5.1**	< 3.6	**63**	< 2.7	**3.4 (MC)**	--	--	--	< 0.18
SV30	SV30-5	5.0	12/1/2015	< 5.7	**110**	**6.7**	**3.4**	< 2.1	< 3.4	< 5.8	**22**	< 3.4	**110**	**12**	**11**	< 3.6	**11**	< 3.6	< 8.3	< 4.1	< 4.1	**41**	**7.3**	ND	--	--	--	< 0.17
	SV30-10	10.0	12/1/2015	< 12	**23**	**28**	**13**	**33**	< 7.4	< 12	**30**	< 7.4	**130**	**67**	**24**	**8.0**	**21**	**8.6**	< 18	< 8.9	< 8.9	**97**	**6.8**	**33 (1,1-DCE), 10 (Freon 11)**	--	--	--	< 0.18
SV31	SV31-5	5.0	12/1/2015	< 4.6	**13**	< 2.7	< 2.7	< 1.7	< 2.8	< 4.7	**13**	< 2.8	**75**	**13**	**19**	**4.0**	**14**	**6.3**	< 6.7	< 3.4	< 3.4	**21**	**8.5**	**3.5 (MC)**	--	--	--	< 0.17
	SV31-10	10.0	12/1/2015	< 2.7	**23**	< 1.6	**2.8**	< 1	< 1.6	< 2.7	**4.8**	< 1.6	**38**	**17**	**15**	**4.0**	**22**	**6.6**	< 3.9	< 2.0	< 2.0	**11**	**11**	**4 (CM)**	--	--	--	< 0.16
SV32	SV32-5	5.0	12/1/2015	< 8.8	**11**	< 5.1	< 5.1	< 3.3	< 5.3	< 8.9	**22**	< 5.3	**150**	**14**	**16**	< 5.6	< 11	< 5.6	< 13	< 6.4	< 6.4	**8.0**	**19**	ND	--	--	--	< 0.16
	SV32-10	10.0	12/1/2015	< 19	< 15	< 11	< 11	< 7.2	< 12	< 19	**49**	< 12	**330**	**43**	**17**	< 12	< 24	< 12	< 28	< 14	< 14	< 18	< 10	ND	--	--	--	< 0.17
SV33	SV33-5	5.0	12/1/2015	< 22	< 18	< 13	< 13	< 8.5	< 14	< 23	**34**	< 14	**230**	**37**	**20**	< 14	**30**	< 14	< 33	< 16	< 16	**24**	< 12	ND	--	--	--	< 0.17
	SV33-10	10.0	12/1/2015	< 46	< 37	< 27	< 27	**47**	< 28	**430**	< 40	**970**	< 200	< 22	**65**	**70**	**350**	**80**	< 67	< 34	< 34	< 43	< 25	ND	--	--	--	< 0.17
SV36	SV36-5	5.0	12/1/2015	< 7.9	< 6.3	< 4.6	< 4.6	**3.0**	< 4.8	**21**	**16**	**8.3**	**77**	**5.7**	**9.0**	< 5.1	< 10	**5.0**	< 11	< 5.7	< 5.7	< 7.2	< 4.3	ND	**3.6**	< 1.2	**17**	< 0.23
	SV36-10	10.0	12/1/2015	< 58	< 46	< 34	< 34	< 22	< 35	**2,500**	< 51	**370**	< 260	**150**	**41**	**210**	< 75	**250**	< 85	< 42	< 42	**53**	< 31	**170 (BC)**	**2.0**	**11**	**10**	< 0.17
SV38	SV38-5	5.0	11/30/2015	< 17	< 13	< 9.7	< 9.7	**25**	< 10	< 17	**85**	< 10	**460**	**18**	**24**	< 11	< 21	< 11	< 24	< 12	< 12	**110**	**48**	ND	**0.99**	**13**	**2.4**	< 0.18
	SV38-10	10.0	11/30/2015	< 40	< 32	**160**	**54**	**1,800**	< 24	< 41	**78**	< 24	**310**	**150**	**30**	< 26	< 52	< 26	< 59	< 29	< 29	**320**	< 22	ND	< 0.89	**67**	**1.6**	< 0.18
SV39	SV39-5	5.0	12/1/2015	< 7.5	< 6	< 4.4	< 4.4	< 2.8	< 4.6	< 7.6	**61**	< 4.6	**290**	**17**	**17**	**39**	**23**	**4.8**	< 11	< 5.5	< 5.5	**110**	**4.1**	ND	< 0.96	< 0.96	**24**	**0.19**
	SV39-10	10.0	12/1/2015	< 8.1	**9.0**	**38**	**63**	**7.5**	< 4.9	< 8.2	**49**	< 4.9	**200**	**130**	**71**	**99**	**220**	**65**	**62**	**43**	**23**	**140**	< 4.4	ND	< 0.94	**3.4**	**22**	< 0.19
SV40	SV40-5	5.0	12/1/2015	< 17	**13**	**42**	**10**	**24**	< 10	**27**	**29**	**38**	**180**	**25**	**14**	< 11	< 22	< 11	< 25	< 12	< 12	**43**	< 9.2	ND	--	--	--	< 0.19

Table 2
Summary of Soil Vapor Analytical Results
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	cis-1,2-DCE ($\mu g/m^3$)	trans-1,2-DCE ($\mu g/m^3$)	Vinyl chloride ($\mu g/m^3$)	1,1,1-TCA ($\mu g/m^3$)	1,1,2,2-PCA ($\mu g/m^3$)	MEK ($\mu g/m^3$)	MIBK ($\mu g/m^3$)	Acetone ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	o-Xylene ($\mu g/m^3$)	1,2,4-TMB ($\mu g/m^3$)	1,3,5-TMB ($\mu g/m^3$)	4-Ethyltoluene ($\mu g/m^3$)	Carbon disulfide ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Other VOCs ($\mu g/m^3$)	Carbon Dioxide (% v/v)	Methane (% v/v)	Oxygen (% v/v)	Helium (% v/v)
SV40	SV40-10	10.0	12/1/2015	< 62	< 49	< 36	< 36	**110**	< 38	**640**	< 54	**73**	< 270	**50**	< 35	< 40	**160**	**130**	< 90	< 45	< 45	< 57	< 34	ND	--	--	--	< 0.18
SV43	SV43-5	5.0	12/1/2015	< 8.5	< 6.7	< 5	< 5	< 3.2	< 5.1	< 8.6	**17**	**21**	**76**	**25**	**9.1**	< 5.4	< 11	< 5.4	< 12	< 6.2	< 6.2	**15**	**12**	ND	--	--	--	< 0.19
	SV43-10	10.0	12/1/2015	< 3	< 2.4	**1.8**	< 1.8	< 1.1	< 1.8	**7.5**	**15**	< 1.8	**42**	**5.1**	**4.9**	< 1.9	**5.3**	**1.9**	< 4.4	< 2.2	< 2.2	**6.5**	< 1.6	**3.3 (BC)**	--	--	--	< 0.18
SV44	SV44-5	5.0	12/1/2015	< 4.5	< 3.6	< 2.6	< 2.6	< 1.7	< 2.7	< 4.6	**49**	< 2.7	**220**	**50**	**17**	**30**	**22**	**13**	**16**	**3.7**	**6.9**	**60**	< 2.4	**17 (NAPH)**	< 0.83	< 0.83	**24**	< 0.17
	SV44-10	10.0	12/1/2015	< 5.9	< 4.7	**21**	< 3.5	**3.1**	< 3.6	< 6	**28**	< 3.6	**130**	**5.6**	**4.7**	< 3.8	< 7.6	< 3.8	< 8.6	< 4.3	< 4.3	**26**	< 3.2	ND	**9.3**	**0.92**	**2.3**	< 0.16
SV45	SV45-5	5.0	12/1/2015	< 12	< 9.2	**6.6**	< 6.8	< 4.4	< 7.0	< 12	**110**	< 7	**540**	**51**	**14**	**10**	**50**	**15**	< 17	< 8.4	< 8.4	**45**	**22**	ND	**5.8**	< 0.9	**14**	**0.34**
	SV45-10	10.0	12/1/2015	< 4.9	< 3.9	**9.5**	< 2.9	< 1.8	< 2.9	< 4.9	**76**	< 2.9	**170**	**16**	**8.3**	**6.0**	**33**	**12**	**9.7**	**4.4**	< 3.5	**7.7**	**4.9**	**3.4 (BC)**	**11**	< 0.9	**4.0**	**0.36**
SV47	SV47-5	5.0	12/3/2015	< 7.2	< 5.7	**8.8**	< 4.2	< 2.7	**5.7**	< 7.2	**38**	< 4.3	**250**	**13**	**24**	< 4.6	**11**	< 4.6	< 10	< 5.2	< 5.2	**22**	< 3.9	ND	--	--	--	< 0.21
SV48	SV48-5	5.0	2/1/2016	< 7.2	< 5.7	< 4.2	< 4.2	< 2.7	< 4.4	< 7.3	**21**	< 4.4	**200**	**34**	**210**	**36**	**150**	**52**	**27**	**12**	**12**	< 6.7	< 3.9	ND	**6.2**	< 0.96	**5.6**	**0.43**
	SV48-10	10.0	2/1/2016	< 5.1	< 4.1	**8.2**	< 3	**3.2**	< 3.1	< 5.2	**44**	< 3.1	**150**	**14**	**64**	**9.2**	**39**	**12**	**11**	**3.9**	**5.3**	**80**	< 2.8	**5.8 (CB)**	**8.2**	**2.6**	**2.0**	< 0.19
SV49	SV49-5	5.0	2/1/2016	< 5.0	**6.5**	**14**	< 2.9	< 1.9	< 3	< 5.1	**37**	< 3	**90**	**59**	**28**	**14**	**57**	**24**	**9.9**	**5.0**	**4.5**	**6.6**	< 2.7	ND	**6.8**	**1.3**	**2.1**	< 0.19
SV50	SV50-5	5.0	2/2/2016	< 27	< 21	< 16	< 16	**200**	< 16	< 27	**40**	**220**	**270**	**210**	**1,600**	**160**	**580**	**160**	< 39	< 19	**20**	**33**	< 14	ND	--	--	--	< 0.24
SV51	SV51-5	5.0	2/2/2016	< 150	< 120	< 87	< 87	**6,500**	< 90	< 150	< 130	< 90	< 650	**160**	**260**	< 96	< 190	< 96	< 220	< 110	< 110	< 140	< 81	ND	--	--	--	< 0.2
SV52	SV52-5	5.0	2/2/2016	< 15	< 12	**72**	< 8.6	**220**	< 8.9	< 15	**38**	< 8.9	**150**	**130**	**53**	< 9.5	**33**	**10**	< 21	< 11	< 11	< 14	< 8	ND	--	--	--	< 0.18
SV53	SV53-5	5.0	2/2/2016	**3.2**	**13**	**24**	**3.2**	**110**	**1.8**	< 2.7	**32**	< 1.6	**140**	**79**	**200**	**20**	**75**	**25**	**11**	**5.5**	**5.8**	**55**	**2.1**	**3.3 (1,1-DCE), 2.6 (CM), 3.9 (Freon 12), 4.1 (MC), 3.5 (Freon 11), 6.6 (VA)**	--	--	--	< 0.24
SV54	SV54-5	5.0	2/1/2016	< 150	< 120	< 89	< 89	**5,100**	< 92	< 150	< 130	< 92	< 670	**200**	< 85	< 98	< 200	< 98	< 220	< 110	< 110	< 140	< 82	ND	**8.5**	**45**	**2.0**	< 0.19
SV55	SV55-5	5.0	2/2/2016	< 15	< 12	< 8.9	< 8.9	**1,200**	< 9.2	< 15	**56**	< 9.2	**480**	**79**	**29**	< 9.7	< 19	< 9.7	< 22	< 11	< 11	**20**	< 8.2	ND	--	--	--	**0.19**
SV56	SV56-5	5.0	2/2/2016	< 530	< 420	**770**	< 310	**29,000**	< 320	< 540	< 460	< 320	< 2,300	**270**	< 290	< 340	< 680	< 340	< 770	< 380	< 380	< 490	< 290	ND	--	--	--	< 0.17
SV57	SV57-5	5.0	2/2/2016	< 180	< 140	**210**	< 100	**9,400**	< 110	< 180	< 160	< 110	< 780	**190**	**180**	< 110	< 230	< 110	< 260	< 130	< 130	< 160	< 96	ND	--	--	--	< 0.21
SV58	SV58-5	5.0	2/3/2016	< 4.9	< 3.8	< 2.8	< 2.8	< 1.8	< 2.9	< 4.9	**24**	< 2.9	**99**	**38**	**140**	**15**	**58**	**18**	**12**	**5.0**	**5.9**	**18**	< 2.6	**3.7 (Freon 12)**	< 0.9	< 0.9	**24**	< 0.18
	SV58-10	10.0	2/3/2016	< 8.8	**11**	**18**	< 5.1	**6.4**	< 5.3	< 8.9	**63**	< 5.3	**220**	**160**	**89**	**22**	**64**	**22**	**15**	**7.5**	**9.9**	**150**	< 4.7	ND	< 1.2	**35**	**14**	**0.38**
SV59	SV59-5	5.0	2/3/2016	< 2,600	< 2,000	**3,300**	**1,700**	**120,000**	< 1,500	< 2,600	< 2,200	< 1,500	< 11,000	< 1,200	< 1,400	< 1,600	< 3,300	< 1,600	< 3,700	< 1,900	< 1,900	< 2,300	< 1,400	ND	**2.6**	**9.4**	**13**	< 0.19
	SV59-10	10.0	2/3/2016	< 810	**680**	**5,600**	**2,100**	**15,000**	< 490	< 820	< 700	< 490	< 3500	< 380	< 450	< 520	< 1,000	< 520	< 1,200	< 590	< 590	< 740	< 440	ND	< 0.96	**39**	**2.6**	< 0.19
SV60	SV60-5	5.0	2/3/2016	< 110	< 89	**720**	**220**	**3,100**	< 68	< 110	< 98	**72**	< 490	**110**	**500**	< 72	**170**	**86**	< 160	< 82	< 82	< 100	< 61	ND	< 0.97	< 0.97	**24**	< 0.19
	SV60-10	10.0	2/3/2016	< 29,000	< 23,000	**98,000**	**41,000**	**920,000**	< 18,000	< 30,000	< 26,000	< 18,000	< 130,000	< 14,000	< 16,000	< 19,000	< 38,000	< 19,000	< 43,000	< 21,000	< 21,000	< 27,000	< 16,000	ND	< 0.87	**94**	**0.59**	< 0.17
SV61	SV61-5	5.0	2/4/2016	< 23	< 18	< 13	< 13	< 8.5	< 14	< 23	**25**	< 14	**260**	**37**	**820**	**300**	**1,500**	**530**	**500**	**240**	**200**	< 21	< 12	ND	< 0.84	< 0.84	**24**	**0.21**
	SV61-10	10.0	2/4/2016	< 420	< 330	< 240	< 240	**7,500**	< 250	< 420	< 360	< 250	< 1,800	**340**	**280**	< 270	**1,400**	**410**	**580**	**340**	**380**	< 380	< 230	ND	< 0.86	**25**	**7.3**	< 0.17
Residential Land Use ESL (Soil Gas) [1]				*240*	*240*	*4,200*	*31,000*	*4.7*	*520,000*	*24*	*2,600,000*	*1,600,000*	*16,000,000*	*48*	*160,000*	*560*	*52,000*	*52,000*	*NE*	*NE*	*NE*	*NE*	*61*	*NE*	*NE*	*NE*	*NE*	*NE*
Commercial/Industrial ESL [2]				*2,100*	*3,000*	*35,000*	*260,000*	*160*	*4,400,000*	*210*	*22,000,000*	*13,000,000*	*140,000,000*	*420*	*1,300,000*	*4,900*	*440,000*	*440,000*	*NE*	*NE*	*NE*	*NE*	*530*	*NE*	*NE*	*NE*	*NE*	*NE*

Notes:
Detections are shown in bold. Results equal to or exceeding applicable regulatory screening levels are shaded.
Only detected analytes are summarized on table. Refer to Appendix C for laboratory report to access entire list of compounds analyzed.
PCE = Tetrachloroethene.
TCE = Trichloroethene.
DCE = Dichloroethene.
TCA = Trichloroethane.
PCA = Tetrachloroethane
MEK = Methyl Ethyl Ketone
MIBK = Methyl Isobutyl Ketone
TMB = Trimethylbenzene.
CB = Chlorobenzene.
CM = Chloromethane.
DCA = Dichloroethane.
DCB = Dichlorobenzene
BC = Benzyl chloride
Freon 11 = Trichlorofluoromethane
Freon 12 = Dichlorodifluoromethane
Freon 21 = Dichlorofluoromethane
TCD = Carbon Dioxide
MC = Methylene Chloride
NAPH = Naphthalene
VA = Vinyl Acetate
VOCs = Volatile organic compounds.
bgs = Below ground surface.
$\mu g/m^3$ = Micrograms per cubic meter.
% v/v = Percent by volume.
< 2.9 = Not detected at or above the indicated laboratory method reporting limit.
ND = Not detected at or above the respective laboratory method reporting limits.
NE = Not established.
-- = Not applicable/not analyzed.
1. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table SG-1 Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels. Residential.

2. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table SG-1 Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels. Commercial/Industrial.

Table 3
Summary of Soil Vapor Leak Check Results
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Helium Detected in Sample (% v/v)	Helium Detected in Shroud (% v/v)	Breakthrough Factor (%)
SV5	SV5-5	5.0	12/2/2015	**1.5**	**19.8**	7.6
SV6	SV6-10	10.0	12/2/2015	**0.57**	**18.6**	3.1
SV9	SV9-5	5.0	12/2/2015	**0.93**	**18.0**	5.2
	SV9-10	10.0	12/2/2015	**0.67**	**18.0**	3.7
SV10	SV10-5	5.0	12/2/2015	**0.76**	**16.1**	4.7
	SV10-10	10.0	12/2/2015	**0.71**	**16.1**	4.4
SV11	SV11-5	5.0	12/3/2015	**0.44**	**24.2**	1.8
SV12	SV12-5	5.0	12/3/2015	**0.56**	**25.9**	2.2
	SV12-10	10.0	12/3/2015	**0.64**	**25.9**	2.5
SV13	SV13-5	5.0	12/2/2015	**0.90**	**11.2**	8.0
SV14	SV14-10	10.0	12/2/2015	**1.2**	**16.2**	7.4
SV16	SV16-10	10.0	12/2/2015	**0.81**	**13.2**	6.1
SV18	SV18-10	10.0	12/2/2015	**0.29**	**10.1**	2.9
SV22	SV22-10	10.0	12/1/2015	**0.41**	**22.4**	1.8
SV28R	SV28R-5	5.0	12/3/2015	**0.58**	**25.7**	2.3
SV39	SV39-5	5.0	12/1/2015	**0.19**	**11.2**	1.7
SV45	SV45-5	5.0	12/1/2015	**0.34**	**19.6**	1.7
	SV45-10	10.0	12/1/2015	**0.36**	**19.6**	1.8
SV48	SV48-5	5.0	2/1/2016	**0.43**	**11.0**	3.9
SV55	SV55-5	5.0	2/2/2016	**0.19**	**27.0**	0.7
SV58	SV58-10	10.0	2/3/2016	**0.38**	**18.0**	2.1
SV61	SV61-5	5.0	2/4/2016	**0.21**	**19.0**	1.1
Acceptable Ambient Air Breakthrough Limit [1]				--	--	*5%*

Notes:
Detections are shown in bold. Results equal to or exceeding applicable RPD limits are shaded.
bgs = Below ground surface.
RPD = Relative percent difference.
% v/v = Percent by volume.
-- = Not applicable/not analyzed.
1. In accordance with California Environmental Protection Agency/Department of Toxic Substances Control Advisory - Active Soil Gas Investigations, July 2015 - Appendix C: Quantitative Leak Testing Using a Tracer Gas.

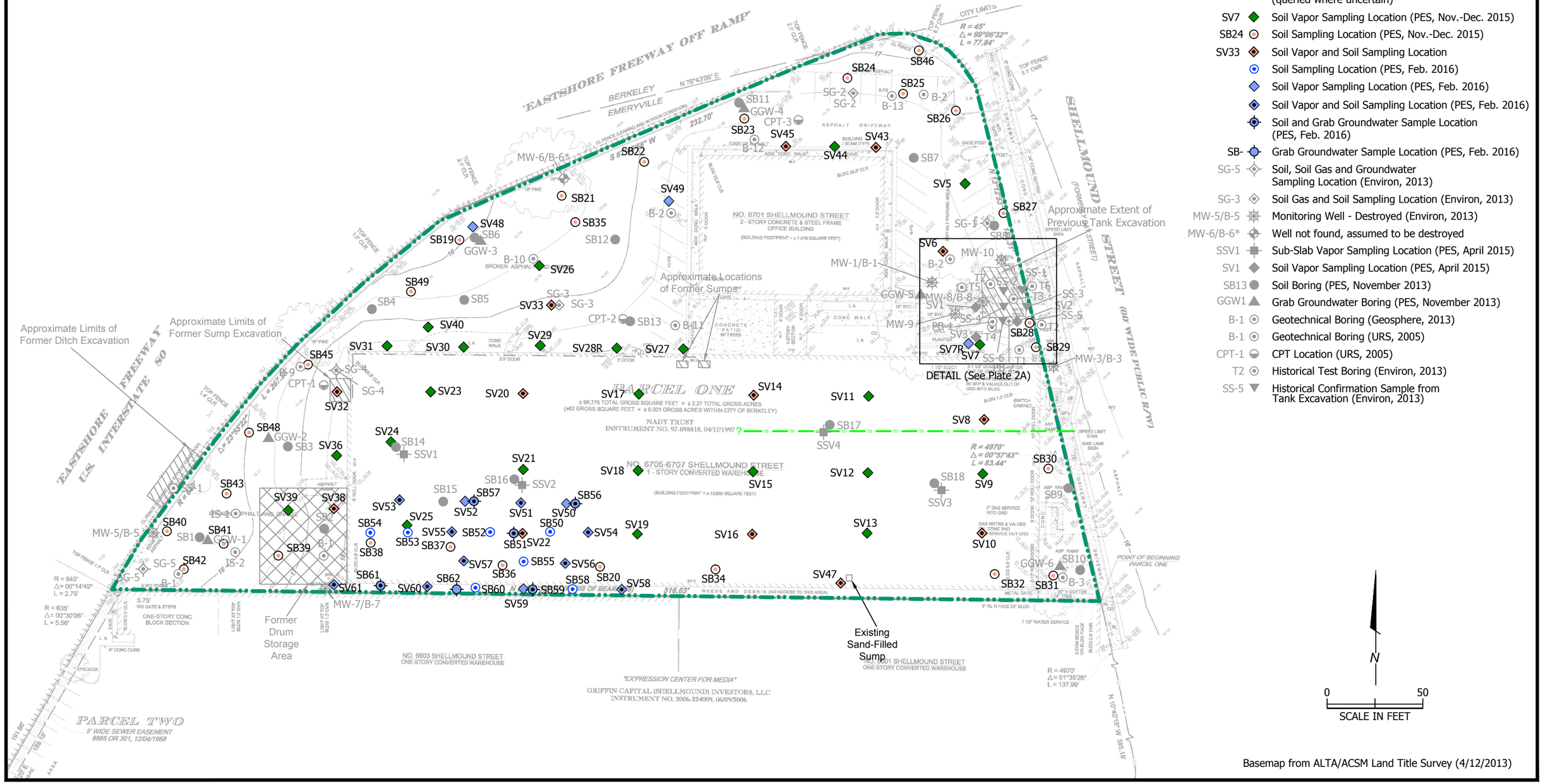
Table 4
Summary of Soil Analytical Results - Petroleum Hydrocarbons, VOCs, SVOCs, and PCBs
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	TPHd (mg/Kg)	TPHmo (mg/Kg)	TCE (µg/Kg)	cis-1,2-DCE (µg/Kg)	trans-1,2-DCE (µg/Kg)	Vinyl chloride (µg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	m,p-Xylenes (µg/Kg)	o-Xylenes (µg/Kg)	Naphthalene (µg/Kg)	MEK (µg/Kg)	Acetone (µg/Kg)	Other VOCs (µg/Kg)	Phenol (mg/Kg)	PCB-1260 (µg/Kg)
SB19	SB19-0.5	0.5	12/2/2015	**24**	**86**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB20	SB20-1.0	1.0	11/30/2015	**23**	**57**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
	SB20-2.5	2.5	11/30/2015	**36**	**110**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**1,700 H**
SB21	SB21-0.5	0.5	12/2/2015	**110**	**380**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**1,900 H**
SB22	SB22-0.5	0.5	12/2/2015	**1.6**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB23	SB23-0.5	0.5	12/2/2015	**26**	**130**	--	--	--	--	--	--	--	--	--	< 130	--	--	ND	< 0.13	**490 H**
SB24	SB24-0.5	0.5	12/2/2015	**56**	**180**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**3,700 H**
SB25	SB25-1	1.0	12/2/2015	**87**	**410**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**800 H**
SB26	SB26-1.5	1.5	12/2/2015	**27**	**160**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**120 H**
SB27	SB27-2.5	2.5	12/2/2015	**260**	**960**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**590 H**
SB28	SB28-0.5	0.5	12/2/2015	**64**	**190**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**610 H**
	SB28-4.5	4.5	12/2/2015	**200**	**890**	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	--	--	< 9	--	< 45	ND	--	**55,000 H**
SB29	SB29-2.5	2.5	12/2/2015	**39**	**110**	--	--	--	--	--	--	--	--	--	< 130	--	--	ND	< 0.13	**1,900 H**
SB30	SB30-1	1.0	12/2/2015	**5.0**	< 49	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB31	SB31-2	2.0	12/2/2015	**35**	**150**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**280 E H**
	SB31-6	6.0	12/2/2015	**110**	**510**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	< 50
SB32	SB32-1.5	1.5	12/3/2015	**26**	**100**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**290 H**
SB34	SB34-4.0	4.0	12/1/2015	**59**	**290**	--	--	--	--	--	--	--	--	--	< 330	--	--	ND	< 0.33	**190 H**
SB35	SB35-0.5	0.5	12/2/2015	**130**	**450**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**620 H**
SB36	SB36-1.5	1.5	11/30/2015	**16**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB37	SB37-0.5	0.5	12/1/2015	**2.9**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB38	SB38-1.5	1.5	11/30/2015	**11**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB39	SB39-0.5	0.5	12/2/2015	**79**	**210**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**250 H**
SB40	SB40-1	1.0	12/2/2015	**84**	**300**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**1,900 H**
SB41	SB41-1	1.0	12/2/2015	**150**	**490**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**2,900 H**
SB42	SB42-1	1.0	12/2/2015	**55**	**170**	--	--	--	--	--	--	--	--	--	< 330	--	--	ND	< 0.33	**2,800 H**
SB43	SB43-1.5	1.5	12/1/2015	**200**	**680**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**1,300 H**
SB45	SB45-1.5	1.5	12/1/2015	**460**	**1,900**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**2,800 H**
SB46	SB46-0.5	0.5	12/2/2015	**62**	**310**	--	--	--	--	--	--	--	--	--	< 330	--	--	ND	< 0.33	**1,200 H**
SB48	SB48-1.0	1.0	12/1/2015	**110**	**410**	--	--	--	--	--	--	--	--	--	< 660	--	--	ND	< 0.66	**8,300 H**
SB49	SB49-0.5	0.5	12/2/2015	**8.2**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SB50	SB50-0.5	0.5	2/1/2016	--	--	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	--	--	< 8.5	--	< 42	ND	--	--
	SB50-5	5.0	2/1/2016	--	--	< 3.7	6.2	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	--	--	< 7.3	--	< 37	ND	--	--
SB51	SB51-0.5	0.5	2/1/2016	--	--	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	--	--	< 7	--	< 35	ND	--	--
	SB51-4.5	4.5	2/1/2016	--	--	< 3.6	< 3.6	< 3.6	**35**	**9.8**	**59**	**97**	**270**	**110**	**110**	**8.6**	**38**	**990 >LR b (1,2,4-TMB), 370 >LR b (1,3,5-TMB), 90 (IPB), 95 (n-BB), 91 (p-IT), 150 >LR b (PB), 86 (sec-BB), 4.6 (tert-BB)**	--	--
	SB51-10	10.0	2/1/2016	--	--	< 3.5	< 3.5	< 3.5	< 7.1	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7.1	**22**	**6.4 (n-BB), 4.2 (p-IT), 5.6 (sec-BB)**	--	--
SB52	SB52-0.5	0.5	2/1/2016	--	--	< 4	< 4	< 4	< 4	< 4	< 4	< 4	--	--	< 8.1	--	< 40	ND	--	--
	SB52-4.5	4.5	2/1/2016	--	--	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	--	--	< 7.8	--	**55**	ND	--	--
SB53	SB53-0.5	0.5	2/1/2016	--	--	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	--	--	< 7.5	--	< 38	ND	--	--
	SB53-5	5.0	2/1/2016	--	--	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	--	--	< 6.3	--	< 31	ND	--	--
	SB53-10	10.0	2/1/2016	--	--	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	--	--	< 6.9	--	< 35	ND	--	--
SB54	SB54-0.5	0.5	2/2/2016	--	--	< 3.4	< 3.4	< 3.4	< 6.8	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 6.8	< 14	ND	--	--
	SB54-5	5.0	2/2/2016	--	--	< 3.3	< 3.3	< 3.3	< 6.5	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 6.5	< 13	ND	--	--
SB55	SB55-0.5	0.5	2/2/2016	--	--	< 3.7	< 3.7	< 3.7	< 7.4	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 7.4	< 15	ND	--	--
	SB55-5.5	5.0	2/2/2016	--	--	< 4.6	**300 >LR b**	**56**	**60**	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 9.1	**35 b**	ND	--	--
	SB55-10	10.0	2/2/2016	--	--	< 810	**24,000**	**8,300**	< 1,600	< 810	< 810	< 810	< 810	< 810	< 810	< 1,600	< 3,200	ND	--	--
SB56	SB56-10	10.0	2/4/2016	--	--	< 4.2	< 4.2	< 4.2	< 8.4	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	**16**	**69**	ND	--	--
	SB56-13	13.0	2/4/2016	--	--	< 390	< 390	< 390	< 780	< 390	< 390	< 390	< 390	< 390	< 390	< 780	< 1,600	**620 (p-IT)**	--	--
SB57	SB57-10	10.0	2/4/2016	--	--	< 3.8	< 3.8	< 3.8	< 7.6	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 7.6	**21 b**	ND	--	--
	SB57-12.5	12.5	2/4/2016	--	--	< 350	< 350	< 350	< 710	< 350	< 350	< 350	< 350	< 350	< 350	< 710	< 1,400	ND	--	--
SB58	SB58-0.5	0.5	2/3/2016	--	--	< 3.5	< 3.5	< 3.5	< 7	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7	< 14	ND	--	--
	SB58-5	5.0	2/3/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.1	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	**8.5**	**36 b**	ND	--	--
SB59	SB59-0.5	0.5	2/3/2016	--	--	< 3.0	< 3.0	< 3.0	< 6.1	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 6.1	< 12	ND	--	--
	SB59-5	5.0	2/3/2016	--	--	< 3.7	**130**	**19**	**38**	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 7.4	**19 b**	ND	--	--
	SB59-10	10.0	2/3/2016	--	--	**20,000**	**73,000**	**81,000**	**14,000**	< 2,900	< 2,900	< 2,900	< 2,900	< 2,900	< 2,900	< 5,900	< 12,000	ND	--	--
	SB59-13.5	13.5	2/3/2016	--	--	< 3.4	**99**	**3.6**	**26**	< 3.4	< 3.4	< 3.4	**20**	**7.5**	< 3.4	< 6.9	< 14	**4.1 (1,2,4-TMB)**	--	--
SB60	SB60-0.5	0.5	2/3/2016	--	--	< 3.5	< 3.5	< 3.5	< 7	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7	< 14	ND	--	--
	SB60-5	5.0	2/3/2016	--	--	< 3.2	< 3.2	< 3.2	< 6.3	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	< 6.3	< 13	ND	--	--
SB61	SB61-0.5	0.5	2/3/2016	--	--	< 3.5	< 3.5	< 3.5	< 7	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7	< 14	ND	--	--
	SB61-5	5.0	2/3/2016	--	--	< 3.9	< 3.9	< 3.9	< 7.7	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 7.7	**18 b**	ND	--	--
	SB61-10	10.0	2/3/2016	--	--	< 1,200	< 1,200	< 1,200	< 2,500	< 1,200	< 1,200	< 1,200	< 1,200	< 1,200	**9,200**	< 2,500	< 4,900	**1,300 (PB)**	--	--
	SB61-12.5	12.5	2/3/2016	--	--	< 440	< 440	< 440	< 890	< 440	< 440	< 440	< 440	< 440	**1,800**	< 890	< 1,800	ND	--	--
SV6	SV6-0.5	0.5	12/1/2015	**2.2**	< 50	--	--	--	--	--	--	--	--	--	< 67	--	--	ND	< 0.067	--
SV8	SV8-0.5	0.5	12/3/2015	**7.2**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SV10	SV10-0.5	0.5	12/1/2015	**7.4**	< 50	--	--	--	--	--	--	--	--	--	< 66	--	--	ND	< 0.066	--
SV14	SV14-0.5	0.5	12/1/2015	**4.8**	< 50	--	--	--	--	--	--	--	--	--	< 67	--	--	ND	< 0.067	--
SV16	SV16-0.5	0.5	12/1/2015	**130**	**380**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	< 49
SV20	SV20-0.5	0.5	11/30/2015	**34**	**98**	--	--	--	--	--	--	--	--	--	< 330	--	--	ND	< 0.33	--
SV22	SV22-0.5	0.5	11/30/2015	**6.6**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SV32	SV32-1.0	1.0	11/30/2015	**38**	**160**	--	--	--	--	--	--	--	--	--	< 330	--	--	ND	< 0.33	**1,800 H**
	SV32-7.0	7.0	11/30/2015	**780**	**5,300**	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	--	--	< 8.1	--	< 41	ND	< 3.3	**890 H**

