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October 5, 2016

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  
NORTHERN EXTANT ONSITE BUILDING 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 Northern Extant Onsite Building Investigation Report, 6701, 6705, and 6707 Shellmound Street, Emeryville, California dated October 5, 2016, prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-referenced document for the subject property are true and correct to the best of my knowledge.

Very truly yours,

ANTON EMERYVILLE, LLC



Rachel Green  
Development Manager



A Report Prepared For:

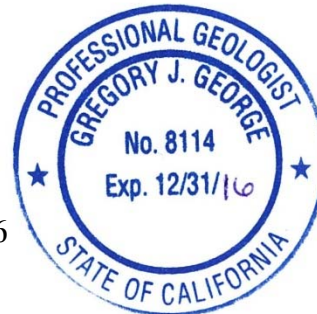
Anton Emeryville, LLC  
950 Tower Lane, Suite 1225  
Foster City, California 94404

**NORTHERN EXTANT ONSITE BUILDING INVESTIGATION REPORT  
6701, 6705, AND 6707 SHELLMOUND STREET  
EMERYVILLE, CALIFORNIA  
FUEL LEAK CASE NO. RO0000548  
GEOTRACKER GLOBAL ID T0600100894**

**OCTOBER 5, 2016**

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**1448.001.01.036**

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DISTRIBUTION

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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 supplemental subsurface investigation conducted beneath and in the immediate vicinity of the northern extant onsite building (Northern Investigation) located 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' *Work Plan for Supplemental Subsurface Investigation, Northern Extant Onsite Building* (Work Plan) dated June 23, 2016 (Reference No. 1448.001.01.034). The Work Plan was conditionally approved by Alameda County Environmental Health (ACEH) in correspondence dated July 18, 2016 (Appendix A).

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.

The site is also listed in the Leaking Underground Storage Tank (LUST) database under Mike Roberts Color Production (6707 Bay Street) due to the reported release from former underground storage tanks (USTs). The LUST case (ACEH fuel leak case number RO0000548) has been conditionally closed by ACEH under conditions associated with a deed notice.

PES is assisting Anton in working with ACEH to obtain SLIC case closure and understands Anton is seeking to acquire the site for redevelopment purposes. Redevelopment 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.

The objective of the Northern Investigation, which was conducted in September 2016, was to evaluate the subsurface for the potential presence of volatile organic compounds (VOCs) including; methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), and naphthalene as well as benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) related to historical deposition of fill material beneath the site or previous industrial activities conducted at the site. Furthermore, the Northern Investigation was conducted to further evaluate the subsurface for the presence of VOCs and BTEX to identify potential sources and provide data in support of developing or revising remedial or mitigation measures (e.g., previously presented in the Conceptual Site Model [CSM], Site Management Plan [SMP], and Human Health Risk Assessment [HHRA]) to address the VOCs and BTEX appropriate for the proposed development (PES, 2015a; PES 2015b; SLR, 2015). The results of this investigation will also be incorporated into a Corrective Action Plan (CAP) to be prepared for the Site. A CAP was requested by ACEH in a letter to Anton dated September 26, 2016 (ACEH, 2016)

## **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 (northern extant onsite building) and a warehouse building. 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 bound 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.

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 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 Site Geology and Hydrogeology**

Based on the results of investigations performed on the subject property and in the vicinity, the site is underlain by fill material overlying deposits of native silts and clays known locally as Old Bay Mud. The fill material ranges in thickness from approximately 10 to 19 feet and consists primarily of coarse-grained sands and gravels that contain varying amounts of fines, and fine-grained silts and clays. The fill material has been encountered throughout the site and is generally most abundant on the western half of the site and at depths below approximately 8 to 10 feet below ground surface (bgs). The fill material often 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 consisted of dark-colored clays and occasional silts with organic material that represent Old Bay Mud deposits.

Depth to groundwater varies locally but is generally shallow. Shallow groundwater at the site is present at depths ranging from approximately 8 to 13.5 feet bgs. Based on topography and the results of historical groundwater investigations performed at the site, the predominant groundwater flow direction beneath the site is to the south-southwest toward the San Francisco Bay with localized flow towards the west-northwest in the area of the former underground storage tanks (USTs) located in the eastern portion of the site.

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

## **2.4 Recent Environmental Investigations**

PES conducted pre-construction subsurface investigations at the site in November and December 2015 as well as February 2016. A detailed discussion of results, as well as redevelopment overview, may be found in PES' *Pre-Construction Subsurface Investigation Report* dated April 8, 2016.

## **3.0 INVESTIGATION METHODS**

On September 7 and September 12, 2016, soil vapor and soil sampling activities were conducted using direct push drilling methods at 6 locations at the site as shown on Plate 2. The primary components of the Northern Investigation included:

- Installing and sampling 6 temporary soil vapor probes (SV62 through SV67) beneath and in the immediate vicinity of the northern extant onsite building to evaluate soil vapor conditions at multiple depths (approximately 5 and 10 feet bgs); and
- Collecting companion soil samples from soil cores obtained at locations of the temporary soil vapor probes (SV62 through SV67) to characterize soil vapor conditions at multiple depths (approximately 5 and 10 feet bgs).

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, the 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 reviewed (PES, 2016c). 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 Sub-Surface Locators, Inc. of Milpitas, California was retained to clear the boring locations for subsurface utilities, and Osborne's Concrete Coring of Fremont, California was retained to core the concrete slab at interior sample locations.

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 probes and perform soil sampling.

### **3.2 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* (DTSC, 2015) (Advisory).

On September 7 and September 12, 2016, ECA utilized truck-mounted and track-mounted limited-access direct push drilling rigs to install a total of 6 temporary nested soil vapor probes (SV62 through SV67) at the site at depths of 5 and 10 feet bgs (Plate 2).

Soil cores were collected continuously and 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. Soil boring logs are presented in Appendix C.

Upon reaching the target depth of 10.25 feet bgs at each location, a new ceramic soil vapor probe was placed at approximately 10 feet bgs within a #2/12 sand pack extending 3 inches above and below the sampling interval, and attached to new ¼-inch diameter Nylaflo™ 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 8.75 and 5.25 feet bgs was filled with hydrated bentonite.

A shallower soil vapor probe was installed within the same borehole as the deeper probe at each soil vapor sampling location targeted for shallow soil vapor sampling. The shallow probe tip was placed at approximately 5 feet bgs within a #2/12 sand pack extending 3 inches above and below the sampling interval, and attached to new ¼-inch diameter Nylaflo™ tubing extending to ground surface. One-foot of dry granular bentonite was placed on top of the sand pack. The borehole annular space from approximately 3.75 feet bgs to ground surface was filled with hydrated bentonite. The upper end of the tubing for each probe was capped with a vapor-tight fitting and marked at the surface to identify the probe location and depth.



In accordance with the Advisory, each soil vapor probe was allowed to equilibrate with the surrounding formation for a minimum of two hours prior to purging and sampling. 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-H<sub>2</sub>O), 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. Observable vacuum loss was not noted at any of the sample locations.

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 a 6-L Summa™ canister.

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.

A total of 12 soil vapor samples were transported to TestAmerica Laboratories, Inc. (TestAmerica), a state-certified analytical laboratory, under chain-of-custody protocol for analysis for VOCs, including MEK, MIBK, and naphthalene using U.S. EPA Test Method TO-15 and helium, carbon dioxide, methane, and oxygen using ASTM Test Method D1946. Laboratory analytical reports and chain-of-custody documentation are presented in Appendix D.

Upon completion of soil vapor sampling activities, the probes and annular materials were removed to the total installed depth using a push drilling rig, 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 Sampling Activities**

On September 7 and September 12, 2016, ECA utilized truck-mounted and track-mounted limited-access direct push drilling rigs to advance 6 soil borings (SV62 through SV67) to depths of 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 submitted for analysis of volatile compounds were collected in accordance with U.S. EPA Method 5035 using Terracore™ samplers.

As described in Section 3.2, soil cores were periodically field-screened for volatile organics using a PID and recorded on the soil boring logs. PES observed the borehole drilling and prepared a lithologic log for the continuously cored borings using the USCS and Munsell Color Index. Soil boring logs are presented in Appendix C.

Upon completion of soil sampling activities, the sampler and rods were removed from the borehole and each boring was fitted with temporary soil vapor probes as described in Section 3.2.

### **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. A total of 12 soil samples were submitted for analysis for the following constituents:

- VOCs including MEK, MIBK, BTEX, and naphthalene by U.S. EPA Test Method 8260B.

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 sample. Upon completion of soil and soil vapor sampling activities, each borehole was grouted to the ground surface with neat cement grout in accordance with ACPWA requirements. 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 Northern Investigation activities are summarized below.

#### 4.1 Subsurface Physical Conditions

The Northern 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. 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 area of the investigation. Observations of site soil encountered during the investigation are consistent with the presence of artificial fill containing abundant quantities of debris.

Groundwater was not encountered within the total depth explored of 10 feet bgs during the Northern Investigation.

#### 4.2 Soil Vapor Analytical Results

Analytical results for the soil vapor samples are presented on Table 1. Soil vapor sampling locations are shown on Plate 2. Laboratory analytical reports and chain-of-custody documents for the soil vapor samples are presented in Appendix D. Soil vapor analytical results for the site were compared with California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) risk-based Environmental Screening Levels (ESLs) for soil gas for evaluation of potential vapor intrusion in a residential land use scenario (RWQCB, 2016). The ESLs were developed by the RWQCB to be protective of human health and the environment for potentially complete exposure pathways.

Primary VOCs detected in the soil vapor samples above laboratory reporting limits included: MEK; MIBK; acetone; BTEX compounds; 1,2,4-trimethylbenzene (TMB); 1,3,5-TMB; 4-ethyltoluene; trichloroethene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); carbon disulfide; and chloroform. However, only benzene and ethylbenzene were detected at levels in excess of applicable screening levels.