Table 4
Summary of Soil Analytical Results - Petroleum Hydrocarbons, VOCs, SVOCs, and PCBs
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	TPHd (mg/Kg)	TPHmo (mg/Kg)	TCE (µg/Kg)	cis-1,2-DCE (µg/Kg)	trans-1,2-DCE (µg/Kg)	Vinyl chloride (µg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	m,p-Xylenes (µg/Kg)	o-Xylenes (µg/Kg)	Naphthalene (µg/Kg)	MEK (µg/Kg)	Acetone (µg/Kg)	Other VOCs (µg/Kg)	Phenol (mg/Kg)	PCB-1260 (µg/Kg)
SV33	SV33-0.5	0.5	11/30/2015	**130**	**410**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**4,000 H**
	SV33-4.5	4.5	11/30/2015	**230**	**1,000**	< 4	< 4	< 4	< 4	< 4	< 4	< 4	--	--	< 8	--	**47**	ND	--	**860 H**
SV38	SV38-1.0	1.0	11/30/2015	**29**	**83**	--	--	--	--	--	--	--	--	--	< 130	--	--	ND	**0.70**	--
SV43	SV43-1.0	1.0	11/30/2015	**3.7**	< 50	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
SV45	SV45-1.0	1.0	11/30/2015	**130**	**600**	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	**6,900 H**
SV47	SV47-1.5	1.5	12/3/2015	**7.3**	< 49	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--
	SV47-2.5	2.5	12/3/2015	**16**	< 50	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	--	--	< 7.5	--	< 37	ND	--	--
SV50	SV50-0.5	0.5	2/2/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.1	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 7.1	< 14	ND	--	--
	SV50-4.5	4.5	2/2/2016	--	--	< 3.5	< 3.5	< 3.5	< 7.1	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7.1	**27**	ND	--	--
SV51	SV51-0.5	0.5	2/2/2016	--	--	< 4.0	< 4.0	< 4.0	< 7.9	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 7.9	< 16	ND	--	--
	SV51-5	5.0	2/2/2016	--	--	< 3.8	< 3.8	< 3.8	< 7.6	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	**7.8**	**34**	ND	--	--
SV52	SV52-0.5	0.5	2/2/2016	--	--	< 3.8	< 3.8	< 3.8	< 7.7	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 7.7	< 15	ND	--	--
	SV52-5	5.0	2/2/2016	--	--	< 3.7	< 3.7	< 3.7	< 7.3	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7	**4**	< 7.3	**16**	ND	--	--
SV53	SV53-0.5	0.5	2/2/2016	--	--	< 3.3	< 3.3	< 3.3	< 6.6	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 6.6	< 13	ND	--	--
	SV53-5	5.0	2/2/2016	--	--	< 3.2	< 3.2	< 3.2	< 6.4	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	< 6.4	**18**	ND	--	--
SV54	SV54-0.5	0.5	2/4/2016	--	--	< 3.3	< 3.3	< 3.3	< 6.7	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3	< 6.7	< 13	ND	--	--
	SV54-5	5.0	2/4/2016	--	--	< 4.3	< 4.3	< 4.3	< 8.6	< 4.3	< 4.3	< 4.3	< 4.3	< 4.3	< 4.3	< 8.6	**40**	ND	--	--
SV55	SV55-0.5	0.5	2/2/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.1	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 7.1	< 14	ND	--	--
	SV55-5	5.0	2/2/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.1	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 7.1	< 14	ND	--	--
SV56	SV56-0.5	0.5	2/2/2016	--	--	< 3.5	< 3.5	< 3.5	< 7.1	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7.1	< 14	ND	--	--
	SV56-5	5.0	2/2/2016	--	--	< 4.2	< 4.2	< 4.2	< 8.3	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 8.3	**23 b**	ND	--	--
SV57	SV57-0.5	0.5	2/2/2016	--	--	< 3.9	< 3.9	< 3.9	< 7.8	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9	< 7.8	< 16	ND	--	--
	SV57-5	5.0	2/2/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.2	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 7.2	< 14	ND	--	--
SV58	SV58-0.5	0.5	2/3/2016	--	--	< 4.2	< 4.2	< 4.2	< 8.3	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 8.3	< 17	ND	--	--
	SV58-5	5.0	2/3/2016	--	--	< 3.6	< 3.6	< 3.6	< 7.3	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 7.3	**20 b**	ND	--	--
	SV58-10	10.0	2/3/2016	--	--	< 4	< 4	< 4	< 8	< 4	< 4	< 4	< 4	< 4	< 4	< 8	< 16	ND	--	--
SV60	SV60-0.5	0.5	2/3/2016	--	--	< 3.5	< 3.5	< 3.5	< 7.1	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7.1	< 14	ND	--	--
	SV60-5	5.0	2/3/2016	--	--	< 3.5	< 3.5	< 3.5	< 7.1	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 7.1	< 14	ND	--	--
	SV60-10	10.0	2/3/2016	--	--	**600**	**13,000**	**5,800**	**3,300**	< 400	< 400	< 400	**530**	**710**	**890**	< 800	< 1,600	**2,700 (1,2,4-TMB), 2,600 (1,3,5-TMB), 430 (IPB), 590 (p-IT), 650 (PB), 610 (sec-BB)**	--	--
SV61	SV61-0.5	0.5	2/1/2016	--	--	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	--	--	< 7.1	--	< 35	ND	--	--
	SV61-5	5.0	2/1/2016	--	--	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	--	--	< 7.6	--	< 38	ND	--	--
	SV61-10	10.0	2/1/2016	--	--	< 3.5	< 3.5	< 3.5	**14**	**5.2**	**26**	**16**	**13**	**26**	**17**	**12**	**43**	**1,900 >LR b (1,2,4-TMB), 340 >LR b (1,3,5-TMB), 450 >LR b (IPB), 130 (n-BB), 220 >LR b (p-IT), 450 >LR b (PB), 210 >LR b (sec-BB), 39 (tert-BB)**	--	--
Tier 2 Residential Land Use ESL (Shallow Soil)				*230* [1]	*5,100* [3]	*510* [3]	*3,500* [3]	*39,000* [3]	*8.2* [3]	*49* [3]	*9,300* [3]	*1,400* [3]	*11,000* [3]	*11,000* [3]	*1,800* [1]	*13,000* [3]	*500* [3]	Varies	*8.8* [3]	*250* [6]
Construction Worker Exposure ESL [2]				*850*	*31,000*	*22,000*	*84,000*	*530,000*	*3,400*	*24,000*	*3,900,000*	*480,000*	*2,300,000*	*2,300,000*	*76,000*	*130,000,000*	*250,000,000*	Varies	*94,000*	*5,600* [6]

Notes:
Detections are shown in bold. Results equal to or exceeding applicable regulatory screening levels are shaded.
Only detected analytes are summarized on table. Refer to Appendix C for laboratory report to access entire list of compounds analyzed.
VOCs = Volatile organic compounds.
SVOCs = Semi-volatile organic compounds
TPHd = Total petroleum hydrocarbons quantified as diesel (C10-C28).
TPHmo = Total petroleum hydrocarbons quantified as motor oil (C24-C36).
TCE = Trichloroethene.
DCE = Dichloroethene.
IPB = Isopropylbenzene
p-IT = para-Isopropyl Toluene
PB = Propylbenzene
PCBs = Polychlorinated biphenyls
MEK = Methyl Ethyl Ketone
n-BB = n-Butylbenzene
sec-BB = sec-Butylbenzene
tert-BB = tert-Butylbenzene
TMB = Trimethylbenzene.
bgs = Below ground surface.
mg/kg = Milligrams per kilogram.
µg/kg = Micrograms per kilogram.
< 0.99 = Not detected at or above the indicated laboratory method reporting limit.
-- = Not applicable/not analyzed.
H = Sample was prepped or analyzed beyond the specified holding time.
E = Result exceeded calibration range.
ND = Not Detected.
>LR = Response exceeds instrument's linear range
b = High response was observed for acetone; see lab report for detailed explanation.
1. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-1: Direct Exposure Human Health Risk Levels, Residential: Shallow Soil Exposure
2. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-1: Soil Direct Exposure Human Health Risk Screening Levels, Any Land Use, Construction Worker Shallow and Deep Soil Exposure Scenario.
3. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-2: Soil Leaching to Groundwater Screening Levels, Final Soil Leaching Screening Levels, Non-Drinking Water Resources.
4. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-4: Soil Odor Nuisance Screening Levels, Residential Land Use, Shallow Soil Exposure Scenario.
5. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table S-3: Soil Gross Contamination Level.
6. Screening level is for total PCBs.



Explanation

- Approximate Property Boundary
- Assumed Former Drain Line Location
- Approximate Location of Existing Sewer Line (queried where uncertain)
- SV7 — Soil Vapor Sampling Location (PES, Nov.-Dec. 2015)
- SB24 — Soil Sampling Location (PES, Nov.-Dec. 2015)
- SV33 — Soil Vapor and Soil Sampling Location
- Soil Sampling Location (PES, Feb. 2016)
- Soil Vapor Sampling Location (PES, Feb. 2016)
- Soil Vapor and Soil Sampling Location (PES, Feb. 2016)
- Soil and Grab Groundwater Sample Location (PES, Feb. 2016)
- SB- — Grab Groundwater Sample Location (PES, Feb. 2016)
- 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 - Destroyed (Environ, 2013)
- MW-6/B-6* — Well not found, assumed to be destroyed
- SSV1 — Sub-Slab Vapor Sampling Location (PES, April 2015)
- SV1 — Soil Vapor Sampling Location (PES, April 2015)
- 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)
- T2 — Historical Test Boring (Environ, 2013)
- SS-5 — Historical Confirmation Sample from Tank Excavation (Environ, 2013)

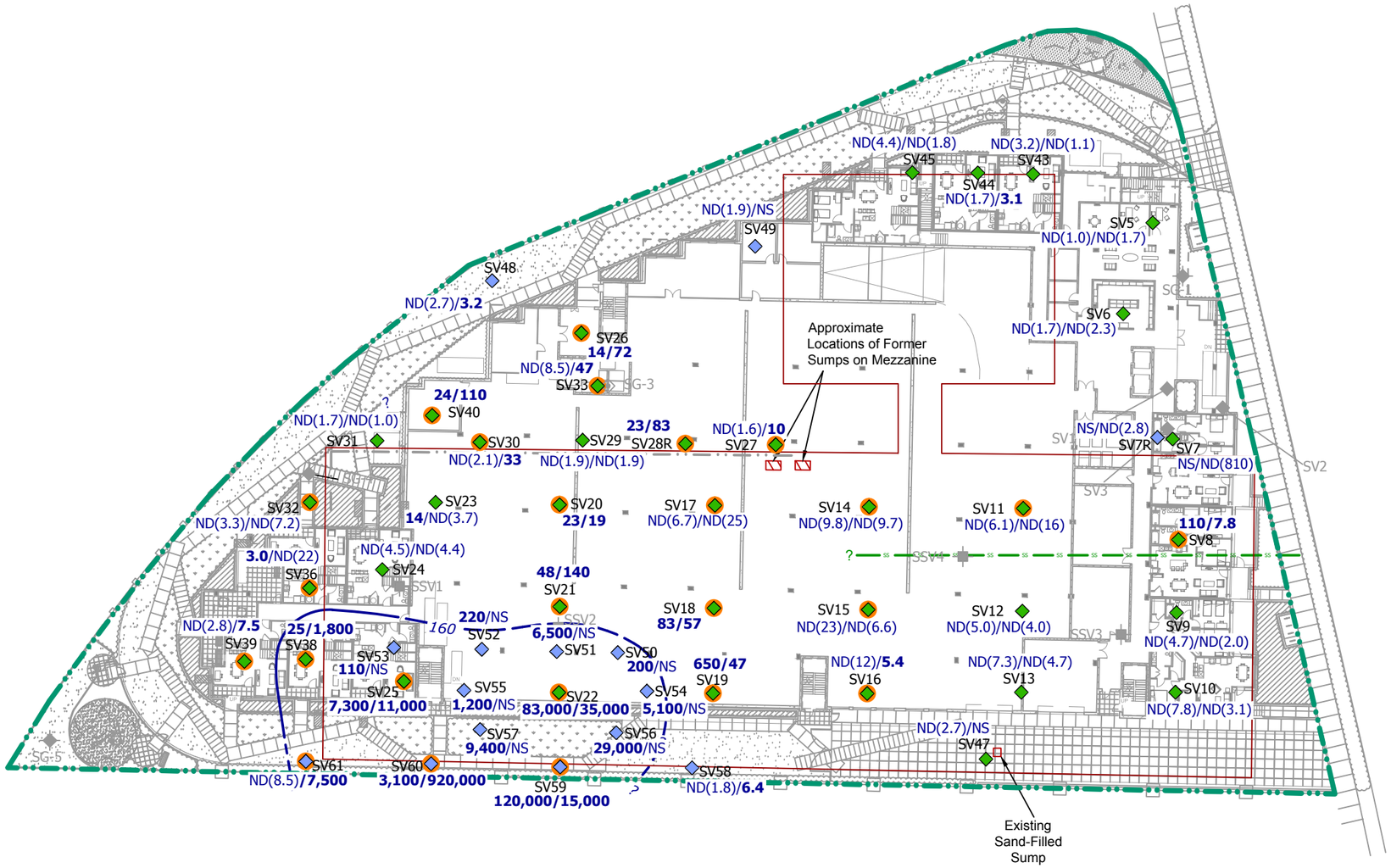
Basemap from ALTA/ACSM Land Title Survey (4/12/2013)

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan Showing Sample Locations
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 2

1448.001.01.009	144800101019_PCSIR-r1_1-2	CJB	4/16
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- Soil Vapor Sampling Location (PES, Feb 2016)
- SV7 — Soil Vapor Sampling Location (PES, Nov-Dec 2015)
- SG-5 — Soil, Soil Gas and Groundwater Sampling Location (Environ, 2013)
- SG-3 — Soil Gas and Soil Sampling Location (Environ, 2013)
- SV1 — Soil Vapor Sampling Location (PES, April 2015)
- SSV1 — Sub-Slab Vapor Sampling Location (PES, April 2015)
- Assumed Former Drain Line Location
- Approximate Location of Existing Sewer Line (queried where uncertain)
- Existing Building Outline
- Future Driveway - Grasscrete
- Future Driveway - Decomposed Granite
- Future Planter/Infiltration Gallery
- Future Concrete Walkway

83/57 Vinyl Chloride concentration at 5-feet and 10-feet below ground surface (ft bgs), respectively, shown in micrograms per cubic meter (µg/m^3)

ND(5.0) Not detected at or above the indicated laboratory reporting limit

NS Not Sampled

Detection or reporting limit exceeds residential Environmental Screening Level (ESL) for Soil Gas (4.7 µg/m^3)

160 Vinyl Chloride isoconcentration contour for soil vapor exceeding commercial ESL (160 µg/m^3) at 5 ft bgs in µg/m^3 (dashed where inferred)

Notes:
1. Sample depths for SV-15 are 5-ft and 8-ft bgs.

N

0 50

SCALE IN FEET

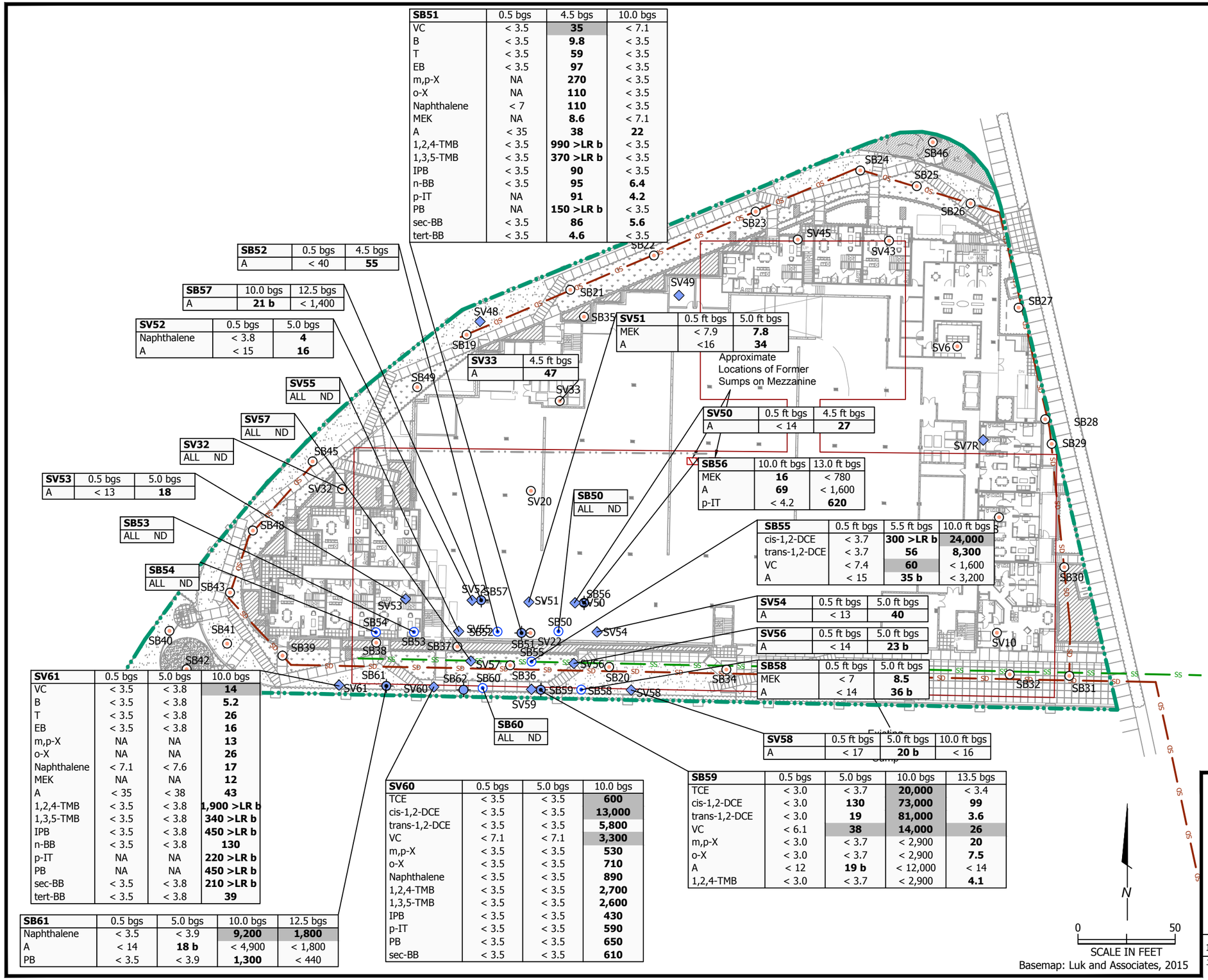
Basemap: Luk and Associates, 2015

PES Environmental, Inc.
Engineering & Environmental Services

Soil Vapor Sample Results and Isoconcentration Contours - Vinyl Chloride at 10 ft bgs
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
10B

1448.001.01.019144800101019_PCSIR-r1_8-15	CJB	4/16
JOB NUMBER DRAWING NUMBER	REVIEWED BY	DATE



SB51	0.5 bgs	4.5 bgs	10.0 bgs
VC	< 3.5	**35**	< 7.1
B	< 3.5	**9.8**	< 3.5
T	< 3.5	**59**	< 3.5
EB	< 3.5	**97**	< 3.5
m,p-X	NA	**270**	< 3.5
o-X	NA	**110**	< 3.5
Naphthalene	< 7	**110**	< 3.5
MEK	NA	**8.6**	< 7.1
A	< 35	**38**	**22**
1,2,4-TMB	< 3.5	**990 >LR b**	< 3.5
1,3,5-TMB	< 3.5	**370 >LR b**	< 3.5
IPB	< 3.5	**90**	< 3.5
n-BB	< 3.5	**95**	**6.4**
p-IT	NA	**91**	**4.2**
PB	NA	**150 >LR b**	< 3.5
sec-BB	< 3.5	**86**	**5.6**
tert-BB	< 3.5	**4.6**	< 3.5

SB52	0.5 bgs	4.5 bgs
A	< 40	**55**

SB57	10.0 bgs	12.5 bgs
A	**21 b**	< 1,400

SV52	0.5 bgs	5.0 bgs
Naphthalene	< 3.8	**4**
A	< 15	**16**

SV55
ALL ND

SV57
ALL ND

SV32
ALL ND

SV53	0.5 bgs	5.0 bgs
A	< 13	**18**

SB53
ALL ND

SB54
ALL ND

SV33	4.5 ft bgs
A	**47**

SV51	0.5 ft bgs	5.0 ft bgs
MEK	< 7.9	**7.8**
A	<16	**34**

Approximate Locations of Former Sumps on Mezzanine

SV50	0.5 ft bgs	4.5 ft bgs
A	< 14	**27**

SB56	10.0 ft bgs	13.0 ft bgs
MEK	**16**	< 780
A	**69**	< 1,600
p-IT	< 4.2	**620**

SB50
ALL ND

SB55	0.5 ft bgs	5.5 ft bgs	10.0 ft bgs
cis-1,2-DCE	< 3.7	**300 >LR b**	**24,000**
trans-1,2-DCE	< 3.7	**56**	**8,300**
VC	< 7.4	**60**	< 1,600
A	< 15	**35 b**	< 3,200

SV54	0.5 ft bgs	5.0 ft bgs
A	< 13	**40**

SV56	0.5 ft bgs	5.0 ft bgs
A	< 14	**23 b**

SB58	0.5 ft bgs	5.0 ft bgs
MEK	< 7	**8.5**
A	< 14	**36 b**

SV58	0.5 ft bgs	5.0 ft bgs	10.0 ft bgs
A	< 17	**20 b**	< 16

SV61	0.5 bgs	5.0 bgs	10.0 bgs
VC	< 3.5	< 3.8	**14**
B	< 3.5	< 3.8	**5.2**
T	< 3.5	< 3.8	**26**
EB	< 3.5	< 3.8	**16**
m,p-X	NA	NA	**13**
o-X	NA	NA	**26**
Naphthalene	< 7.1	< 7.6	**17**
MEK	NA	NA	**12**
A	< 35	< 38	**43**
1,2,4-TMB	< 3.5	< 3.8	**1,900 >LR b**
1,3,5-TMB	< 3.5	< 3.8	**340 >LR b**
IPB	< 3.5	< 3.8	**450 >LR b**
n-BB	< 3.5	< 3.8	**130**
p-IT	NA	NA	**220 >LR b**
PB	NA	NA	**450 >LR b**
sec-BB	< 3.5	< 3.8	**210 >LR b**
tert-BB	< 3.5	< 3.8	**39**

SB61	0.5 bgs	5.0 bgs	10.0 bgs	12.5 bgs
Naphthalene	< 3.5	< 3.9	**9,200**	**1,800**
A	< 14	**18 b**	< 4,900	< 1,800
PB	< 3.5	< 3.9	**1,300**	< 440

SV60	0.5 bgs	5.0 bgs	10.0 bgs
TCE	< 3.5	< 3.5	**600**
cis-1,2-DCE	< 3.5	< 3.5	**13,000**
trans-1,2-DCE	< 3.5	< 3.5	**5,800**
VC	< 7.1	< 7.1	**3,300**
m,p-X	< 3.5	< 3.5	**530**
o-X	< 3.5	< 3.5	**710**
Naphthalene	< 3.5	< 3.5	**890**
1,2,4-TMB	< 3.5	< 3.5	**2,700**
1,3,5-TMB	< 3.5	< 3.5	**2,600**
IPB	< 3.5	< 3.5	**430**
p-IT	< 3.5	< 3.5	**590**
PB	< 3.5	< 3.5	**650**
sec-BB	< 3.5	< 3.5	**610**

SB60
ALL ND

SB59	0.5 bgs	5.0 bgs	10.0 bgs	13.5 bgs
TCE	< 3.0	< 3.7	**20,000**	< 3.4
cis-1,2-DCE	< 3.0	**130**	**73,000**	**99**
trans-1,2-DCE	< 3.0	**19**	**81,000**	**3.6**
VC	< 6.1	**38**	**14,000**	**26**
m,p-X	< 3.0	< 3.7	< 2,900	**20**
o-X	< 3.0	< 3.7	< 2,900	**7.5**
A	< 12	**19 b**	< 12,000	< 14
1,2,4-TMB	< 3.0	< 3.7	< 2,900	**4.1**

Explanation

- Approximate Property Boundary
- Soil Sampling Location (PES, Nov.-Dec. 2015)
- Soil Sampling Location (PES, Feb 2016)
- Soil Vapor and Soil Sampling Location (PES, Feb. 2016)
- Soil and Grab Groundwater Sample Location (PES, Feb 2016)
- Grab Groundwater Sample Location (PES, Feb 2016)
- Assumed Former Drain Line Location
- Existing Building Footprint
- Future Driveway - Grasscrete
- Future Driveway - Decomposed Granite
- Future Planter/Infiltration Gallery
- Future Concrete Walkway
- SS Future Sanitary Sewer Alignment
- SD Future Storm Sewer Alignment

Notes:

Detections are shown in bold. Results equal to or exceeding one or more applicable regulatory screening levels are shaded.
All results presented in micrograms per kilogram (µg/kg)
VOCs = Volatile organic compounds.
TCE = Trichloroethene.
DCE = Dichloroethene.
VC = Vinyl Chloride
B = Benzene
T = Toluene
EB = Ethylbenzene
m,p-X = m,p-Xylenes
o-X = o-Xylenes
MEK = Methyl ethyl ketone or 2-Butanone
A = Acetone
TMB = Trimethylbenzene.
IPB = Isopropylbenzene
n-BB = n-Butylbenzene
p-IT = para-Isopropyl Toluene
PB = Propylbenzene
sec-BB = sec-Butylbenzene
tert-BB = tert-Butylbenzene
bgs = Below ground surface.
< 0.99 = Not detected at or above the indicated laboratory method reporting limit.
NA = Not applicable/not analyzed.
>LR = Response exceeds instrument's linear range
b = High response was observed for acetone; see lab report for detailed explanation.

Basemap: Luk and Associates, 2015

PES Environmental, Inc.
Engineering & Environmental Services

Summary of Soil Analytical Results- Volatile Organic Compounds
Pre-Construction Subsurface Investigation Report
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 14

1448.001.01.019	144800101019_PCSIR-r1_8-15	CJB	4/16
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX B

ALAMEDA COUNTY PUBLIC WORKS AGENCY DRILLING PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

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

Application Approved on: 05/26/2017 By jamesy

Permit Numbers: W2017-0450
Permits Valid from 07/13/2017 to 07/14/2017

Application Id:	1494888943228	**City of Project Site:**	Emeryville
Site Location:	6701-6707 Shellmound Street		
Project Start Date:	05/30/2017	**Completion Date:**	05/31/2017
Assigned Inspector:	Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org		
Extension Start Date:	07/13/2017	**Extension End Date:**	07/14/2017
Extension Count:	1	**Extended By:**	jamesy

Applicant:	PES Environmental, Inc., - Christopher Baldassari 7665 Redwood Bl., Suite 200, Novato, CA 94945	**Phone:** 415-899-1600
Property Owner:	John Nady 870 harbour Way South, Richmond, CA 94804	**Phone:** 510-652-2411
Client:	Anton Evolve Emeryville, c/o Rachel Green 950 Tower Lane, Suite 1225, Foster City, CA 94404	**Phone:** 650-549-1607
Contact:	James Phillips	**Phone:** 415-899-1600 **Cell:** 415-250-2864

	Total Due:	$265.00
Receipt Number: WR2017-0250	**Total Amount Paid:**	$265.00
Payer Name : Christopher Baldassari	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 21 Boreholes
Driller: Environmental Control Associates - Lic #: 695970 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2017-0450	05/26/2017	08/28/2017	21	2.00 in.	10.00 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. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. 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.

6. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

7. 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.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. 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

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION (PROVIDED ON CD-ROM)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-29915-1
Client Project/Site: Anton Emeryville

For:
PES Environmental, Inc.
7665 Redwood Blvd
Suite 200
Novato, California 94945

Attn: Mr. Kyle Flory

Authorized for release by:
7/31/2017 4:57:45 PM

Lee Ann Heathcote, Project Manager II
(916)373-5600
leeann.heathcote@testamericainc.com

Table of Contents

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 320-29915-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative
320-29915-1

Receipt
The sample was received on 7/17/2017 6:20 PM; the sample arrived in good condition.

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

Air - GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Client Sample ID: SV68-8 **Lab Sample ID: 320-29915-1**

No Detections.

This Detection Summary does not include radiochemical test results.