A summary of screening level comparisons for detected compounds exceeding ESLs is presented below:

- **Benzene:** Benzene was detected at concentrations ranging from 6.5  $\mu\text{g}/\text{m}^3$  (SV67-10) to 3,900  $\mu\text{g}/\text{m}^3$  (SV67-5). Five samples, including sample locations SV62-5, SV63-10, SV65-10, SV66-10, and SV67-5, yielded benzene detections above the soil gas ESL for residential land use (48  $\mu\text{g}/\text{m}^3$ ). All other reported concentrations of benzene were below the residential ESL. However, elevated laboratory reporting limits for benzene due to sample dilutions required as a result of elevated concentrations of other (non-target) VOCs was greater than benzene's ESL for residential land use at SV62-10. This elevated reporting limit of benzene was below the soil gas ESL for commercial land use (420  $\mu\text{g}/\text{m}^3$ ); and

- **Ethylbenzene:** Ethylbenzene was detected at concentrations ranging from 6.3  $\mu\text{g}/\text{m}^3$  (SV65-5) to 1,900  $\mu\text{g}/\text{m}^3$  (SV67-5). One sample (SV67-5) yielded ethylbenzene above the soil gas ESL for residential land use (560  $\mu\text{g}/\text{m}^3$ ). All other reported concentrations of ethylbenzene were below the residential ESL.

Data quality for the soil vapor samples was assessed by implementing appropriate QA/QC procedures and through review of analytical data, including analysis laboratory QA/QC data. The following is a summary of the data quality review:

- All samples were analyzed within the required holding times for the requested analyses;
- The method blanks did not contain VOCs at or above the laboratory reporting limits;
- The results of the laboratory control and laboratory control duplicate samples were within acceptable ranges;
- Residual canister vacuums required additional pressurization during analysis;
- The following samples were diluted due to the abundance of non-target analytes: SV62-10, SV63-10, and SV66-10. Elevated reporting limits were provided;
- Non-target compounds alpha-pinene, propene, propane, and butane were identified in samples SV62-10, SV63-10, and SV66-10; and
- Surrogate recovery for SV67-5 was outside control limits. High concentrations of target analytes were present, sample was analyzed at a dilution and elevated reporting limits were provided.

A summary of compounds with elevated reporting limits that exceed respective ESLs is presented below:

- **Naphthalene:** Reported concentrations of naphthalene were below the soil gas ESL for residential land use (41  $\mu\text{g}/\text{m}^3$ ). However, laboratory reporting limits for naphthalene were increased due to sample dilutions required as a result of elevated concentrations of other (non-target and target) VOCs. The laboratory reporting limits were greater than naphthalene's ESL for residential land use in samples SV62-10, SV63-10, and SV67-5. With the exception of SV62-10, these increased reporting limits of naphthalene were below the soil gas ESL for commercial land use (360  $\mu\text{g}/\text{m}^3$ );
- **Chloroform:** Reported concentrations of chloroform were below the soil gas ESL for residential land use (61  $\mu\text{g}/\text{m}^3$ ). However, laboratory reporting limits for chloroform were increased due to sample dilutions required as a result of elevated concentrations of other (non-target) VOCs. The laboratory reporting limits were greater than chloroform's ESL for residential land use in samples SV62-10 and SV63-10. These increased reporting limits of chloroform were below the soil gas ESL for commercial land use (530  $\mu\text{g}/\text{m}^3$ ); and

- **Vinyl Chloride:** Vinyl chloride was not detected at or above the soil gas ESL for residential land use ( $4.7 \mu\text{g}/\text{m}^3$ ). However, laboratory reporting limits were increased for vinyl chloride due to sample dilutions required as a result of elevated concentrations of other (non-target and target) VOCs. The laboratory reporting limits were greater than vinyl chloride's ESL for residential land use at SV62-5, SV62-10, SV63-10, SV66-10, SV67-5, and SV67-10. These increased reporting limits of vinyl chloride were below the soil gas ESL for commercial land use ( $160 \mu\text{g}/\text{m}^3$ ).

As indicated on Table 2, the leak check compound (helium) was detected at or above laboratory reporting limits in 11 of the 12 soil vapor samples analyzed. Real-time field monitoring detected helium within the shroud at corresponding sample locations at concentrations ranging from approximately 41.2 % volume to 58.1 % volume. The validity of soil vapor sample results was evaluated using the following formula to calculate an ambient air breakthrough factor, where  $C_{\text{samp}}$  is the concentration of leak check compound detected in the soil vapor sample,  $C_{\text{shroud}}$  is the concentration of leak check compound detected in the shroud sample, and  $f_{\text{break}}$  is the breakthrough factor:

$$f_{\text{break}} = 100\% * \frac{C_{\text{samp}}}{C_{\text{shroud}}}$$

The calculated breakthrough factor was compared with the 5% acceptable limit<sup>1</sup> for ambient air dilution. One soil vapor sample (SV64-10) exhibited a breakthrough factor above 5%, indicating soil vapor analytical results for this sample may be biased slightly low. However, the calculated breakthrough for this sample is low (8% or less) and VOC analytical results appear generally consistent with nearby samples. Therefore, the results are deemed valid for the investigation. The leak check compound analytical results do not indicate significant concerns with respect to sample train leaks or atmospheric dilution for the soil vapor samples collected at the site.

### **4.3 Soil Analytical Results**

Laboratory analytical results for soil samples are presented on Table 3. Laboratory analytical reports and chain-of-custody forms are presented in Appendix D. Soil sampling locations are presented on Plate 2. 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; as such soil analytical results for the site were compared with ESLs for shallow soil (less than 3 meters bgs) in a residential land use setting where groundwater is not a current or potential drinking water source, as well as ESLs for construction/trench worker exposure.

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<sup>1</sup> In accordance with the 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.

Primary VOCs detected in the soil samples above laboratory reporting limits included: total xylenes; naphthalene; and acetone. Reported concentrations of all VOCs in soil were below their respective residential land use ESLs for shallow soils.

Data quality for the soil samples were assessed by implementing appropriate quality assurance/quality control (QA/QC) procedures and through review of analytical data, including analysis of laboratory QA/QC data. The following is a summary of the data quality review:

- The samples were received in good condition, properly preserved on ice;
- All samples were analyzed within the required holding times for the requested analyses;
- The results of surrogate analyses were within acceptable ranges;
- The method blank did not contain VOCs at or above the laboratory reporting limits; and
- The results of the laboratory matrix spike and laboratory matrix spike duplicate samples were within acceptable ranges.

## **5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

### **5.1 Discussion of Findings**

A summary of the findings of the Northern Investigation is presented below.

#### **Soil Vapor**

Primary VOCs detected in the soil vapor samples above laboratory reporting limits included: MEK; MIBK; acetone; BTEX compounds; 1,2,4-trimethylbenzene (TMB); 1,3,5-TMB; 4-ethyltoluene; TCE; cis-1,2-DCE; carbon disulfide; and chloroform.

Benzene and ethylbenzene were the only detected compounds exceeding ESLs. Five samples (SV62-5, SV63-10, SV65-10, SV66-10, and SV67-5) yielded benzene above the soil gas ESL for residential land use. Elevated laboratory reporting limits for benzene due to sample dilutions required as a result of elevated concentrations of other (non-target) VOCs was greater than benzene's ESL for residential land use at SV62-10. One sample (SV67-5) yielded ethylbenzene above the soil gas ESL for residential land use. Concentrations of benzene and ethylbenzene in soil vapor decrease significantly, and to concentrations below respective ESLs, with depth from SV67-5 to SV67-10. The elevated concentrations of benzene and ethylbenzene detected in sample SV67-5 are bound by significantly lower levels as determined during previous investigations at the site (PES 2016b). As shown on Plate 2, sample location SV67 is surrounded by soil vapor sample locations SV63, SV64, SV65, and SV66 (sampled during the Northern Investigation reported herein) and SV44, SV45, and SV49 (sampled in December 2015). Furthermore, concentrations of benzene and ethylbenzene were not detected in companion soil sample locations.

Non-target compounds alpha-pinene, propene, propane, and butane were identified by TestAmerica in soil vapor samples SV62-10, SV63-10, and SV66-10. Alpha-pinene is a chemical frequently detected at high concentrations in landfill gas. Propene, propane, and butane are lighter gases than alpha-pinene and are attributable to biogenic gases derived from landfill decomposition processes. The RWQCB and/or EPA do not have vapor screening levels established for these non-target gases.

Increased laboratory reporting limits for naphthalene and chloroform due to sample dilutions required as a result of elevated concentrations of other (non-target and target) VOCs were greater than ESLs for residential land use at SV62-10 (naphthalene and chloroform), SV63-10 (naphthalene and chloroform), and SV67-5 (naphthalene only). With the exception of SV62-10, increased reporting limits of naphthalene were below the soil gas ESL for commercial land use. Increased reporting limits of chloroform were below the soil gas ESL for commercial land use.

In addition, increased laboratory reporting limits for vinyl chloride due to sample dilutions required as a result of elevated concentrations of other (non-target and target) VOCs were greater than ESLs for residential land use at SV62-5, SV62-10, SV63-10, SV66-10, SV67-5, and SV67-10. These increased reporting limits of vinyl chloride were below the soil gas ESL for commercial land use.

### Soil

Primary VOCs detected in the soil samples above laboratory reporting limits included: total xylenes; naphthalene; and acetone. Reported concentrations of all VOCs in soil were below their respective ESLs for shallow soil in a residential land use.

## **5.2 Conclusions and Recommendations**

Based on the results of the Northern Investigation activities described herein, subsurface conditions with respect to VOCs and petroleum hydrocarbons beneath and in the immediate vicinity of the northern extant onsite building have been characterized, and the site investigation objectives were achieved through implementation of the approved Work Plan. The soil vapor and soil analytical results are generally consistent with Site conditions previously identified and attributed to historical deposition of fill material beneath the site.

PES recommends updating the existing CSM, SMP and HHRA for the site to incorporate the findings of the Northern Investigation described herein. Based on the concentrations of benzene and ethylbenzene detected in soil vapor below the northern extant onsite building and exceeding residential ESLs, PES further recommends that measures to address benzene-and ethylbenzene-affected media be included in the SMP to be revised and submitted to ACEH for review and approval.

## 6.0 REFERENCES

- Alameda County Department of Environmental Health (ACEH), 1989. Shahid, Rafat A., Alameda County, Department of Environmental Health, Notice of Violation Letter to James McClay, Mike Roberts Color Productions. March 2.
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**TABLES**

**Table 1**  
**Summary of Soil Vapor Analytical Results**  
**Northern Extant Onsite Building Investigation Report**  
**6701, 6705, and 6707 Shellmound Street, Emeryville, California**

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Acetone (µg/m³)	Benzene (µg/m³)	MEK (µg/m³)	Carbon disulfide (µg/m³)	Chloroform (µg/m³)	Chloromethane (µg/m³)	cis-1,2-DCE (µg/m³)	Ethylbenzene (µg/m³)	4-Ethyltoluene (µg/m³)	2-Hexanone (µg/m³)	MIBK (µg/m³)	Toluene (µg/m³)	TCE (µg/m³)	1,2,4-TMB (µg/m³)	1,3,5-TMB (µg/m³)	m,p-Xylene (µg/m³)	o-Xylene (µg/m³)	Naphthalene (µg/m³)	Vinyl Chloride (µg/m³)	Other VOCs (µg/m³)	Methane (% v/v)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	Helium (% v/v)
SV62	SV62-5	5.0	9/7/2016	<b>590</b>	<b>120</b>	<b>93</b>	<b>41</b>	<b>17</b>	< 15	< 15	<b>55</b>	< 18	< 15	< 15	<b>250</b>	< 20	<b>50</b>	<b>27</b>	<b>390</b>	<b>94</b>	< 39	< 9.4	ND	<b>5.0</b>	< 2.3	<b>8.3</b>	<b>0.77</b>
	SV62-10	10.0	9/7/2016	< 1200	< 130	< 240	< 250	< 150	< 170	< 160	< 180	< 200	< 170	< 170	< 150	< 220	< 400	< 200	< 350	< 180	< 420	< 100	ND	<b>5.6</b>	< 5.0	<b>6.1</b>	<b>2.1</b>
SV63	SV63-5	5.0	9/7/2016	<b>310</b>	<b>27</b>	<b>71</b>	<b>25</b>	<b>8.7</b>	< 3.7	< 3.5	<b>23</b>	<b>4.5</b>	<b>6.8</b>	<b>14</b>	<b>68</b>	< 4.8	<b>13</b>	<b>6.3</b>	<b>92</b>	<b>27</b>	< 9.3	< 2.3	ND	<b>0.22</b>	< 3.3	<b>9.0</b>	<b>1.1</b>
	SV63-10	10.0	9/7/2016	< 740	<b>170</b>	< 150	< 160	< 91	< 100	< 99	< 110	< 120	< 100	< 100	< 94	< 130	< 250	< 120	<b>620</b>	< 110	< 260	< 64	ND	<b>2.9</b>	< 3.1	<b>15</b>	<b>1.0</b>
SV64	SV64-5	5.0	9/7/2016	<b>190</b>	<b>12</b>	<b>40</b>	<b>9.8</b>	< 2.0	< 2.3	< 2.2	<b>7.5</b>	< 2.7	<b>2.8</b>	<b>3.9</b>	<b>36</b>	< 3.0	<b>6.6</b>	< 2.7	<b>26</b>	<b>7.6</b>	< 5.8	< 1.4	ND	<b>0.0024</b>	< 2.1	<b>17</b>	<b>1.2</b>
	SV64-10	10.0	9/7/2016	<b>100</b>	<b>19</b>	<b>26</b>	<b>37</b>	< 6.6	< 7.4	< 7.1	<b>8.1</b>	< 8.8	< 7.4	< 7.4	<b>28</b>	< 9.7	< 18	< 8.8	<b>20</b>	< 7.8	< 19	< 4.6	ND	<b>0.0057</b>	< 6.8	<b>26</b>	<b>4.0</b>
SV65	SV65-5	5.0	9/7/2016	<b>200</b>	<b>23</b>	<b>50</b>	< 6.2	< 3.6	< 4.1	< 3.9	<b>6.3</b>	< 4.9	< 4.0	<b>7.6</b>	<b>17</b>	< 5.3	< 9.7	< 4.9	<b>22</b>	<b>7.8</b>	< 10	< 2.5	ND	<b>0.0033</b>	< 6.3	<b>14</b>	<b>2.8</b>
	SV65-10	10.0	9/7/2016	<b>73</b>	<b>83</b>	<b>19</b>	<b>11</b>	< 3.5	<b>4.6</b>	< 3.7	<b>15</b>	< 4.6	< 3.9	< 3.9	<b>21</b>	< 5.1	< 9.3	< 4.6	<b>69</b>	<b>31</b>	< 9.9	< 0.94	ND	<b>0.0027</b>	< 3.5	<b>16</b>	<b>1.5</b>
SV66	SV66-5	5.0	9/7/2016	<b>160</b>	<b>29</b>	<b>30</b>	<b>8.3</b>	<b>42</b>	<b>3.9</b>	<b>14</b>	<b>17</b>	< 4.0	< 3.3	< 3.3	<b>86</b>	<b>6.1</b>	<b>12</b>	<b>4.1</b>	<b>54</b>	<b>18</b>	< 8.6	< 2.1	ND	<b>0.0029</b>	< 3.1	<b>14</b>	<b>1.7</b>
	SV66-10	10.0	9/7/2016	<b>190</b>	<b>120</b>	<b>57</b>	<b>29</b>	< 13	< 15	<b>23</b>	< 16	< 18	< 15	< 15	<b>37</b>	< 19	< 36	< 18	<b>37</b>	< 16	< 38	< 9.3	ND	<b>0.60</b>	< 4.5	<b>15</b>	<b>2.1</b>
SV67	SV67-5	5.0	9/12/2016	<b>100</b>	<b>3900</b>	<b>15</b>	< 12	< 7.3	< 8.2	< 7.9	<b>1900</b>	<b>190</b>	< 8.2	< 8.2	<b>4700</b>	<b>50</b>	<b>320</b>	<b>180</b>	<b>3900</b>	<b>760</b>	< 130	< 5.1	<b>15 (1,1-DCA); 18 (1,2-DCA)</b>	<b>0.00091</b>	< 2.0	<b>20</b>	< 0.41
	SV67-10	10.0	9/12/2016	< 59	<b>6.5</b>	< 12	< 12	< 7.3	< 8.2	< 7.9	< 8.6	< 9.8	< 8.1	< 8.1	< 7.5	< 11	< 20	< 9.8	< 17	< 8.6	< 21	< 5.1	ND	<b>0.043</b>	< 2.1	<b>20</b>	<b>0.71</b>
<b>Residential Land Use ESL (Soil Gas)<sup>1</sup></b>				<b>16,000,000</b>	<b>48</b>	<b>2,600,000</b>	<b>NE</b>	<b>61</b>	<b>47000</b>	<b>4,200</b>	<b>560</b>	<b>NE</b>	<b>NE</b>	<b>1,600,000</b>	<b>160,000</b>	<b>240</b>	<b>NE</b>	<b>NE</b>	<b>52,000</b>	<b>52,000</b>	<b>41</b>	<b>4.7</b>	<b>Varies</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>Commercial/Industrial ESL<sup>2</sup></b>				<b>140,000,000</b>	<b>420</b>	<b>22,000,000</b>	<b>NE</b>	<b>530</b>	<b>390000</b>	<b>35,000</b>	<b>4,900</b>	<b>NE</b>	<b>NE</b>	<b>13,000,000</b>	<b>1,300,000</b>	<b>3,000</b>	<b>NE</b>	<b>NE</b>	<b>440,000</b>	<b>440,000</b>	<b>360</b>	<b>160</b>	<b>Varies</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>

**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.

DCA = Dichloroethane

DCE = Dichloroethene.

MEK = Methyl Ethyl Ketone, 2-Butanone

MIBK = Methyl Isobutyl Ketone

TCE = Trichloroethene.

TMB = Trimethylbenzene.

bgs = Below ground surface.

VOCs = Volatile organic compounds.

µg/m³ = 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 2**  
**Summary of Soil Vapor Leak Check Results**  
**Northern Extant Onsite Building 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 (%)
SV62	SV62-5	5.0	9/7/2016	<b>0.77</b>	<b>42.8</b>	1.8
	SV62-10	10.0	9/7/2016	<b>2.1</b>	<b>42.8</b>	4.9
SV63	SV63-5	5.0	9/7/2016	<b>1.1</b>	<b>41.2</b>	2.7
	SV63-10	10.0	9/7/2016	<b>1.0</b>	<b>41.2</b>	2.4
SV64	SV64-5	5.0	9/7/2016	<b>1.2</b>	<b>50.6</b>	2.4
	SV64-10	10.0	9/7/2016	<b>4.0</b>	<b>50.6</b>	7.9
SV65	SV65-5	5.0	9/7/2016	<b>2.8</b>	<b>58.1</b>	4.8
	SV65-10	10.0	9/7/2016	<b>1.5</b>	<b>58.1</b>	2.6
SV66	SV66-5	5.0	9/7/2016	<b>1.7</b>	<b>48.9</b>	3.5
	SV66-10	10.0	9/7/2016	<b>2.1</b>	<b>48.9</b>	4.3
SV67	SV67-5	5.0	9/12/2016	< 0.41	<b>41.6</b>	< 1.0
	SV67-10	10.0	9/12/2016	<b>0.71</b>	<b>41.6</b>	1.7
<b>Acceptable Ambient Air Breakthrough Limit <sup>1</sup></b>				--	--	5%

**Notes:**

Detections are shown in bold. Results equal to or exceeding applicable RPD limits are shaded.

bgs = Below ground surface.

% v/v = Percent by volume.

< 0.41 = Not detected at or above the indicated laboratory method reporting limit.