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Client Sample ID: SV68-8
Date Collected: 07/14/17 07:32
Date Received: 07/17/17 18:20
Sample Container: Summa Canister 1L

Lab Sample ID: 320-29915-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.68		ppb v/v			07/24/17 22:40	1.71

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.7		ug/m3			07/24/17 22:40	1.71

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*07/24/17 22:40*	*1.71*
1,2-Dichloroethane-d4 (Surr)	*128*		*70 - 130*		*07/24/17 22:40*	*1.71*
Toluene-d8 (Surr)	*112*		*70 - 130*		*07/24/17 22:40*	*1.71*

Method: D1946 - Fixed Gases in Air (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		0.17		% v/v			07/19/17 10:24	1.71

Surrogate Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
320-29915-1	SV68-8	101	128	112
LCS 320-175624/5	Lab Control Sample	104	110	106
LCSD 320-175624/6	Lab Control Sample Dup	105	110	111
MB 320-175624/3	Method Blank	101	108	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-175624/3
Matrix: Air
Analysis Batch: 175624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40		ppb v/v			07/24/17 17:43	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0		ug/m3			07/24/17 17:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*07/24/17 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*07/24/17 17:43*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*07/24/17 17:43*	*1*

Lab Sample ID: LCS 320-175624/5
Matrix: Air
Analysis Batch: 175624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			20.0	19.8		ppb v/v		99	69 - 129		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			51	50.7		ug/m3		99	69 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 320-175624/6
Matrix: Air
Analysis Batch: 175624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride			20.0	20.0		ppb v/v		100	69 - 129	1	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride			51	51.2		ug/m3		100	69 - 129	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Method: D1946 - Fixed Gases in Air (GC)

Lab Sample ID: MB 320-174794/7
Matrix: Air
Analysis Batch: 174794

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		0.10		% v/v			07/19/17 08:27	1

Lab Sample ID: LCS 320-174794/5
Matrix: Air
Analysis Batch: 174794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Helium			16.5	17.9		% v/v		109	80 - 120		

Lab Sample ID: LCSD 320-174794/6
Matrix: Air
Analysis Batch: 174794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Helium			16.5	18.1		% v/v		109	80 - 120	1	20

QC Association Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Air - GC/MS VOA

Analysis Batch: 175624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-29915-1	SV68-8	Total/NA	Air	TO-15	
MB 320-175624/3	Method Blank	Total/NA	Air	TO-15	
LCS 320-175624/5	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-175624/6	Lab Control Sample Dup	Total/NA	Air	TO-15	

Air - GC VOA

Analysis Batch: 174794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-29915-1	SV68-8	Total/NA	Air	D1946	
MB 320-174794/7	Method Blank	Total/NA	Air	D1946	
LCS 320-174794/5	Lab Control Sample	Total/NA	Air	D1946	
LCSD 320-174794/6	Lab Control Sample Dup	Total/NA	Air	D1946	

Lab Chronicle

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Client Sample ID: SV68-8
Date Collected: 07/14/17 07:32
Date Received: 07/17/17 18:20

Lab Sample ID: 320-29915-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.71	250 mL	250 mL	175624	07/24/17 22:40	AP1	TAL SAC
Total/NA	Analysis	D1946		1.71	50 mL	50 mL	174794	07/19/17 10:24	AZ1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Laboratory: TestAmerica Sacramento

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Oregon	NELAP	10	4040	01-28-18

Method Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC
D1946	Fixed Gases in Air (GC)	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: PES Environmental, Inc.
Project/Site: Anton Emeryville

TestAmerica Job ID: 320-29915-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-29915-1	SV68-8	Air	07/14/17 07:32	07/17/17 18:20

[redacted] JP

CHAIN OF CUSTODY RECORD

177076

PES Environmental, Inc.
Engineering & Environmental Services
7665 Redwood Boulevard, Suite 200
Novato, California 94945
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Test America
JOB NUMBER: 1448.001.03.003
NAME / LOCATION: Anton Emeryville
PROJECT MANAGER: K. Flory / C. Baldassari

SAMPLERS: Chris Pollio
RECORDER: Chris Pollio

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	Sumt Start Vac	Sumt End Vac	DEPTH IN FEET (or ID)	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)	Vinyl Chloride by TO-15	Helium tracer by ASTM 1946D
17	07	14	0732	SV68-8	X									1	-30	-5	34000630								X	X


320-29915 Chain of Custody

NOTES

Turn Around Time: Standard

1.5°C

Page 1 of 1

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)	DATE 7/14/17	TIME 1410
RELINQUISHED BY: (Signature) 1515			RECEIVED BY: (Signature)	DATE 7/14/17	TIME 1515
RELINQUISHED BY: (Signature) 7/17/17	1820		RECEIVED BY: (Signature)	DATE 7/17/17	TIME 1820
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

Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-29915-1

Login Number: 29915
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento
Canister QC Certification
Batch Certification

Certification Type: TO-15 (SCAN)

Date Cleaned/Batch ID: D062917 320-29581

Date of QC: 7/3/17

Data File Number: MS9070318

320-29581 Chain of Custody

CANISTER ID NUMBERS

*	34000963	34000630	
	34001107	34001017	
	34001676	34000905	
	34001011	34000637	
	34000900	0322	
	34000944	0509	
	34001967	0325	
	34001104		

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

1st level Reviewed By: _____ Date: 7/10/17

2nd level Reviewed By: _____ Date: 7/21/17

Q:\FORMS\QA-814 BATCH CAN QC 20130729.DOC
QA-814

ERS 7/29/2013

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-29581-1

SDG No.:

Client Sample ID: 34000863 Lab Sample ID: 320-29581-1

Matrix: Air Lab File ID: MS9070318.D

Analysis Method: TO-15 Date Collected: 06/29/2017 00:00

Sample wt/vol: 500(mL) Date Analyzed: 07/04/2017 02:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 172197 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	ND		5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	0.15	J	0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-29581-1

SDG No.:

Client Sample ID: 34000863 Lab Sample ID: 320-29581-1

Matrix: Air Lab File ID: MS9070318.D

Analysis Method: TO-15 Date Collected: 06/29/2017 00:00

Sample wt/vol: 500(mL) Date Analyzed: 07/04/2017 02:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 172197 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	0.11	J	0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	ND		0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	ND		0.80	0.21
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-29581-1

SDG No.:

Client Sample ID: 34000863 Lab Sample ID: 320-29581-1

Matrix: Air Lab File ID: MS9070318.D

Analysis Method: TO-15 Date Collected: 06/29/2017 00:00

Sample wt/vol: 500(mL) Date Analyzed: 07/04/2017 02:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 172197 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		70-130
2037-26-5	Toluene-d8 (Surr)	102		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20170703-45005.b\MS9070318.D
Lims ID: 320-29581-A-1
Client ID: 34000863
Sample Type: Client
Inject. Date: 04-Jul-2017 02:17:30 ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 320-29581-A-1
Misc. Info.: 500 CAN CERT
Operator ID: SV Instrument ID: ATMS9

Method: \\ChromNA\Sacramento\ChromData\ATMS9\20170703-45005.b\TO15_ATMS9N.m
Limit Group: MSA - TO15 - ICAL
Last Update: 05-Jul-2017 10:47:26 Calib Date: 20-Jun-2017 19:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS9\20170621-44546.b\MS9062012.D

Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vanommens Date: 05-Jul-2017 10:47:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	12.320	12.321	-0.001	97	56161	4.00	
* 2 1,4-Difluorobenzene	114	14.407	14.407	0.000	96	223544	4.00	
* 3 Chlorobenzene-d5 (IS)	117	20.326	20.327	-0.001	89	139033	4.00	
$ 4 1,2-Dichloroethane-d4 (Sur	65	13.482	13.489	-0.007	97	92033	4.52	
$ 5 Toluene-d8 (Surr)	100	17.564	17.571	-0.007	98	103582	4.10	
$ 6 4-Bromofluorobenzene (Surr	174	22.249	22.255	-0.006	88	66923	3.63	
47 Methylene Chloride	49	8.889	8.889	0.000	25	2133	0.1148	
48 Carbon disulfide	76	8.950	8.944	0.006	94	4621	0.1453	

Reagents:

VAMSIS20_00016 Amount Added: 50.00 Units: mL Run Reagent

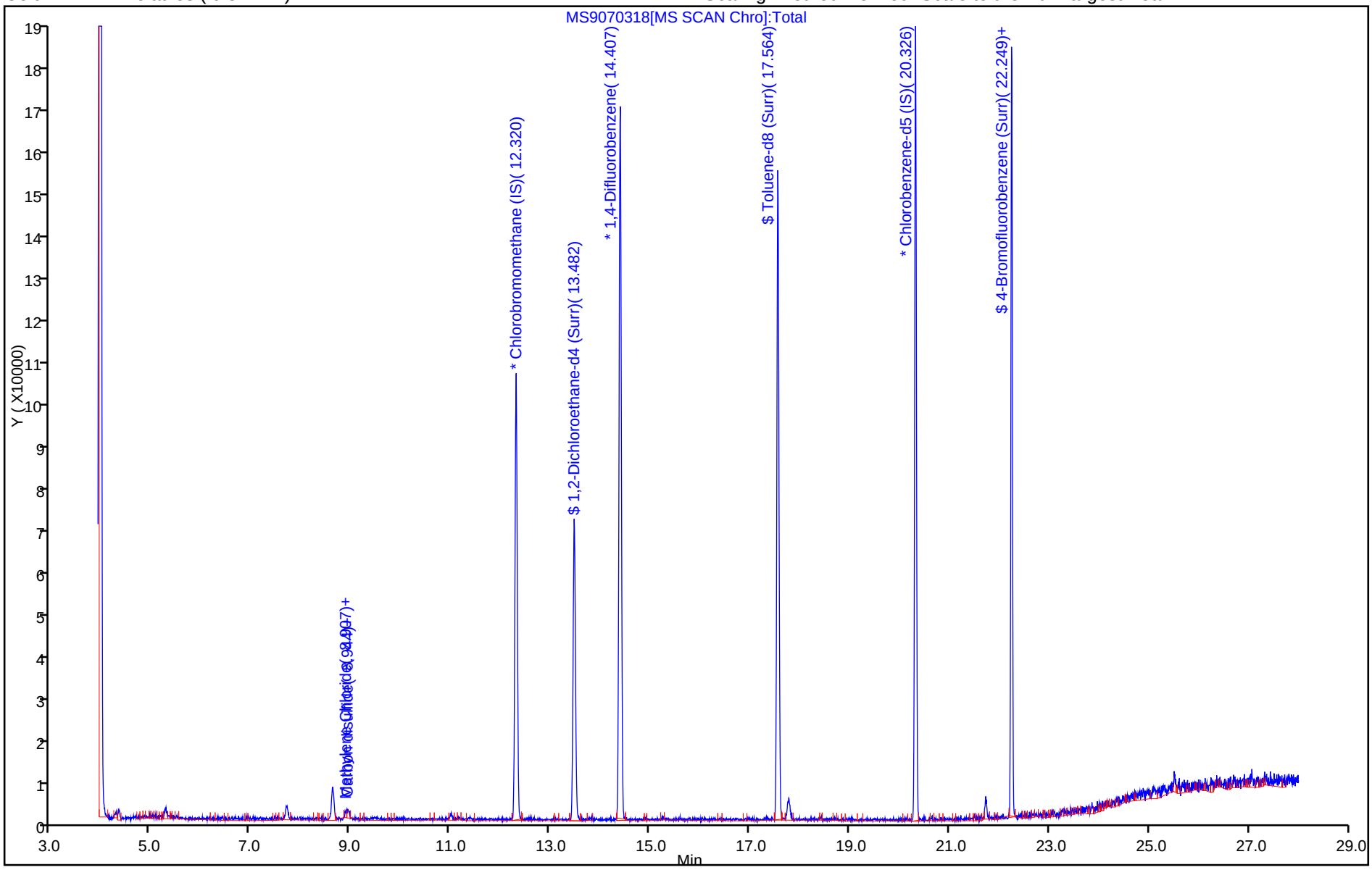
Report Date: 05-Jul-2017 10:47:27 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20170703-45005.b\MS9070318.D

Injection Date:	04-Jul-2017 02:17:30	Instrument ID:	ATMS9	Operator ID:	SV
Lims ID:	320-29581-A-1	Lab Sample ID:	320-29581-1	Worklist Smp#:	17
Client ID:	34000863				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	TO15_ATMS9N	Limit Group:	MSA - TO15 - ICAL		

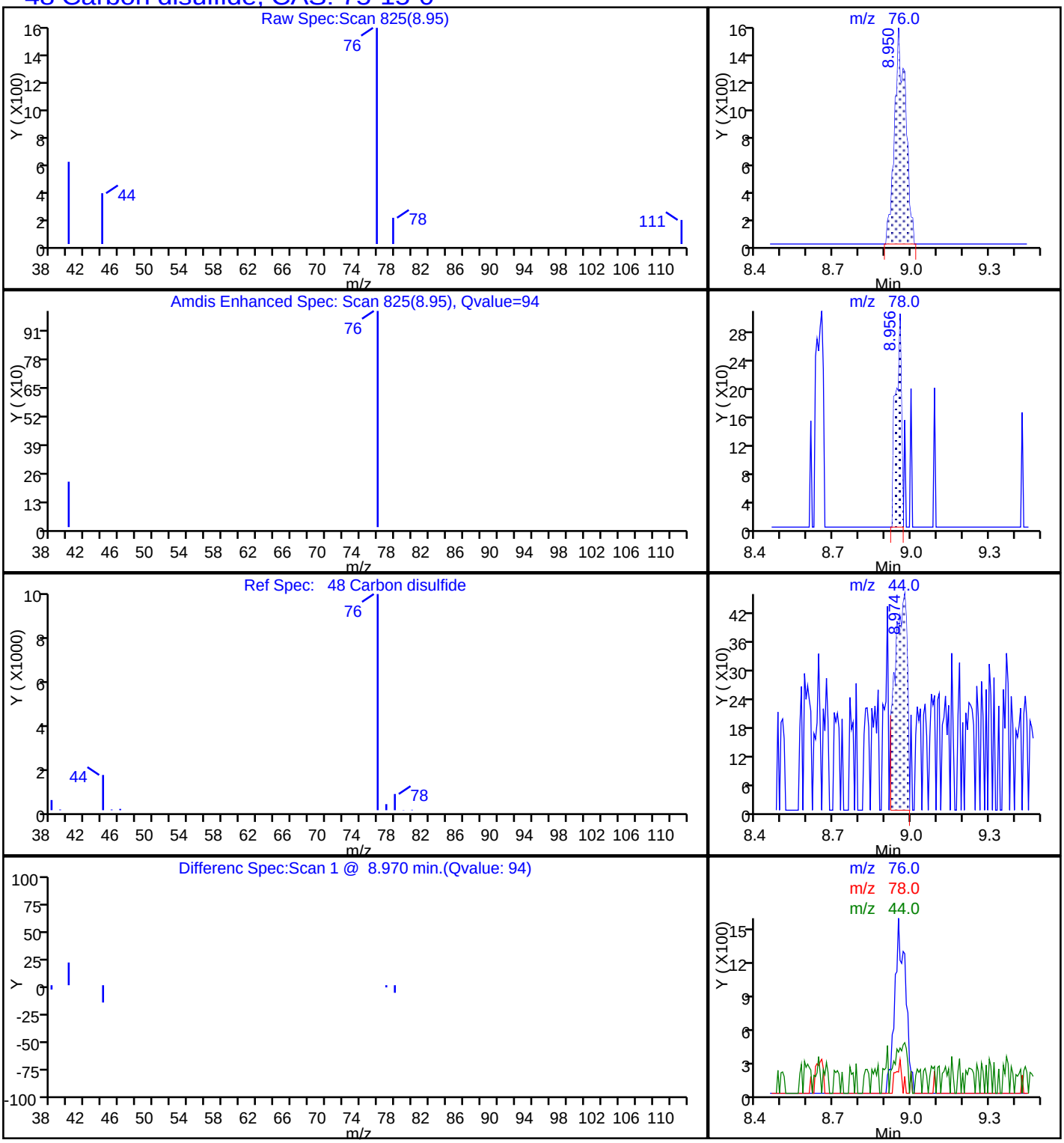
Column: RTX Volatiles (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Sacramento

Data File:	\\ChromNA\Sacramento\ChromData\ATMS9\20170703-45005.b\MS9070318.D				
Injection Date:	04-Jul-2017 02:17:30	Instrument ID:	ATMS9		
Lims ID:	320-29581-A-1	Lab Sample ID:	320-29581-1		
Client ID:	34000863				
Operator ID:	SV	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	TO15_ATMS9N	Limit Group:	MSA - TO15 - ICAL		
Column:	RTX Volatiles (0.32 mm)	Detector	MS SCAN		