-- = 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 3**  
**Summary of Soil Analytical Results - Petroleum Hydrocarbons and VOCs**  
**Northern Extant Onsite Building Investigation Report**  
**6701, 6705, and 6707 Shellmound Street, Emeryville, California**

Sample Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Xylenes (Total) (µg/Kg)	Naphthalene (µg/Kg)	Acetone (µg/Kg)	4-Isopropyltoluene (µg/Kg)	Carbon Disulfide (µg/Kg)	Other VOCs (µg/Kg)
SV62	SV62-5	5.0	9/7/2016	< 17	<b>60</b>	<b>100</b>	< 8.3	< 8.3	ND
	SV62-10	10.0	9/7/2016	< 12	< 12	<b>130</b>	< 6.2	<b>6.3</b>	ND
SV63	SV63-5	5.0	9/7/2016	< 8.1	< 8.1	< 40	< 4.0	< 4.0	ND
	SV63-10	10.0	9/7/2016	<b>7.2</b>	<b>33</b>	<b>57</b>	<b>7.1</b>	< 3.6	ND
SV64	SV64-5	5.0	9/7/2016	< 11	< 11	< 57	< 5.7	< 5.7	ND
	SV64-10	10.0	9/7/2016	< 7.8	< 7.8	<b>48</b>	< 3.9	< 3.9	ND
SV65	SV65-5	5.0	9/7/2016	< 8.1	< 8.1	< 41	< 4.1	< 4.1	ND
	SV65-10	10.0	9/7/2016	< 10	< 10	< 51	< 5.1	< 5.1	ND
SV66	SV66-5	5.0	9/7/2016	< 7.2	< 7.2	<b>47</b>	< 3.6	< 3.6	ND
	SV66-10	10.0	9/7/2016	< 7.7	< 7.7	<b>100</b>	< 3.9	< 3.9	ND
SV67	SV67-5	5.0	9/12/2016	< 10	<b>40</b>	<b>230</b>	< 5.2	< 5.2	ND
	SV67-10	10.0	9/12/2016	< 7.3	< 7.3	<b>60</b>	< 3.7	< 3.7	ND
<b>Tier 2 Residential Land Use ESL (Shallow Soil)</b>				<i>500,000</i>	<i>3,300<sup>1</sup></i>	<i>500<sup>3</sup></i>	<i>NE</i>	<i>NE</i>	<i>Varies</i>
<b>Construction Worker Exposure ESL<sup>2</sup></b>				<i>2,400,000</i>	<i>14,000</i>	<i>630,000,000</i>	<i>NE</i>	<i>NE</i>	<i>Varies</i>

**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.

bgs = Below ground surface.

µg/Kg = Micrograms per kilogram.

< 3.7 = Not detected at or above the indicated laboratory method reporting limit.

ND = Not Detected.

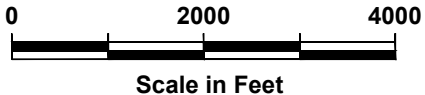
NE = Not established.

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

## **ILLUSTRATIONS**



**PROJECT SITE**

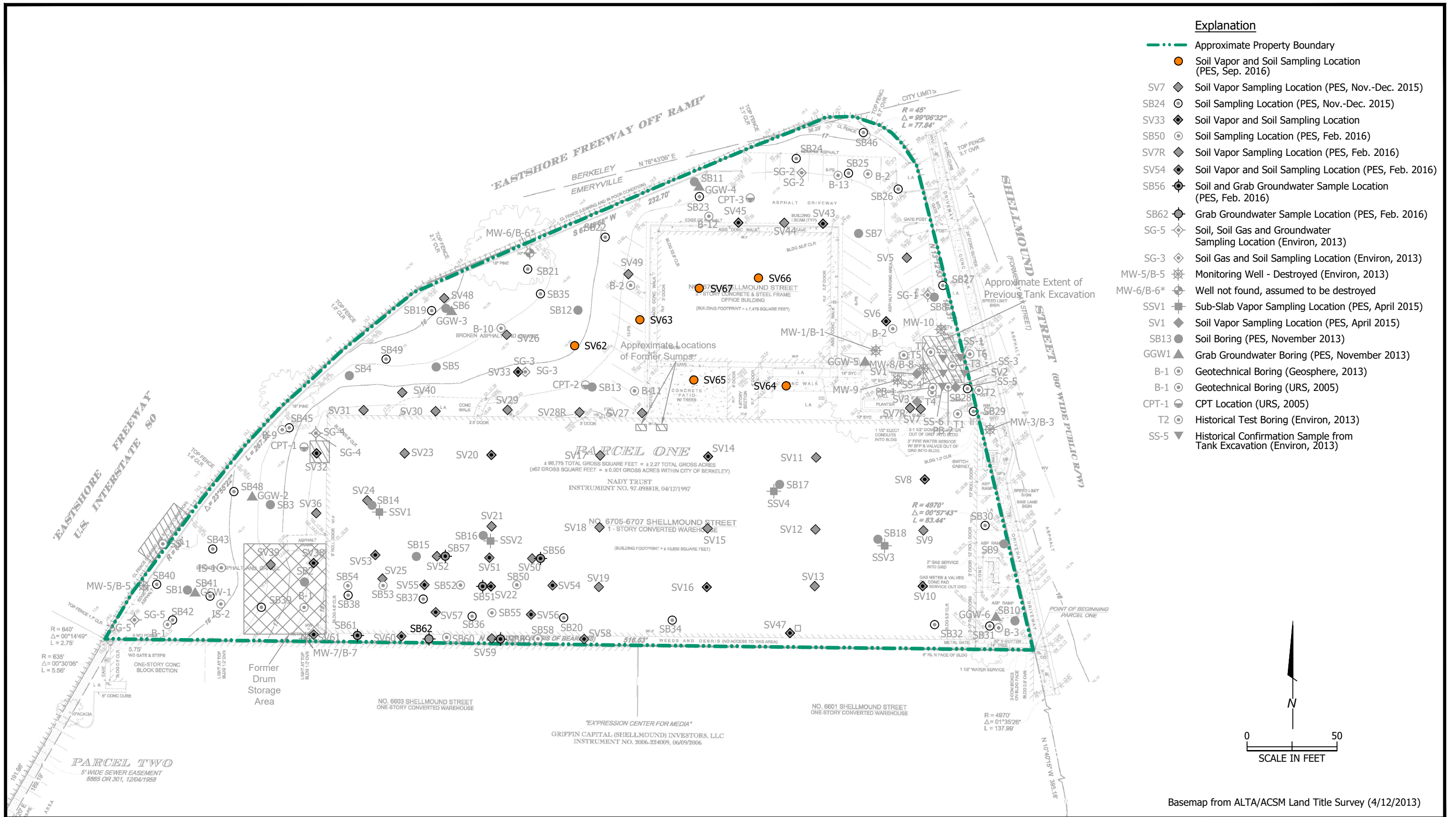


U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle. 1997



**Site Location Map**  
 Northern Extant Onsite Building Investigation Report  
 6701, 6705, and 6707 Shellmound Street  
 Emeryville, California

PLATE  
**1**





**APPENDIX A**

**ALAMEDA COUNTY ENVIRONMENTAL HEALTH SERVICES MODIFIED WORK  
PLAN APPROVAL**



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

July 18, 2016

Ms. Rachel Green  
Anton Development Company  
1415 L Street, Suite 450  
Sacramento, CA 95814  
(Sent via electronic mail to: [rgreen@anton.co](mailto:rgreen@anton.co))

Subject: Modified Work Plan Approval; SCP Case RO000548 and Geotracker Global ID T0600100894, Mike Roberts Color Production 6707 Bay Street, Emeryville, CA 94608

Dear Ms. Green:

Alameda County Department of Environmental Health (ACDEH) has reviewed the case file, including the *Work Plan for Supplemental Subsurface Investigation, Northern Extant Onsite Building*, and dated June 23, 2016. The work plan was prepared and submitted on your behalf by PES Environmental, Inc (PES). Thank you for submitting the work plan.

Based on ACDEH staff review of the referenced work plan, the proposed scope of work is conditionally approved for implementation provided that the technical comments below are incorporated during the proposed work. Submittal of a revised work plan or a work plan addendum is not required unless an alternate scope of work outside that described in the work plan or these technical comments is proposed. We request that you address the following technical comments, perform the proposed work, and send us the report described below. Please provide 72-hour advance written notification to this office (e-mail preferred to: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)) prior to the start of field activities.

### **TECHNICAL COMMENTS**

1. **Conditional Work Plan Approval** – The referenced work plan proposes a series of actions with which ACDEH is in general agreement; however, ACDEH requests the following modifications to the approach, as discussed below. Please submit a report by the date identified below.
  - a. **Soil Vapor Analytical Suite** – In response to the previous directive letter, the referenced work plan proposed the installation of six soil bores in a relatively unexplored area of the site in order to collect soil and soil vapor at the subject site at a depth of 5 and 10 feet below grade surface (bgs). Although the soil vapor analytical suite was not specifically referenced, ACDEH anticipates analysis for Volatile Organic Compounds (VOCs) will be conducted, consistent with previous investigations at the site. Similarly, ACDEH requests continued analysis for oxygen, methane, carbon dioxide, and the tracer employed during vapor sampling. The additional collection of the concentration of the tracer in the shroud, consistent with Department of Toxic Substances Control (DTSC) guidance, will allow a determination of the percentage of any vapor leak, should it become a concern.

### **TECHNICAL REPORT REQUEST**

Please upload technical reports to the ACDEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

Ms. Rachel Green  
RO0000548  
July 18, 2016, Page 2

- **September 30, 2016** – Site Investigation Report  
File to be named: RO548\_SWI\_R\_YYYY-MM-DD

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,

Mark Detterman, PG, CEG  
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations  
Electronic Report Upload (ftp) Instructions

cc: John Nady, Nady Systems, Inc., 11 Glen Alpine Road, Piedmont, CA 94611

Kyle Flory, PES Environmental, Inc, 1682 Novato Blvd, Suite 100, Novato, CA 94947  
(Sent via electronic mail to: [kflory@pesenv.com](mailto:kflory@pesenv.com))

Robert Creps, PES Environmental, Inc, 1682 Novato Blvd, Suite 100, Novato, CA 94947  
(Sent via electronic mail to: [rcreps@pesenv.com](mailto:rcreps@pesenv.com))

Dilan Roe, ACDEH, (Sent via electronic mail to; [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))  
Mark Detterman, ACDEH, (Sent via electronic mail to; [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))  
Geotracker, Electronic File

## Attachment 1

### Responsible Party(ies) Legal Requirements / Obligations

#### REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> May 15, 2014
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org)
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses,** and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

**APPENDIX B**

**ALAMEDA COUNTY PUBLIC WORKS AGENCY DRILLING PERMIT**

# 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: 08/24/2016 By jamesy

Permit Numbers: W2016-0622  
Permits Valid from 09/02/2016 to 09/02/2016

Application Id: 1471905167192  
Site Location: 6701 - 6707 Shellmound Street  
Project Start Date: 09/02/2016  
Assigned Inspector: Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

City of Project Site: Emeryville

Completion Date: 09/02/2016

Applicant: PES Environmental - Gregory George  
7665 Redwood Boulevard, Suite 200, Novato, CA 94945

Phone: 415-899-1600

Property Owner: John Nady  
6701 Shellmound Street, Emeryville, CA 94608

Phone: 510-652-2411

Client: \*\* same as Property Owner \*\*

Receipt Number: WR2016-0422 Total Due: \$265.00  
Payer Name : Gregory George Total Amount Paid: \$265.00  
Paid By: VISA PAID IN FULL

## Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 6 Boreholes  
Driller: ECA - Lic #: 695970 - Method: DP

Work Total: \$265.00

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0622	08/24/2016	12/01/2016	6	2.25 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. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

## Alameda County Public Works Agency - Water Resources Well Permit

6. 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.

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.

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**APPENDIX C**

**SOIL BORING LOGS**

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

**ABBREVIATION KEY**

- PID (PPM) - Photo Ionization Detector readings in parts per million from field headspace sample screening.
- BLOWS/6IN - Blows required to drive sampler 6 inches as indicated on the logs using sample drive hammer weight of 140 pounds falling 30 inches.
- (10,60,30) - Percent gravel, percent sand, percent silt/clay
- 2.5YR 6/2 - Soil Color according to Munsell Soil Color Charts (1994 Revised Edition)
- feet MSL - feet above Mean Seal Level
- feet BGS - feet below ground surface

**SYMBOLS KEY**

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

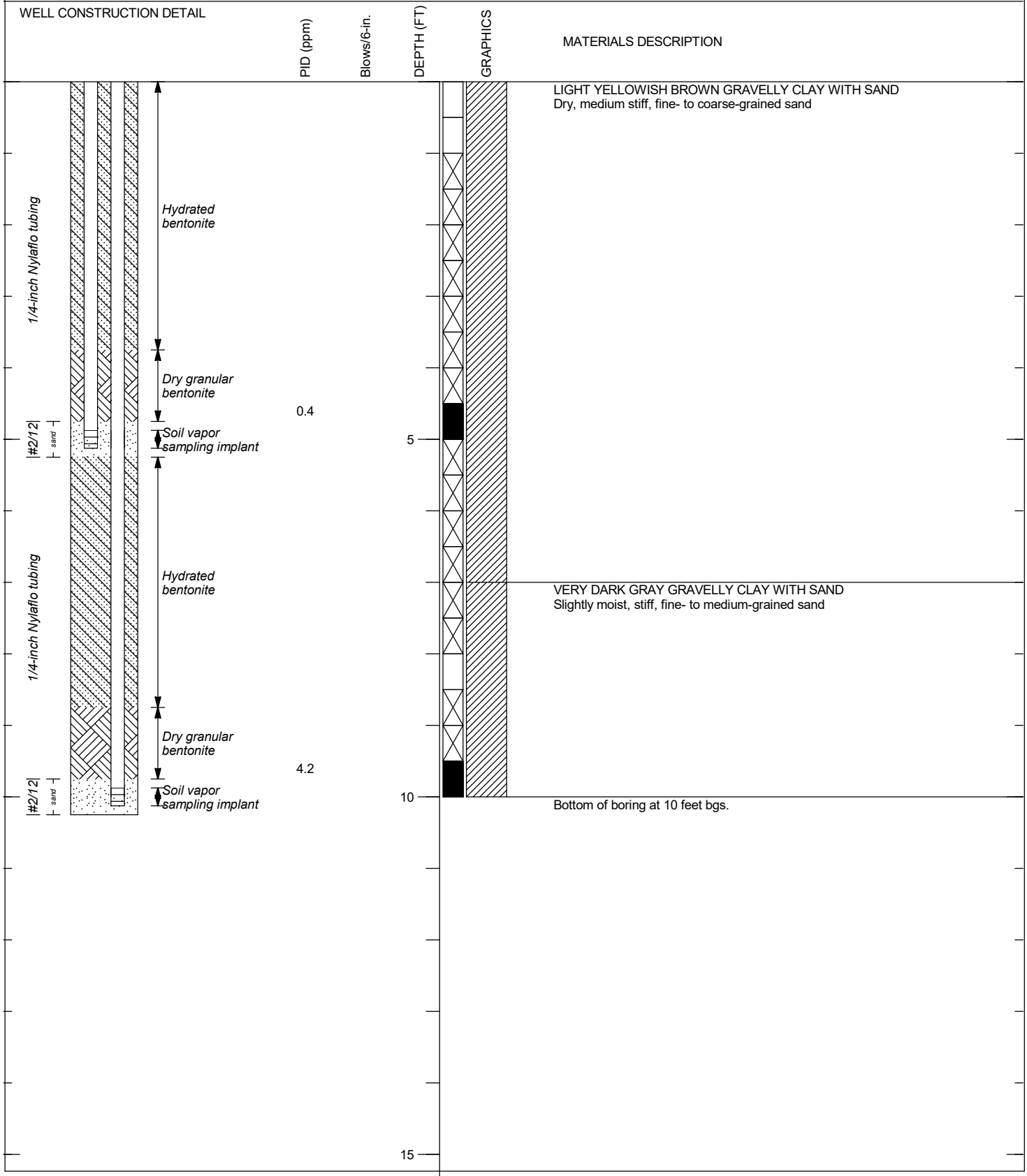


**PES Environmental, Inc.**  
Engineering & Environmental Services

**Unified Soil Classification System Chart**  
Shellmound Street  
6701 Shellmound Street

PLATE

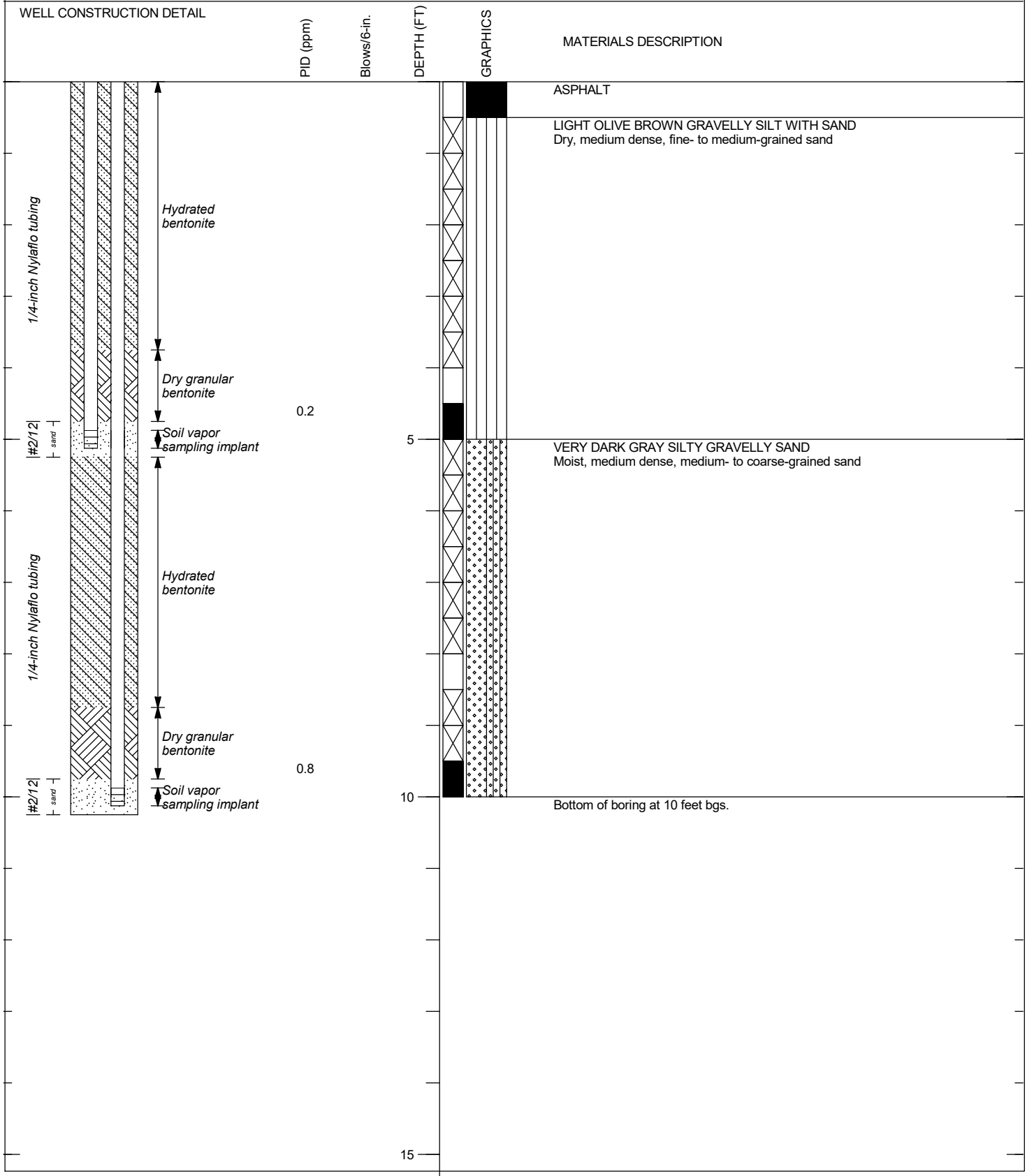
**C-0**



PROJECT Shellmound Street  
 LOCATION 6701 Shellmound Street  
 JOB NUMBER 1448.001.01.036  
 LOGGED BY Greg George  
 DRILL RIG Geoprobe