48 Carbon disulfide, CAS: 75-15-0



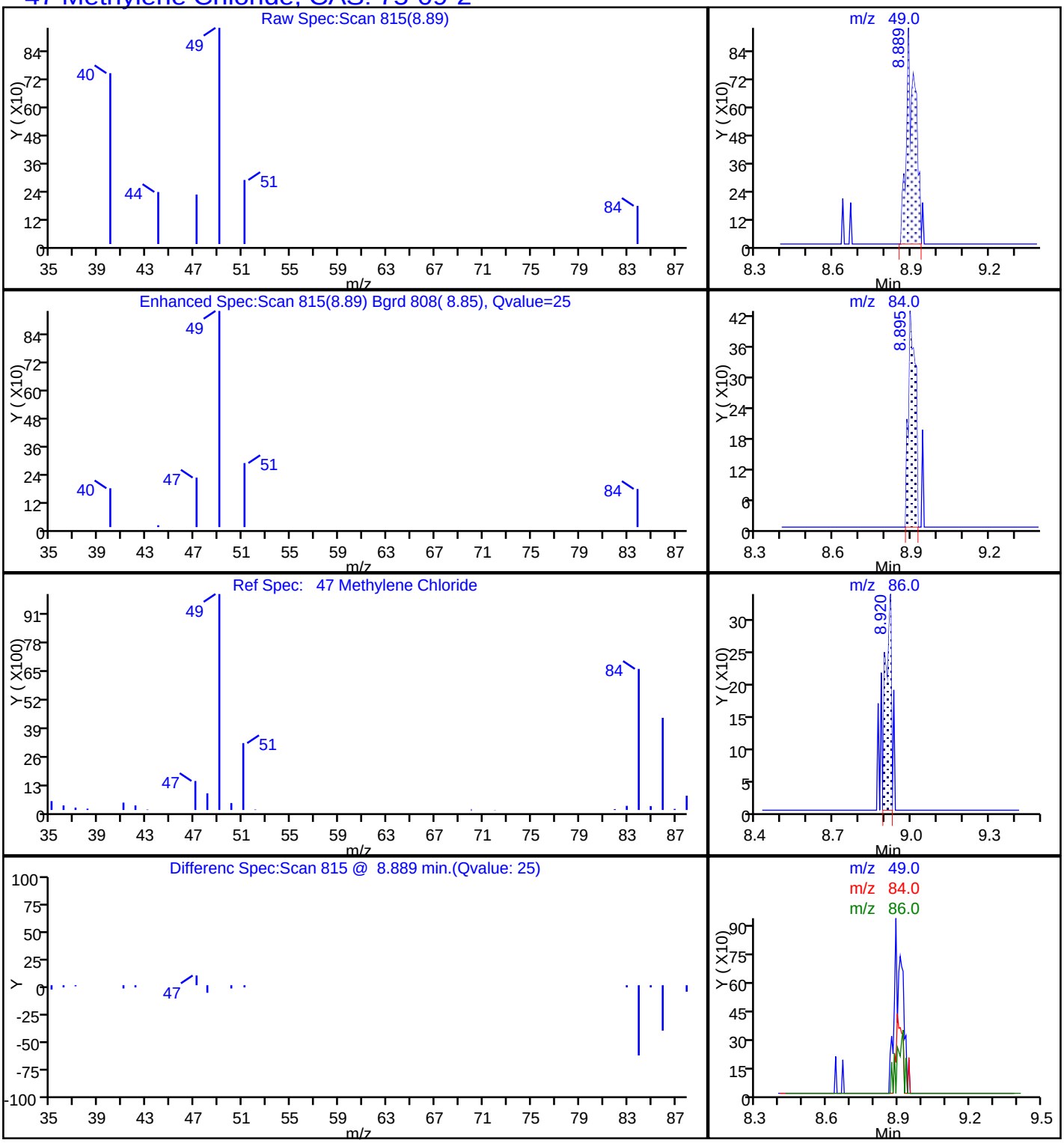
Report Date: 05-Jul-2017 10:47:27 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20170703-45005.b\MS9070318.D

Injection Date:	04-Jul-2017 02:17:30	Instrument ID:	ATMS9		
Lims ID:	320-29581-A-1	Lab Sample ID:	320-29581-1		
Client ID:	34000863				
Operator ID:	SV	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	TO15_ATMS9N	Limit Group:	MSA - TO15 - ICAL		
Column:	RTX Volatiles (0.32 mm)	Detector	MS SCAN		

47 Methylene Chloride, CAS: 75-09-2



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-80659-1
Client Project/Site: Anton EMeryville

For:
PES Environmental, Inc.
7665 Redwood Blvd
Suite 200
Novato, California 94945

Attn: Mr. Kyle Flory

Authorized for release by:
7/21/2017 3:41:56 PM

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Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-80659-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-80659-1

Comments
No additional comments.

Receipt
The samples were received on 7/13/2017 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

Receipt Exceptions

One of the 5mL DI water w/ stir bar VOAs for sample SB74-5 was received broken.

GC/MS VOA
Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 for the following samples were outside acceptance criteria: SB67-8.5 (720-80659-4), SB68-9 (720-80659-5), SB69-5 (720-80659-7), SB69-10 (720-80659-8), SB63-10 (720-80659-9), SB64-8 (720-80659-10) and SB76-5 (720-80659-13). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 and Chlorobenzene-d5 for the following sample was outside acceptance criteria: SB68-5 (720-80659-6). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for the following sample was outside control limits: SB77-5 (720-80659-14). The sample(s) was re-extracted and/or re-analyzed with concurring results, and the original set of data has been reported.

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

Detection Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB65-6 — Lab Sample ID: 720-80659-1

No Detections.

Client Sample ID: SB66-6 — Lab Sample ID: 720-80659-2

No Detections.

Client Sample ID: SB67-5 — Lab Sample ID: 720-80659-3

No Detections.

Client Sample ID: SB67-8.5 — Lab Sample ID: 720-80659-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	9.0		3.5		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB68-9 — Lab Sample ID: 720-80659-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	74		4.7		ug/Kg	1		8260B	Total/NA
trans-1,2-Dichloroethene	32		4.7		ug/Kg	1		8260B	Total/NA
Vinyl chloride	130		4.7		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB68-5 — Lab Sample ID: 720-80659-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	200		4.2		ug/Kg	1		8260B	Total/NA
trans-1,2-Dichloroethene	38		4.2		ug/Kg	1		8260B	Total/NA
Vinyl chloride	79		4.2		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB69-5 — Lab Sample ID: 720-80659-7

No Detections.

Client Sample ID: SB69-10 — Lab Sample ID: 720-80659-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	4.7		4.6		ug/Kg	1		8260B	Total/NA
Vinyl chloride	33		4.6		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB63-10 — Lab Sample ID: 720-80659-9

No Detections.

Client Sample ID: SB64-8 — Lab Sample ID: 720-80659-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.8		3.1		ug/Kg	1		8260B	Total/NA
Vinyl chloride	18		3.1		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB74-8.5 — Lab Sample ID: 720-80659-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	10		3.5		ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB74-5 — Lab Sample ID: 720-80659-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	9.6		3.5		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB76-5 — Lab Sample ID: 720-80659-13

No Detections.

Client Sample ID: SB77-5 — Lab Sample ID: 720-80659-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	56	*	3.4		ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB65-6
Date Collected: 07/13/17 10:50
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/19/17 00:44	1
Trichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/19/17 00:44	1
Vinyl chloride	ND		3.7		ug/Kg		07/13/17 17:36	07/19/17 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*45 - 131*	*07/13/17 17:36*	*07/19/17 00:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*120*		*60 - 140*	*07/13/17 17:36*	*07/19/17 00:44*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*07/13/17 17:36*	*07/19/17 00:44*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB66-6
Date Collected: 07/13/17 10:20
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:08	1
Trichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:08	1
Vinyl chloride	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*45 - 131*	*07/13/17 17:36*	*07/20/17 18:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*	*07/13/17 17:36*	*07/20/17 18:08*	*1*
Toluene-d8 (Surr)	*85*		*58 - 140*	*07/13/17 17:36*	*07/20/17 18:08*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB67-5
Date Collected: 07/13/17 09:30
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-3
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		4.1		ug/Kg		07/13/17 17:36	07/20/17 19:07	1
trans-1,2-Dichloroethene	ND		4.1		ug/Kg		07/13/17 17:36	07/20/17 19:07	1
Trichloroethene	ND		4.1		ug/Kg		07/13/17 17:36	07/20/17 19:07	1
Vinyl chloride	ND		4.1		ug/Kg		07/13/17 17:36	07/20/17 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*	*07/13/17 17:36*	*07/20/17 19:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*	*07/13/17 17:36*	*07/20/17 19:07*	*1*
Toluene-d8 (Surr)	*85*		*58 - 140*	*07/13/17 17:36*	*07/20/17 19:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB67-8.5
Date Collected: 07/13/17 09:35
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-4
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.5		ug/Kg		07/13/17 17:36	07/20/17 19:37	1
trans-1,2-Dichloroethene	ND		3.5		ug/Kg		07/13/17 17:36	07/20/17 19:37	1
Trichloroethene	ND		3.5		ug/Kg		07/13/17 17:36	07/20/17 19:37	1
Vinyl chloride	**9.0**		3.5		ug/Kg		07/13/17 17:36	07/20/17 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*45 - 131*	*07/13/17 17:36*	*07/20/17 19:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 140*	*07/13/17 17:36*	*07/20/17 19:37*	*1*
Toluene-d8 (Surr)	*85*		*58 - 140*	*07/13/17 17:36*	*07/20/17 19:37*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB68-9
Date Collected: 07/13/17 09:15
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-5
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**74**		4.7		ug/Kg		07/13/17 17:36	07/20/17 20:07	1
trans-1,2-Dichloroethene	**32**		4.7		ug/Kg		07/13/17 17:36	07/20/17 20:07	1
Trichloroethene	ND		4.7		ug/Kg		07/13/17 17:36	07/20/17 20:07	1
Vinyl chloride	**130**		4.7		ug/Kg		07/13/17 17:36	07/20/17 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*07/13/17 17:36*	*07/20/17 20:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*60 - 140*	*07/13/17 17:36*	*07/20/17 20:07*	*1*
Toluene-d8 (Surr)	*84*		*58 - 140*	*07/13/17 17:36*	*07/20/17 20:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB68-5
Date Collected: 07/13/17 09:10
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-6
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**200**		4.2		ug/Kg		07/13/17 17:36	07/20/17 20:37	1
trans-1,2-Dichloroethene	**38**		4.2		ug/Kg		07/13/17 17:36	07/20/17 20:37	1
Trichloroethene	ND		4.2		ug/Kg		07/13/17 17:36	07/20/17 20:37	1
Vinyl chloride	**79**		4.2		ug/Kg		07/13/17 17:36	07/20/17 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*77*	*	*45 - 131*	*07/13/17 17:36*	*07/20/17 20:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*07/13/17 17:36*	*07/20/17 20:37*	*1*
Toluene-d8 (Surr)	*81*		*58 - 140*	*07/13/17 17:36*	*07/20/17 20:37*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB69-5
Date Collected: 07/13/17 08:45
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-7
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:38	1
trans-1,2-Dichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:38	1
Trichloroethene	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:38	1
Vinyl chloride	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*	*07/13/17 17:36*	*07/20/17 18:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*07/13/17 17:36*	*07/20/17 18:38*	*1*
Toluene-d8 (Surr)	*84*		*58 - 140*	*07/13/17 17:36*	*07/20/17 18:38*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB69-10
Date Collected: 07/13/17 08:50
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-8
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		4.6		ug/Kg		07/13/17 17:36	07/20/17 21:07	1
trans-1,2-Dichloroethene	**4.7**		4.6		ug/Kg		07/13/17 17:36	07/20/17 21:07	1
Trichloroethene	ND		4.6		ug/Kg		07/13/17 17:36	07/20/17 21:07	1
Vinyl chloride	**33**		4.6		ug/Kg		07/13/17 17:36	07/20/17 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*68*		*45 - 131*	*07/13/17 17:36*	*07/20/17 21:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*	*07/13/17 17:36*	*07/20/17 21:07*	*1*
Toluene-d8 (Surr)	*84*		*58 - 140*	*07/13/17 17:36*	*07/20/17 21:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB63-10
Date Collected: 07/13/17 08:05
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-9
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		3.7		ug/Kg		07/13/17 17:36	07/20/17 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*07/13/17 17:36*	*07/20/17 21:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*	*07/13/17 17:36*	*07/20/17 21:37*	*1*
Toluene-d8 (Surr)	*85*		*58 - 140*	*07/13/17 17:36*	*07/20/17 21:37*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB64-8
Date Collected: 07/13/17 12:10
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-10
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4.8**		3.1		ug/Kg		07/13/17 17:36	07/20/17 22:07	1
Trichloroethene	ND		3.1		ug/Kg		07/13/17 17:36	07/20/17 22:07	1
Vinyl chloride	**18**		3.1		ug/Kg		07/13/17 17:36	07/20/17 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*84*		*45 - 131*	*07/13/17 17:36*	*07/20/17 22:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 140*	*07/13/17 17:36*	*07/20/17 22:07*	*1*
Toluene-d8 (Surr)	*82*		*58 - 140*	*07/13/17 17:36*	*07/20/17 22:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB74-8.5
Date Collected: 07/13/17 14:25
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-11
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	10		3.5		ug/Kg		07/13/17 17:36	07/20/17 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*45 - 131*	*07/13/17 17:36*	*07/20/17 22:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*60 - 140*	*07/13/17 17:36*	*07/20/17 22:37*	*1*
Toluene-d8 (Surr)	*86*		*58 - 140*	*07/13/17 17:36*	*07/20/17 22:37*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB74-5
Date Collected: 07/13/17 14:20
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-12
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	9.6		3.5		ug/Kg		07/13/17 17:36	07/20/17 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*45 - 131*	*07/13/17 17:36*	*07/20/17 17:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*60 - 140*	*07/13/17 17:36*	*07/20/17 17:38*	*1*
Toluene-d8 (Surr)	*85*		*58 - 140*	*07/13/17 17:36*	*07/20/17 17:38*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB76-5
Date Collected: 07/13/17 15:00
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-13
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		4.0		ug/Kg		07/13/17 17:36	07/20/17 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*78*	*	*45 - 131*	*07/13/17 17:36*	*07/20/17 23:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*07/13/17 17:36*	*07/20/17 23:07*	*1*
Toluene-d8 (Surr)	*82*		*58 - 140*	*07/13/17 17:36*	*07/20/17 23:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB77-5
Date Collected: 07/13/17 14:05
Date Received: 07/13/17 16:50

Lab Sample ID: 720-80659-14
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	56	*	3.4		ug/Kg		07/13/17 17:36	07/20/17 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*76*	*	*45 - 131*	*07/13/17 17:36*	*07/20/17 23:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*	*	*60 - 140*	*07/13/17 17:36*	*07/20/17 23:37*	*1*
Toluene-d8 (Surr)	*73*	*	*58 - 140*	*07/13/17 17:36*	*07/20/17 23:37*	*1*

Surrogate Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
720-80659-1	SB65-6	94	120	96
720-80659-2	SB66-6	90	90	85
720-80659-3	SB67-5	88	90	85
720-80659-4	SB67-8.5	85	89	85
720-80659-5	SB68-9	86	96	84
720-80659-6	SB68-5	77 *	92	81
720-80659-7	SB69-5	88	92	84
720-80659-8	SB69-10	68	90	84
720-80659-9	SB63-10	91	90	85
720-80659-10	SB64-8	84	91	82
720-80659-11	SB74-8.5	97	99	86
720-80659-12	SB74-5	93	93	85
720-80659-13	SB76-5	78 *	92	82
720-80659-14	SB77-5	76 *	108 *	73 *
LCS 720-226788/17	Lab Control Sample	104	100	108
LCS 720-226916/20	Lab Control Sample	96	80	89
LCSD 720-226788/18	Lab Control Sample Dup	106	103	109
LCSD 720-226916/21	Lab Control Sample Dup	98	82	90
MB 720-226788/16	Method Blank	104	107	106
MB 720-226916/6	Method Blank	99	82	89

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-226788/16
Matrix: Solid
Analysis Batch: 226788