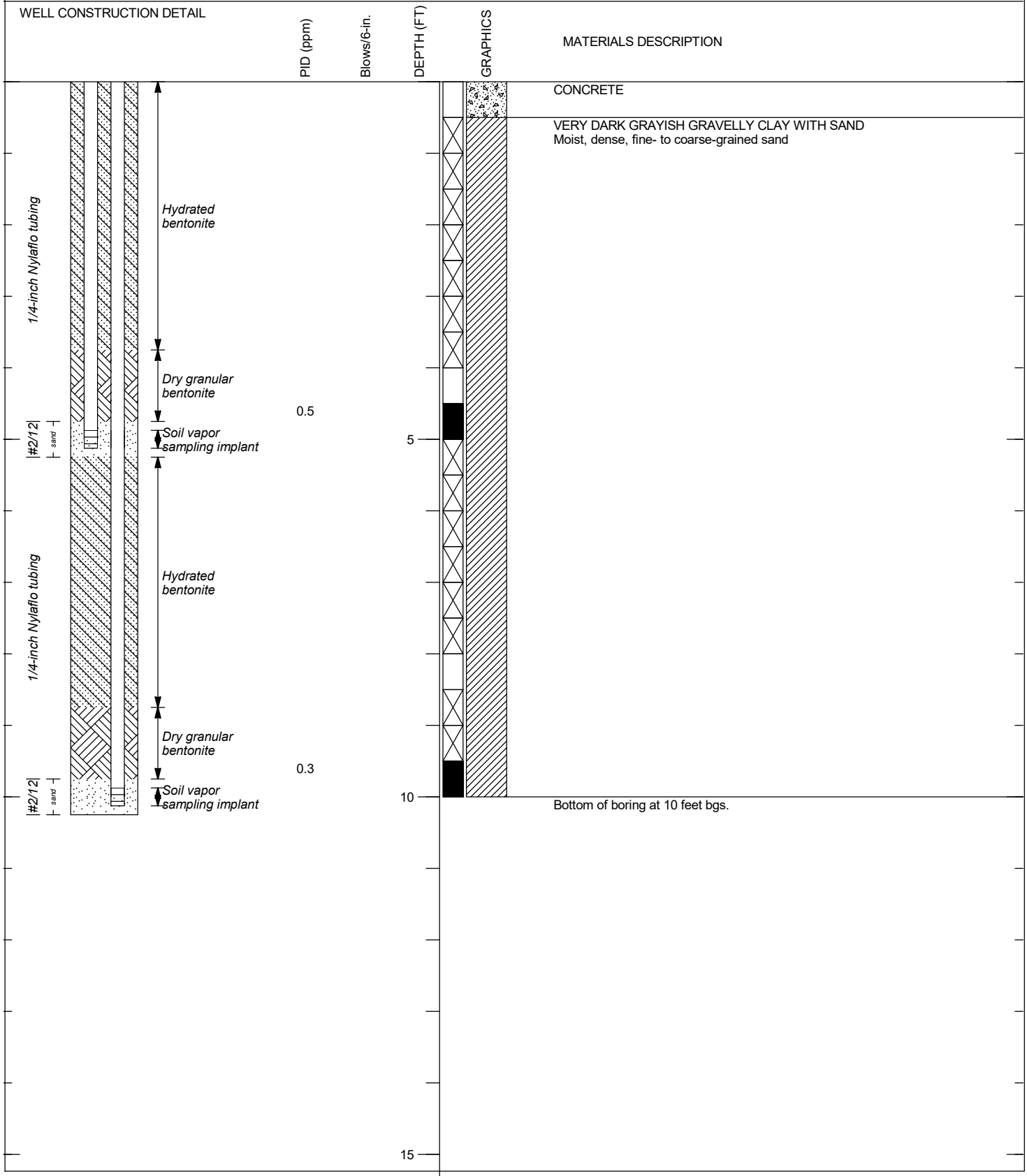
REVIEWED BY GJG  
 DIAMETER OF HOLE 2.25 inches  
 TOTAL DEPTH OF HOLE 10 feet  
 DATE STARTED 9/7/16  
 DATE COMPLETED 9/7/16

PLATE  
**C-1**



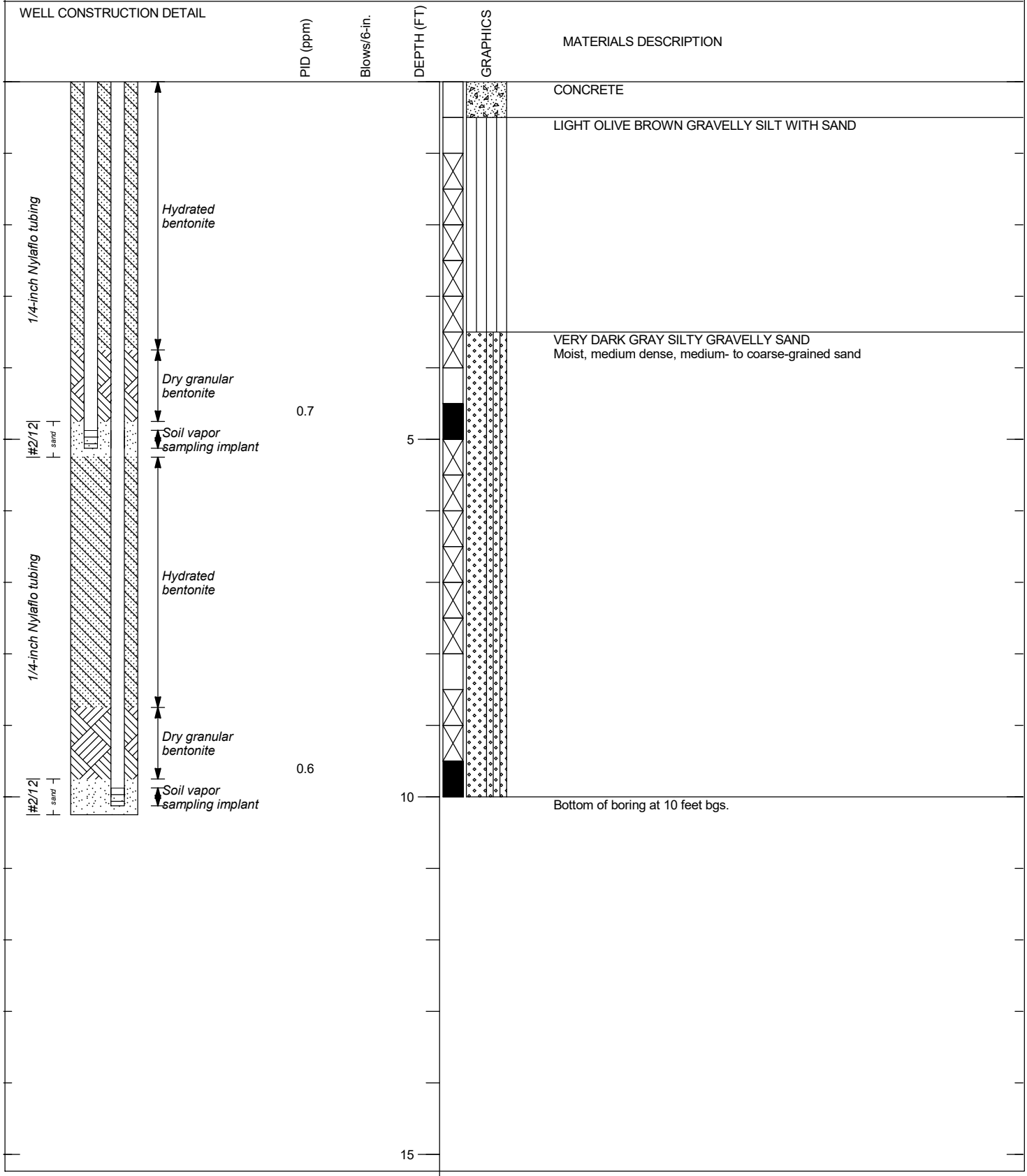
PROJECT	Shellmound Street	REVIEWED BY	GJG
LOCATION	6701 Shellmound Street	DIAMETER OF HOLE	2.25 inches
JOB NUMBER	1448.001.01.036	TOTAL DEPTH OF HOLE	10 feet
LOGGED BY	Greg George	DATE STARTED	9/7/16
DRILL RIG	Geoprobe	DATE COMPLETED	9/7/16

PLATE  
**C-2**



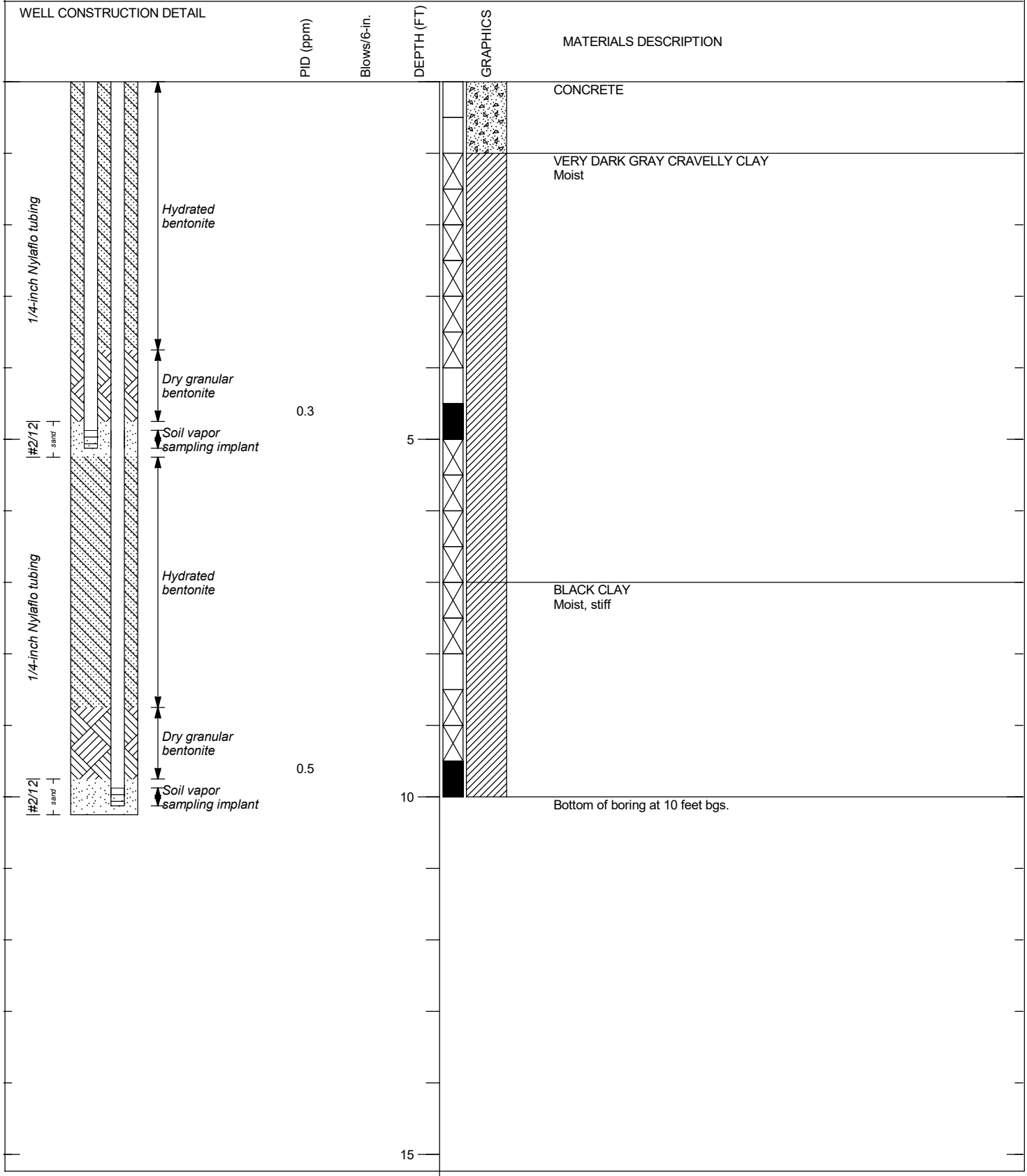
PROJECT	Shellmound Street	REVIEWED BY	GJG
LOCATION	6701 Shellmound Street	DIAMETER OF HOLE	2.25 inches
JOB NUMBER	1448.001.01.036	TOTAL DEPTH OF HOLE	10 feet
LOGGED BY	Greg George	DATE STARTED	9/7/16
DRILL RIG	Geoprobe/ Track	DATE COMPLETED	9/7/16

PLATE  
**C-3**



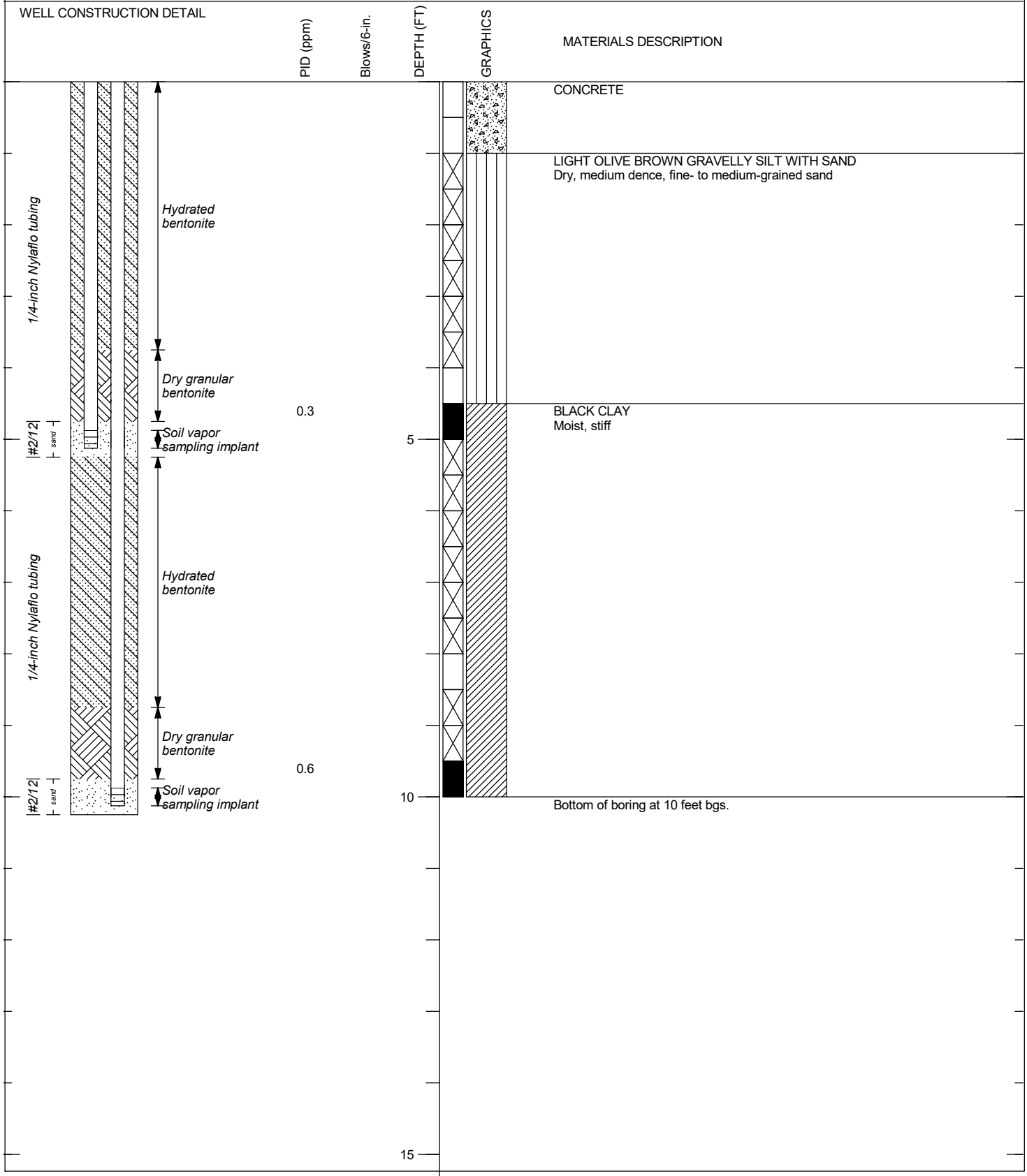
PROJECT	Shellmound Street	REVIEWED BY	GJG
LOCATION	6701 Shellmound Street	DIAMETER OF HOLE	2.25 inches
JOB NUMBER	1448.001.01.036	TOTAL DEPTH OF HOLE	10 feet
LOGGED BY	Greg George	DATE STARTED	9/7/16
DRILL RIG	Geoprobe/ Track	DATE COMPLETED	9/7/16

PLATE  
**C-4**



PROJECT	Shellmound Street	REVIEWED BY	GJG
LOCATION	6701 Shellmound Street	DIAMETER OF HOLE	2.25 inches
JOB NUMBER	1448.001.01.036	TOTAL DEPTH OF HOLE	10 feet
LOGGED BY	Greg George	DATE STARTED	9/7/16
DRILL RIG	Geoprobe/ Track	DATE COMPLETED	9/7/16

PLATE  
**C-5**



PROJECT	Shellmound Street	REVIEWED BY	GJG
LOCATION	6701 Shellmound Street	DIAMETER OF HOLE	2.25 inches
JOB NUMBER	1448.001.01.036	TOTAL DEPTH OF HOLE	10 feet
LOGGED BY	Greg George	DATE STARTED	9/12/16
DRILL RIG	Geoprobe/ Track	DATE COMPLETED	9/12/16

PLATE  
**C-6**



**APPENDIX D**

**LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY  
DOCUMENTATION**

# 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: 320-21558-1

Client Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

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

Attn: Mr. Kyle Flory

*Beth Riley*

---

Authorized for release by:  
9/14/2016 10:03:17 AM

Beth Riley, Project Manager II  
(714)258-8610  
[beth.riley@testamericainc.com](mailto:beth.riley@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
*	LCS or LCSD is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

# Case Narrative

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Job ID: 320-21558-1**

**Laboratory: TestAmerica Sacramento**

## Narrative

### Job Narrative 320-21558-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/8/2016 8:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.0° C.

#### Receipt Exceptions

Samples SV62-5 and SV62-10 were frozen past hold time.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample duplicate (LCSD) for analytical batch 720-209080 recovered outside control limits for the following analytes: 2-Butanone (MEK). These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for the following samples was outside control limits: SV62-10 (320-21558-2), SV63-5 (320-21558-3), SV64-5 (320-21558-5), SV65-5 (320-21558-7), SV65-10 (320-21558-8) and SV66-10 (320-21558-10). The sample were re-analyzed with concurring results, and the second 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: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

## Client Sample ID: SV62-5

## Lab Sample ID: 320-21558-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	100		83		ug/Kg	1		8260B	Total/NA
Naphthalene	60		17		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV62-10

## Lab Sample ID: 320-21558-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	130		62		ug/Kg	1		8260B	Total/NA
Carbon disulfide	6.3		6.2		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV63-5

## Lab Sample ID: 320-21558-3

No Detections.

## Client Sample ID: SV63-10

## Lab Sample ID: 320-21558-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	7.1		3.6		ug/Kg	1		8260B	Total/NA
Acetone	57		36		ug/Kg	1		8260B	Total/NA
Naphthalene	33		7.1		ug/Kg	1		8260B	Total/NA
Xylenes, Total	7.2		7.1		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV64-5

## Lab Sample ID: 320-21558-5

No Detections.

## Client Sample ID: SV64-10

## Lab Sample ID: 320-21558-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	48		39		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV65-5

## Lab Sample ID: 320-21558-7

No Detections.

## Client Sample ID: SV65-10

## Lab Sample ID: 320-21558-8

No Detections.

## Client Sample ID: SV66-5

## Lab Sample ID: 320-21558-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	47		36		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV66-10

## Lab Sample ID: 320-21558-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	100		39		ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV62-5**

**Date Collected: 09/07/16 10:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-1**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1,1-Trichloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1,2,2-Tetrachloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1,2-Trichloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1-Dichloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1-Dichloroethene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,1-Dichloropropene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2,3-Trichlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2,3-Trichloropropane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2,4-Trichlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2,4-Trimethylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2-Dibromo-3-Chloropropane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2-Dichlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2-Dichloroethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,2-Dichloropropane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,3,5-Trimethylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,3-Dichlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,3-Dichloropropane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
1,4-Dichlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
2,2-Dichloropropane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
2-Butanone (MEK)	ND		83		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
2-Chlorotoluene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
2-Hexanone	ND		83		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
4-Chlorotoluene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
4-Isopropyltoluene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
4-Methyl-2-pentanone (MIBK)	ND		83		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
<b>Acetone</b>	<b>100</b>		83		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Benzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Bromobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Bromoform	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Bromomethane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Carbon disulfide	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Carbon tetrachloride	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chlorobenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chlorobromomethane	ND		33		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chlorodibromomethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chloroethane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chloroform	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Chloromethane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
cis-1,2-Dichloroethene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
cis-1,3-Dichloropropene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Dibromomethane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Dichlorobromomethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Dichlorodifluoromethane	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Ethylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Ethylene Dibromide	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Hexachlorobutadiene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Isopropylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV62-5**