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			07/18/17 20:08	1
Trichloroethene	ND		5.0		ug/Kg			07/18/17 20:08	1
Vinyl chloride	ND		5.0		ug/Kg			07/18/17 20:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*45 - 131*		*07/18/17 20:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 140*		*07/18/17 20:08*	*1*
Toluene-d8 (Surr)	*106*		*58 - 140*		*07/18/17 20:08*	*1*

Lab Sample ID: LCS 720-226788/17
Matrix: Solid
Analysis Batch: 226788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	49.5		ug/Kg		99	70 - 138
Trichloroethene	50.0	51.2		ug/Kg		102	70 - 133
Vinyl chloride	50.0	53.2		ug/Kg		106	58 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*108*		*58 - 140*

Lab Sample ID: LCSD 720-226788/18
Matrix: Solid
Analysis Batch: 226788

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	50.0	51.1		ug/Kg		102	70 - 138	3	20
Trichloroethene	50.0	50.6		ug/Kg		101	70 - 133	1	20
Vinyl chloride	50.0	54.5		ug/Kg		109	58 - 125	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*109*		*58 - 140*

Lab Sample ID: MB 720-226916/6
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
Trichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
Vinyl chloride	ND		5.0		ug/Kg			07/20/17 17:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-226916/6
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		45 - 131		07/20/17 17:08	1
1,2-Dichloroethane-d4 (Surr)	82		60 - 140		07/20/17 17:08	1
Toluene-d8 (Surr)	89		58 - 140		07/20/17 17:08	1

Lab Sample ID: LCS 720-226916/20
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	41.6		ug/Kg		83	70 - 138
trans-1,2-Dichloroethene	50.0	40.9		ug/Kg		82	67 - 130
Trichloroethene	50.0	39.6		ug/Kg		79	70 - 133
Vinyl chloride	50.0	48.6		ug/Kg		97	58 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	80		60 - 140
Toluene-d8 (Surr)	89		58 - 140

Lab Sample ID: LCSD 720-226916/21
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	50.0	41.6		ug/Kg		83	70 - 138	0	20
trans-1,2-Dichloroethene	50.0	40.9		ug/Kg		82	67 - 130	0	20
Trichloroethene	50.0	39.3		ug/Kg		79	70 - 133	1	20
Vinyl chloride	50.0	48.4		ug/Kg		97	58 - 125	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		45 - 131
1,2-Dichloroethane-d4 (Surr)	82		60 - 140
Toluene-d8 (Surr)	90		58 - 140

GC/MS VOA

Prep Batch: 226766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80659-1	SB65-6	Total/NA	Solid	5035	

Analysis Batch: 226788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80659-1	SB65-6	Total/NA	Solid	8260B	226766
MB 720-226788/16	Method Blank	Total/NA	Solid	8260B	
LCS 720-226788/17	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-226788/18	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 226842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80659-2	SB66-6	Total/NA	Solid	5035	
720-80659-3	SB67-5	Total/NA	Solid	5035	
720-80659-4	SB67-8.5	Total/NA	Solid	5035	
720-80659-5	SB68-9	Total/NA	Solid	5035	
720-80659-6	SB68-5	Total/NA	Solid	5035	
720-80659-7	SB69-5	Total/NA	Solid	5035	
720-80659-8	SB69-10	Total/NA	Solid	5035	
720-80659-9	SB63-10	Total/NA	Solid	5035	
720-80659-10	SB64-8	Total/NA	Solid	5035	
720-80659-11	SB74-8.5	Total/NA	Solid	5035	
720-80659-12	SB74-5	Total/NA	Solid	5035	
720-80659-13	SB76-5	Total/NA	Solid	5035	
720-80659-14	SB77-5	Total/NA	Solid	5035	

Analysis Batch: 226916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80659-2	SB66-6	Total/NA	Solid	8260B	226842
720-80659-3	SB67-5	Total/NA	Solid	8260B	226842
720-80659-4	SB67-8.5	Total/NA	Solid	8260B	226842
720-80659-5	SB68-9	Total/NA	Solid	8260B	226842
720-80659-6	SB68-5	Total/NA	Solid	8260B	226842
720-80659-7	SB69-5	Total/NA	Solid	8260B	226842
720-80659-8	SB69-10	Total/NA	Solid	8260B	226842
720-80659-9	SB63-10	Total/NA	Solid	8260B	226842
720-80659-10	SB64-8	Total/NA	Solid	8260B	226842
720-80659-11	SB74-8.5	Total/NA	Solid	8260B	226842
720-80659-12	SB74-5	Total/NA	Solid	8260B	226842
720-80659-13	SB76-5	Total/NA	Solid	8260B	226842
720-80659-14	SB77-5	Total/NA	Solid	8260B	226842
MB 720-226916/6	Method Blank	Total/NA	Solid	8260B	
LCS 720-226916/20	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-226916/21	Lab Control Sample Dup	Total/NA	Solid	8260B	

Client Sample ID: SB65-6
Lab Sample ID: 720-80659-1
Date Collected: 07/13/17 10:50
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226766	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226788	07/19/17 00:44	BAJ	TAL PLS

Client Sample ID: SB66-6
Lab Sample ID: 720-80659-2
Date Collected: 07/13/17 10:20
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 18:08	AP1	TAL PLS

Client Sample ID: SB67-5
Lab Sample ID: 720-80659-3
Date Collected: 07/13/17 09:30
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 19:07	AP1	TAL PLS

Client Sample ID: SB67-8.5
Lab Sample ID: 720-80659-4
Date Collected: 07/13/17 09:35
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 19:37	AP1	TAL PLS

Client Sample ID: SB68-9
Lab Sample ID: 720-80659-5
Date Collected: 07/13/17 09:15
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 20:07	AP1	TAL PLS

Client Sample ID: SB68-5
Lab Sample ID: 720-80659-6
Date Collected: 07/13/17 09:10
Matrix: Solid
Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 20:37	AP1	TAL PLS

Client Sample ID: SB69-5

Lab Sample ID: 720-80659-7

Date Collected: 07/13/17 08:45

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 18:38	AP1	TAL PLS

Client Sample ID: SB69-10

Lab Sample ID: 720-80659-8

Date Collected: 07/13/17 08:50

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 21:07	AP1	TAL PLS

Client Sample ID: SB63-10

Lab Sample ID: 720-80659-9

Date Collected: 07/13/17 08:05

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 21:37	AP1	TAL PLS

Client Sample ID: SB64-8

Lab Sample ID: 720-80659-10

Date Collected: 07/13/17 12:10

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 22:07	AP1	TAL PLS

Client Sample ID: SB74-8.5

Lab Sample ID: 720-80659-11

Date Collected: 07/13/17 14:25

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 22:37	AP1	TAL PLS

Client Sample ID: SB74-5

Lab Sample ID: 720-80659-12

Date Collected: 07/13/17 14:20

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 17:38	AP1	TAL PLS

Lab Chronicle

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Client Sample ID: SB76-5

Lab Sample ID: 720-80659-13

Date Collected: 07/13/17 15:00

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 23:07	AP1	TAL PLS

Client Sample ID: SB77-5

Lab Sample ID: 720-80659-14

Date Collected: 07/13/17 14:05

Matrix: Solid

Date Received: 07/13/17 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/13/17 17:36	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/20/17 23:37	AP1	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Accreditation/Certification Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2496	01-31-18

Method Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80659-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-80659-1	SB65-6	Solid	07/13/17 10:50	07/13/17 16:50
720-80659-2	SB66-6	Solid	07/13/17 10:20	07/13/17 16:50
720-80659-3	SB67-5	Solid	07/13/17 09:30	07/13/17 16:50
720-80659-4	SB67-8.5	Solid	07/13/17 09:35	07/13/17 16:50
720-80659-5	SB68-9	Solid	07/13/17 09:15	07/13/17 16:50
720-80659-6	SB68-5	Solid	07/13/17 09:10	07/13/17 16:50
720-80659-7	SB69-5	Solid	07/13/17 08:45	07/13/17 16:50
720-80659-8	SB69-10	Solid	07/13/17 08:50	07/13/17 16:50
720-80659-9	SB63-10	Solid	07/13/17 08:05	07/13/17 16:50
720-80659-10	SB64-8	Solid	07/13/17 12:10	07/13/17 16:50
720-80659-11	SB74-8.5	Solid	07/13/17 14:25	07/13/17 16:50
720-80659-12	SB74-5	Solid	07/13/17 14:20	07/13/17 16:50
720-80659-13	SB76-5	Solid	07/13/17 15:00	07/13/17 16:50
720-80659-14	SB77-5	Solid	07/13/17 14:05	07/13/17 16:50

720-80659

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PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

7665 Redwood Boulevard, Suite 200
Novato, California 94945
(415) 899-1600 FAX (415) 899-1601

7/21/2017

LABORATORY Test America

JOB NUMBER 1448.001.03.003

NAME / LOCATION Alton Emeryville

PROJECT MANAGER K. Flory, C. Baldassari

SAMPLERS Aaron Kalter, Chris Pollio

177-53

RECORDER AK, CP

	DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sediment	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	UPBw	MeOH	DEPTH IN FEET
1	17	07	13	1050	SB65-6			X							2	1	
2				1020	SB66-6			X							2	1	
3				0930	SB67-5			X							2	1	
4				0935	SB67-8.5			X							2	1	
5				0915	SB68-9			X							2	1	
6				0910	SB65-5			X							2	1	
7				0845	SB69-5			X							2	1	
8				0850	SB69-10			X							2	1	
9				0805	SB63-10			X							2	1	
10				1210	SB64-8			X							2	1	
11				1425	SB74-8.5			X							2	1	
12				1420	SB74-5			X							2	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)	Vinyl chloride by 8260B	Methylene chloride — CP	TCE by 8260B	cis-1,2-DCE by 8260B	trans-1,2-DCE by 8260B
								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	

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NOTES

Turn Around Time: Standard

720-80659 Chain of Custody

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CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY (Signature)	RECEIVED BY (Signature) Richard Moore	7/13/17	15:30
RELINQUISHED BY (Signature)	RECEIVED BY (Signature)	7/13/17	1650
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 3.8 °C

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

PES Environmental, Inc.
Engineering & Environmental Services
7665 Redwood Boulevard, Suite 200
Novato, California 94945
(415) 899-1600 FAX (415) 899-1601

CHAIN OF CUSTODY RECORD

177053

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7/21/2017

LABORATORY Test America

JOB NUMBER 1448.004.03.003

NAME / LOCATION Anton Emeryville

PROJECT MANAGER K. Flory / C. Baldissari

SAMPLERS Chris Pollio/Aaron Kalter

RECORDER Chris Pollio/Aaron Kalter

	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	UPDBW	MeOH	DEPTH IN FEET	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)	Vinyl Chloride by 8260B
2	17	07	13	1500	SB76-5			X							2	1									X	X
3	17	07	13	1405	SB77-5			X							2	1									X	X

NOTES

Turn Around Time. Standard

Page 2 of 2

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY (Signature)	RECEIVED BY (Signature) Richard Moodie	7/13/17	15:30
RELINQUISHED BY (Signature)	RECEIVED BY (Signature)	7/13/17	1650
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

Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 720-80659-1

Login Number: 80659

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-80682-1
Client Project/Site: Anton EMeryville

For:
PES Environmental, Inc.
7665 Redwood Blvd
Suite 200
Novato, California 94945

Attn: Mr. Kyle Flory

Authorized for release by:
7/24/2017 4:59:24 PM

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
afsaneh.salimpour@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
*	ISTD response or retention time outside acceptable limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-80682-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-80682-1

Comments
No additional comments.

Receipt
The samples were received on 7/14/2017 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C.

GC/MS VOA
Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 for the following samples were outside acceptance criteria: SB78-5 (720-80682-1) and SB71-5 (720-80682-4). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 and Chlorobenzene-d5 for the following samples were outside acceptance criteria: SB75-5 (720-80682-2) and SB75-10 (720-80682-3). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: Surrogate recovery for the following sample was outside the upper control limit: SB70-6.5 (720-80682-10). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

Detection Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB78-5 — Lab Sample ID: 720-80682-1

No Detections.

Client Sample ID: SB75-5 — Lab Sample ID: 720-80682-2

No Detections.

Client Sample ID: SB75-10 — Lab Sample ID: 720-80682-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	18		3.3		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB71-5 — Lab Sample ID: 720-80682-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	150		4.2		ug/Kg	1		8260B	Total/NA
trans-1,2-Dichloroethene	26		4.2		ug/Kg	1		8260B	Total/NA
Vinyl chloride	7.5		4.2		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB71-10 — Lab Sample ID: 720-80682-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	44		3.7		ug/Kg	1		8260B	Total/NA
trans-1,2-Dichloroethene	11		3.7		ug/Kg	1		8260B	Total/NA
Vinyl chloride	23		3.7		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB73-5 — Lab Sample ID: 720-80682-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	120		4.0		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB73-10 — Lab Sample ID: 720-80682-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	6600		380		ug/Kg	100		8260B	Total/NA

Client Sample ID: SB72-5 — Lab Sample ID: 720-80682-8

No Detections.

Client Sample ID: SB72-8 — Lab Sample ID: 720-80682-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.9		3.4		ug/Kg	1		8260B	Total/NA

Client Sample ID: SB70-6.5 — Lab Sample ID: 720-80682-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB78-5
Date Collected: 07/14/17 08:15
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		4.0		ug/Kg		07/14/17 16:35	07/21/17 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*	*07/14/17 16:35*	*07/21/17 01:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 140*	*07/14/17 16:35*	*07/21/17 01:07*	*1*
Toluene-d8 (Surr)	*83*		*58 - 140*	*07/14/17 16:35*	*07/21/17 01:07*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB75-5
Date Collected: 07/14/17 08:25
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		3.3		ug/Kg		07/14/17 16:35	07/21/17 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*	*	*45 - 131*	*07/14/17 16:35*	*07/21/17 01:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*	*07/14/17 16:35*	*07/21/17 01:37*	*1*
Toluene-d8 (Surr)	*81*		*58 - 140*	*07/14/17 16:35*	*07/21/17 01:37*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB75-10
Date Collected: 07/14/17 08:30
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-3
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	18		3.3		ug/Kg		07/14/17 16:35	07/21/17 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*	*	*45 - 131*	*07/14/17 16:35*	*07/21/17 02:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 140*	*07/14/17 16:35*	*07/21/17 02:06*	*1*
Toluene-d8 (Surr)	*81*		*58 - 140*	*07/14/17 16:35*	*07/21/17 02:06*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB71-5
Date Collected: 07/14/17 09:00
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-4
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**150**		4.2		ug/Kg		07/14/17 16:35	07/21/17 02:36	1
trans-1,2-Dichloroethene	**26**		4.2		ug/Kg		07/14/17 16:35	07/21/17 02:36	1
Trichloroethene	ND		4.2		ug/Kg		07/14/17 16:35	07/21/17 02:36	1
Vinyl chloride	**7.5**		4.2		ug/Kg		07/14/17 16:35	07/21/17 02:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*83*		*45 - 131*	*07/14/17 16:35*	*07/21/17 02:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*07/14/17 16:35*	*07/21/17 02:36*	*1*
Toluene-d8 (Surr)	*82*		*58 - 140*	*07/14/17 16:35*	*07/21/17 02:36*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB71-10
Date Collected: 07/14/17 09:05
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-5
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**44**		3.7		ug/Kg		07/14/17 16:35	07/21/17 02:23	1
trans-1,2-Dichloroethene	**11**		3.7		ug/Kg		07/14/17 16:35	07/21/17 02:23	1
Trichloroethene	ND		3.7		ug/Kg		07/14/17 16:35	07/21/17 02:23	1
Vinyl chloride	**23**		3.7		ug/Kg		07/14/17 16:35	07/21/17 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*45 - 131*	*07/14/17 16:35*	*07/21/17 02:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*125*		*60 - 140*	*07/14/17 16:35*	*07/21/17 02:23*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*07/14/17 16:35*	*07/21/17 02:23*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB73-5
Date Collected: 07/14/17 09:20
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-6
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	120		4.0		ug/Kg		07/14/17 16:35	07/21/17 02:51	1
Vinyl chloride	ND		4.0		ug/Kg		07/14/17 16:35	07/21/17 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*45 - 131*	*07/14/17 16:35*	*07/21/17 02:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*131*		*60 - 140*	*07/14/17 16:35*	*07/21/17 02:51*	*1*
Toluene-d8 (Surr)	*102*		*58 - 140*	*07/14/17 16:35*	*07/21/17 02:51*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB73-10
Date Collected: 07/14/17 09:25
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-7
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	6600		380		ug/Kg		07/14/17 16:35	07/22/17 15:54	100
Vinyl chloride	ND		380		ug/Kg		07/14/17 16:35	07/22/17 15:54	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*66 - 148*	*07/14/17 16:35*	*07/22/17 15:54*	*100*
1,2-Dichloroethane-d4 (Surr)	*80*		*62 - 137*	*07/14/17 16:35*	*07/22/17 15:54*	*100*
Toluene-d8 (Surr)	*90*		*65 - 141*	*07/14/17 16:35*	*07/22/17 15:54*	*100*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB72-5
Date Collected: 07/14/17 10:55
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-8
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.9		ug/Kg		07/14/17 16:35	07/21/17 03:46	1
trans-1,2-Dichloroethene	ND		3.9		ug/Kg		07/14/17 16:35	07/21/17 03:46	1
Trichloroethene	ND		3.9		ug/Kg		07/14/17 16:35	07/21/17 03:46	1
Vinyl chloride	ND		3.9		ug/Kg		07/14/17 16:35	07/21/17 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*45 - 131*	*07/14/17 16:35*	*07/21/17 03:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*		*60 - 140*	*07/14/17 16:35*	*07/21/17 03:46*	*1*
Toluene-d8 (Surr)	*98*		*58 - 140*	*07/14/17 16:35*	*07/21/17 03:46*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB72-8
Date Collected: 07/14/17 11:00
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-9
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3.9**		3.4		ug/Kg		07/14/17 16:35	07/21/17 04:14	1
trans-1,2-Dichloroethene	ND		3.4		ug/Kg		07/14/17 16:35	07/21/17 04:14	1
Trichloroethene	ND		3.4		ug/Kg		07/14/17 16:35	07/21/17 04:14	1
Vinyl chloride	ND		3.4		ug/Kg		07/14/17 16:35	07/21/17 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*	*07/14/17 16:35*	*07/21/17 04:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*123*		*60 - 140*	*07/14/17 16:35*	*07/21/17 04:14*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*07/14/17 16:35*	*07/21/17 04:14*	*1*

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB70-6.5
Date Collected: 07/14/17 12:30
Date Received: 07/14/17 15:15

Lab Sample ID: 720-80682-10
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		4.1		ug/Kg		07/14/17 16:35	07/21/17 04:42	1
Trichloroethene	ND		4.1		ug/Kg		07/14/17 16:35	07/21/17 04:42	1
Vinyl chloride	ND		4.1		ug/Kg		07/14/17 16:35	07/21/17 04:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*82*	*	*45 - 131*	*07/14/17 16:35*	*07/21/17 04:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*144*	*X*	*60 - 140*	*07/14/17 16:35*	*07/21/17 04:42*	*1*
Toluene-d8 (Surr)	*76*		*58 - 140*	*07/14/17 16:35*	*07/21/17 04:42*	*1*

Surrogate Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
720-80682-1	SB78-5	88	91	83
720-80682-2	SB75-5	88 *	103	81
720-80682-3	SB75-10	87 *	101	81
720-80682-4	SB71-5	83	92	82
720-80682-5	SB71-10	100	125	96
720-80682-6	SB73-5	95	131	102
720-80682-8	SB72-5	97	127	98
720-80682-9	SB72-8	96	123	96
720-80682-10	SB70-6.5	82 *	144 X	76
LCS 720-226916/20	Lab Control Sample	96	80	89
LCS 720-226949/16	Lab Control Sample	106	108	107
LCSD 720-226916/21	Lab Control Sample Dup	98	82	90
LCSD 720-226949/17	Lab Control Sample Dup	104	103	106
MB 720-226916/6	Method Blank	99	82	89
MB 720-226949/4	Method Blank	102	103	104

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(66-148)	(62-137)	(65-141)
720-80682-7	SB73-10	103	80	90
LCS 720-227036/5	Lab Control Sample	100	79	89
LCS 720-227036/7	Lab Control Sample	102	84	90
LCSD 720-227036/6	Lab Control Sample Dup	98	80	89
LCSD 720-227036/8	Lab Control Sample Dup	102	80	90
MB 720-227036/4	Method Blank	101	82	90

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-226916/6
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
Trichloroethene	ND		5.0		ug/Kg			07/20/17 17:08	1
Vinyl chloride	ND		5.0		ug/Kg			07/20/17 17:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*45 - 131*		*07/20/17 17:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 140*		*07/20/17 17:08*	*1*
Toluene-d8 (Surr)	*89*		*58 - 140*		*07/20/17 17:08*	*1*

Lab Sample ID: LCS 720-226916/20
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			50.0	41.6		ug/Kg		83	70 - 138		
trans-1,2-Dichloroethene			50.0	40.9		ug/Kg		82	67 - 130		
Trichloroethene			50.0	39.6		ug/Kg		79	70 - 133		
Vinyl chloride			50.0	48.6		ug/Kg		97	58 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*80*		*60 - 140*
Toluene-d8 (Surr)	*89*		*58 - 140*

Lab Sample ID: LCSD 720-226916/21
Matrix: Solid
Analysis Batch: 226916

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			50.0	41.6		ug/Kg		83	70 - 138	0	20
trans-1,2-Dichloroethene			50.0	40.9		ug/Kg		82	67 - 130	0	20
Trichloroethene			50.0	39.3		ug/Kg		79	70 - 133	1	20
Vinyl chloride			50.0	48.4		ug/Kg		97	58 - 125	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 140*
Toluene-d8 (Surr)	*90*		*58 - 140*

Lab Sample ID: MB 720-226949/4
Matrix: Solid
Analysis Batch: 226949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 19:29	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			07/20/17 19:29	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-226949/4
Matrix: Solid
Analysis Batch: 226949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.0		ug/Kg			07/20/17 19:29	1
Vinyl chloride	ND		5.0		ug/Kg			07/20/17 19:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*45 - 131*		*07/20/17 19:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*		*07/20/17 19:29*	*1*
Toluene-d8 (Surr)	*104*		*58 - 140*		*07/20/17 19:29*	*1*

Lab Sample ID: LCS 720-226949/16
Matrix: Solid
Analysis Batch: 226949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			50.0	54.9		ug/Kg		110	70 - 138		
trans-1,2-Dichloroethene			50.0	54.6		ug/Kg		109	67 - 130		
Trichloroethene			50.0	54.1		ug/Kg		108	70 - 133		
Vinyl chloride			50.0	53.8		ug/Kg		108	58 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*108*		*60 - 140*
Toluene-d8 (Surr)	*107*		*58 - 140*

Lab Sample ID: LCSD 720-226949/17
Matrix: Solid
Analysis Batch: 226949

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			50.0	53.4		ug/Kg		107	70 - 138	3	20
trans-1,2-Dichloroethene			50.0	54.4		ug/Kg		109	67 - 130	0	20
Trichloroethene			50.0	53.1		ug/Kg		106	70 - 133	2	20
Vinyl chloride			50.0	52.8		ug/Kg		106	58 - 125	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*106*		*58 - 140*

Lab Sample ID: MB 720-227036/4
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		500		ug/Kg			07/22/17 13:25	100
Vinyl chloride	ND		500		ug/Kg			07/22/17 13:25	100

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-227036/4
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		66 - 148		07/22/17 13:25	100
1,2-Dichloroethane-d4 (Surr)	82		62 - 137		07/22/17 13:25	100
Toluene-d8 (Surr)	90		65 - 141		07/22/17 13:25	100

Lab Sample ID: LCS 720-227036/5
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			5000	4100		ug/Kg		82	70 - 130		
Vinyl chloride			5000	1670		ug/Kg		33	10 - 118		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		66 - 148
1,2-Dichloroethane-d4 (Surr)	79		62 - 137
Toluene-d8 (Surr)	89		65 - 141

Lab Sample ID: LCS 720-227036/7
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		66 - 148
1,2-Dichloroethane-d4 (Surr)	84		62 - 137
Toluene-d8 (Surr)	90		65 - 141

Lab Sample ID: LCSD 720-227036/6
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			5000	4080		ug/Kg		82	70 - 130	0	20
Vinyl chloride			5000	1690		ug/Kg		34	10 - 118	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		66 - 148
1,2-Dichloroethane-d4 (Surr)	80		62 - 137
Toluene-d8 (Surr)	89		65 - 141

Lab Sample ID: LCSD 720-227036/8
Matrix: Solid
Analysis Batch: 227036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		66 - 148
1,2-Dichloroethane-d4 (Surr)	80		62 - 137
Toluene-d8 (Surr)	90		65 - 141

GC/MS VOA

Prep Batch: 226842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80682-1	SB78-5	Total/NA	Solid	5035	
720-80682-2	SB75-5	Total/NA	Solid	5035	
720-80682-3	SB75-10	Total/NA	Solid	5035	
720-80682-4	SB71-5	Total/NA	Solid	5035	
720-80682-5	SB71-10	Total/NA	Solid	5035	
720-80682-6	SB73-5	Total/NA	Solid	5035	
720-80682-8	SB72-5	Total/NA	Solid	5035	
720-80682-9	SB72-8	Total/NA	Solid	5035	
720-80682-10	SB70-6.5	Total/NA	Solid	5035	

Analysis Batch: 226916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80682-1	SB78-5	Total/NA	Solid	8260B	226842
720-80682-2	SB75-5	Total/NA	Solid	8260B	226842
720-80682-3	SB75-10	Total/NA	Solid	8260B	226842
720-80682-4	SB71-5	Total/NA	Solid	8260B	226842
MB 720-226916/6	Method Blank	Total/NA	Solid	8260B	
LCS 720-226916/20	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-226916/21	Lab Control Sample Dup	Total/NA	Solid	8260B	

Analysis Batch: 226949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80682-5	SB71-10	Total/NA	Solid	8260B	226842
720-80682-6	SB73-5	Total/NA	Solid	8260B	226842
720-80682-8	SB72-5	Total/NA	Solid	8260B	226842
720-80682-9	SB72-8	Total/NA	Solid	8260B	226842
720-80682-10	SB70-6.5	Total/NA	Solid	8260B	226842
MB 720-226949/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-226949/16	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-226949/17	Lab Control Sample Dup	Total/NA	Solid	8260B	

Analysis Batch: 227036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80682-7	SB73-10	Total/NA	Solid	8260B	227047
MB 720-227036/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-227036/5	Lab Control Sample	Total/NA	Solid	8260B	
LCS 720-227036/7	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-227036/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
LCSD 720-227036/8	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 227047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-80682-7	SB73-10	Total/NA	Solid	5035	

Client Sample ID: SB78-5
Lab Sample ID: 720-80682-1
Date Collected: 07/14/17 08:15
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/21/17 01:07	AP1	TAL PLS

Client Sample ID: SB75-5
Lab Sample ID: 720-80682-2
Date Collected: 07/14/17 08:25
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/21/17 01:37	AP1	TAL PLS

Client Sample ID: SB75-10
Lab Sample ID: 720-80682-3
Date Collected: 07/14/17 08:30
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/21/17 02:06	AP1	TAL PLS

Client Sample ID: SB71-5
Lab Sample ID: 720-80682-4
Date Collected: 07/14/17 09:00
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226916	07/21/17 02:36	AP1	TAL PLS

Client Sample ID: SB71-10
Lab Sample ID: 720-80682-5
Date Collected: 07/14/17 09:05
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226949	07/21/17 02:23	BAJ	TAL PLS

Client Sample ID: SB73-5
Lab Sample ID: 720-80682-6
Date Collected: 07/14/17 09:20
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226949	07/21/17 02:51	BAJ	TAL PLS

Lab Chronicle

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Client Sample ID: SB73-10

Lab Sample ID: 720-80682-7

Date Collected: 07/14/17 09:25
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			227047	07/14/17 16:35	SLP	TAL PLS
Total/NA	Analysis	8260B		100	227036	07/22/17 15:54	BAJ	TAL PLS

Client Sample ID: SB72-5

Lab Sample ID: 720-80682-8

Date Collected: 07/14/17 10:55
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226949	07/21/17 03:46	BAJ	TAL PLS

Client Sample ID: SB72-8

Lab Sample ID: 720-80682-9

Date Collected: 07/14/17 11:00
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226949	07/21/17 04:14	BAJ	TAL PLS

Client Sample ID: SB70-6.5

Lab Sample ID: 720-80682-10

Date Collected: 07/14/17 12:30
Matrix: Solid
Date Received: 07/14/17 15:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			226842	07/14/17 16:35	BAJ	TAL PLS
Total/NA	Analysis	8260B		1	226949	07/21/17 04:42	BAJ	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Accreditation/Certification Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2496	01-31-18

Method Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: PES Environmental, Inc.
Project/Site: Anton EMeryville

TestAmerica Job ID: 720-80682-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-80682-1	SB78-5	Solid	07/14/17 08:15	07/14/17 15:15
720-80682-2	SB75-5	Solid	07/14/17 08:25	07/14/17 15:15
720-80682-3	SB75-10	Solid	07/14/17 08:30	07/14/17 15:15
720-80682-4	SB71-5	Solid	07/14/17 09:00	07/14/17 15:15
720-80682-5	SB71-10	Solid	07/14/17 09:05	07/14/17 15:15
720-80682-6	SB73-5	Solid	07/14/17 09:20	07/14/17 15:15
720-80682-7	SB73-10	Solid	07/14/17 09:25	07/14/17 15:15
720-80682-8	SB72-5	Solid	07/14/17 10:55	07/14/17 15:15
720-80682-9	SB72-8	Solid	07/14/17 11:00	07/14/17 15:15
720-80682-10	SB70-6.5	Solid	07/14/17 12:30	07/14/17 15:15

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

177077

7665 Redwood Boulevard, Suite 200
Novato, California 94945
(415) 899-1600 FAX (415) 899-1601

LABORATORY Test America
JOB NUMBER 1448.001.03.003
NAME / LOCATION Anton Emeryville
PROJECT MANAGER K. Flory / C. Baldassari

SAMPLERS Chris Pollio

720-80682

RECORDER Chris Pollio

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	UPBW	MeOH	DEPTH IN FEET	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): Vinyl Chloride by 8260B	TCE by 8260B	cis-1,2-DCE by 8260B	trans-1,2-DCE by 8260B
17	07	14	0815	SB78-5			X							2	1									X	X	X
			0825	SB75-5			X							2	1									X	X	X
			0830	SB75-10			X							2	1									X	X	X
			0900	SB71-5			X							2	1									X	X	X
			0905	SB71-10			X							2	1									X	X	X
			0920	SB73-5			X							2	1									X	X	X
			0925	SB73-10			X							2	1									X	X	X
			1055	SB72-5			X							2	1									X	X	X
			1100	SB72-8			X							2	1									X	X	X
			1230	SB70-6.5			X							2	1									X	X	X

720-80682 Chain of Custody

7/24/2017

NOTES

Turn Around Time: Standard

1.5°

Page 1 of 1

CHAIN OF CUSTODY RECORD

RELINQUISHED BY (Signature)		RECEIVED BY (Signature)	DATE 7/14/17 TIME 1410
RELINQUISHED BY (Signature) 1515		RECEIVED BY (Signature) 1515	DATE 7/14/17 TIME
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

Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 720-80682-1

Login Number: 80682

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DISTRIBUTION

FOCUSED SOURCE AREA SOIL AND LIMITED SOIL VAPOR INVESTIGATION REPORT 6701, 6705, AND 6707 SHELLMOUND STREET EMERYVILLE, CALIFORNIA FUEL LEAK CASE NO. RO0000548 GEOTRACKER GLOBAL ID T0600100894

AUGUST 11, 2017

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3 Copies	PES Job Files	3 – 5
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