**Date Collected: 09/07/16 10:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-1**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Methylene Chloride	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
<b>Naphthalene</b>	<b>60</b>		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
n-Butylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
N-Propylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
sec-Butylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Styrene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
tert-Butylbenzene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Tetrachloroethene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Toluene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
trans-1,2-Dichloroethene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
trans-1,3-Dichloropropene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Trichloroethene	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Trichlorofluoromethane	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Vinyl acetate	ND		33		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Vinyl chloride	ND		8.3		ug/Kg		09/09/16 09:55	09/09/16 15:00	1
Xylenes, Total	ND		17		ug/Kg		09/09/16 09:55	09/09/16 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		60 - 140	09/09/16 09:55	09/09/16 15:00	1
4-Bromofluorobenzene	85		45 - 131	09/09/16 09:55	09/09/16 15:00	1
Toluene-d8 (Surr)	102		58 - 140	09/09/16 09:55	09/09/16 15:00	1

**Client Sample ID: SV62-10**

**Date Collected: 09/07/16 10:30**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-2**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1,1-Trichloroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1,1,2-Tetrachloroethane	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1,2-Trichloroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1-Dichloroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1-Dichloroethene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,1-Dichloropropene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2,3-Trichlorobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2,3-Trichloropropane	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2,4-Trichlorobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2,4-Trimethylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2-Dibromo-3-Chloropropane	ND	*	12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2-Dichlorobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2-Dichloroethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,2-Dichloropropane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,3,5-Trimethylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,3-Dichlorobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,3-Dichloropropane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
1,4-Dichlorobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
2,2-Dichloropropane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1

TestAmerica Sacramento



# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV62-10**

**Lab Sample ID: 320-21558-2**

**Date Collected: 09/07/16 10:30**

**Matrix: Solid**

**Date Received: 09/08/16 08:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND	*	62		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
2-Chlorotoluene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
2-Hexanone	ND		62		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
4-Chlorotoluene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
4-Isopropyltoluene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
4-Methyl-2-pentanone (MIBK)	ND		62		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
<b>Acetone</b>	<b>130</b>		62		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Benzene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Bromobenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Bromoform	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Bromomethane	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
<b>Carbon disulfide</b>	<b>6.3</b>		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Carbon tetrachloride	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chlorobenzene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chlorobromomethane	ND		25		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chlorodibromomethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chloroethane	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chloroform	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Chloromethane	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
cis-1,2-Dichloroethene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
cis-1,3-Dichloropropene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Dibromomethane	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Dichlorobromomethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Dichlorodifluoromethane	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Ethylbenzene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Ethylene Dibromide	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Hexachlorobutadiene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Isopropylbenzene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Methyl tert-butyl ether	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Methylene Chloride	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Naphthalene	ND	*	12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
n-Butylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
N-Propylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
sec-Butylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Styrene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
tert-Butylbenzene	ND	*	6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Tetrachloroethene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Toluene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
trans-1,2-Dichloroethene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
trans-1,3-Dichloropropene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Trichloroethene	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Trichlorofluoromethane	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Vinyl acetate	ND		25		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Vinyl chloride	ND		6.2		ug/Kg		09/09/16 09:55	09/12/16 11:33	1
Xylenes, Total	ND		12		ug/Kg		09/09/16 09:55	09/12/16 11:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		60 - 140	09/09/16 09:55	09/12/16 11:33	1
4-Bromofluorobenzene	84		45 - 131	09/09/16 09:55	09/12/16 11:33	1
Toluene-d8 (Surr)	99		58 - 140	09/09/16 09:55	09/12/16 11:33	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV63-5**

**Date Collected: 09/07/16 11:05**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-3**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1,1-Trichloroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1,2,2-Tetrachloroethane	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1,2-Trichloroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1-Dichloroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1-Dichloroethene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,1-Dichloropropene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2,3-Trichlorobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2,3-Trichloropropane	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2,4-Trichlorobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2,4-Trimethylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2-Dibromo-3-Chloropropane	ND	*	8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2-Dichlorobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2-Dichloroethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,2-Dichloropropane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,3,5-Trimethylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,3-Dichlorobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,3-Dichloropropane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
1,4-Dichlorobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
2,2-Dichloropropane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
2-Butanone (MEK)	ND	*	40		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
2-Chlorotoluene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
2-Hexanone	ND		40		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
4-Chlorotoluene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
4-Isopropyltoluene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
4-Methyl-2-pentanone (MIBK)	ND		40		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Acetone	ND		40		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Benzene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Bromobenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Bromoform	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Bromomethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Carbon disulfide	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Carbon tetrachloride	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chlorobenzene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chlorobromomethane	ND		16		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chlorodibromomethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chloroethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chloroform	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Chloromethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
cis-1,2-Dichloroethene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
cis-1,3-Dichloropropene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Dibromomethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Dichlorobromomethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Dichlorodifluoromethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Ethylbenzene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Ethylene Dibromide	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Hexachlorobutadiene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Isopropylbenzene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV63-5**

**Date Collected: 09/07/16 11:05**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-3**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Methylene Chloride	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Naphthalene	ND	*	8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
n-Butylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
N-Propylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
sec-Butylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Styrene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
tert-Butylbenzene	ND	*	4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Tetrachloroethene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Toluene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
trans-1,2-Dichloroethene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
trans-1,3-Dichloropropene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Trichloroethene	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Trichlorofluoromethane	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Vinyl acetate	ND		16		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Vinyl chloride	ND		4.0		ug/Kg		09/09/16 09:55	09/12/16 12:02	1
Xylenes, Total	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		60 - 140	09/09/16 09:55	09/12/16 12:02	1
4-Bromofluorobenzene	84		45 - 131	09/09/16 09:55	09/12/16 12:02	1
Toluene-d8 (Surr)	100		58 - 140	09/09/16 09:55	09/12/16 12:02	1

**Client Sample ID: SV63-10**

**Date Collected: 09/07/16 11:10**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-4**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1,1-Trichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1,2,2-Tetrachloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1,2-Trichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1-Dichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,1-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2,3-Trichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2,3-Trichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2,4-Trichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2,4-Trimethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2-Dibromo-3-Chloropropane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,2-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,3,5-Trimethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,3-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,3-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
1,4-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
2,2-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV63-10**

**Lab Sample ID: 320-21558-4**

**Date Collected: 09/07/16 11:10**

**Matrix: Solid**

**Date Received: 09/08/16 08:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		36		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
2-Chlorotoluene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
2-Hexanone	ND		36		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
4-Chlorotoluene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
<b>4-Isopropyltoluene</b>	<b>7.1</b>		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
4-Methyl-2-pentanone (MIBK)	ND		36		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
<b>Acetone</b>	<b>57</b>		36		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Benzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Bromobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Bromoform	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Bromomethane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Carbon disulfide	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Carbon tetrachloride	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chlorobromomethane	ND		14		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chlorodibromomethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chloroethane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chloroform	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Chloromethane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
cis-1,3-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Dibromomethane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Dichlorobromomethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Dichlorodifluoromethane	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Ethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Ethylene Dibromide	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Hexachlorobutadiene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Isopropylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Methyl tert-butyl ether	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Methylene Chloride	ND		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
<b>Naphthalene</b>	<b>33</b>		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
n-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
N-Propylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
sec-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Styrene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
tert-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Tetrachloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Toluene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
trans-1,2-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
trans-1,3-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Trichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Trichlorofluoromethane	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Vinyl acetate	ND		14		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
Vinyl chloride	ND		3.6		ug/Kg		09/09/16 09:55	09/09/16 16:28	1
<b>Xylenes, Total</b>	<b>7.2</b>		7.1		ug/Kg		09/09/16 09:55	09/09/16 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		60 - 140	09/09/16 09:55	09/09/16 16:28	1
4-Bromofluorobenzene	94		45 - 131	09/09/16 09:55	09/09/16 16:28	1
Toluene-d8 (Surr)	102		58 - 140	09/09/16 09:55	09/09/16 16:28	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV64-5**  
**Date Collected: 09/07/16 11:40**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-5**  
**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1,1-Trichloroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1,2,2-Tetrachloroethane	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1,2-Trichloroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1-Dichloroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1-Dichloroethene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,1-Dichloropropene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2,3-Trichlorobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2,3-Trichloropropane	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2,4-Trichlorobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2,4-Trimethylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2-Dibromo-3-Chloropropane	ND	*	11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2-Dichlorobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2-Dichloroethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,2-Dichloropropane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,3,5-Trimethylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,3-Dichlorobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,3-Dichloropropane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
1,4-Dichlorobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
2,2-Dichloropropane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
2-Butanone (MEK)	ND		57		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
2-Chlorotoluene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
2-Hexanone	ND		57		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
4-Chlorotoluene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
4-Isopropyltoluene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
4-Methyl-2-pentanone (MIBK)	ND		57		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Acetone	ND		57		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Benzene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Bromobenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Bromoform	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Bromomethane	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Carbon disulfide	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Carbon tetrachloride	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chlorobenzene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chlorobromomethane	ND		23		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chlorodibromomethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chloroethane	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chloroform	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Chloromethane	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
cis-1,2-Dichloroethene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
cis-1,3-Dichloropropene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Dibromomethane	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Dichlorobromomethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Dichlorodifluoromethane	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Ethylbenzene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Ethylene Dibromide	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Hexachlorobutadiene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Isopropylbenzene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV64-5**

**Date Collected: 09/07/16 11:40**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-5**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Methylene Chloride	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Naphthalene	ND	*	11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
n-Butylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
N-Propylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
sec-Butylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Styrene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
tert-Butylbenzene	ND	*	5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Tetrachloroethene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Toluene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
trans-1,2-Dichloroethene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
trans-1,3-Dichloropropene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Trichloroethene	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Trichlorofluoromethane	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Vinyl acetate	ND		23		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Vinyl chloride	ND		5.7		ug/Kg		09/09/16 09:55	09/10/16 15:00	1
Xylenes, Total	ND		11		ug/Kg		09/09/16 09:55	09/10/16 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		60 - 140	09/09/16 09:55	09/10/16 15:00	1
4-Bromofluorobenzene	79		45 - 131	09/09/16 09:55	09/10/16 15:00	1
Toluene-d8 (Surr)	98		58 - 140	09/09/16 09:55	09/10/16 15:00	1

**Client Sample ID: SV64-10**

**Date Collected: 09/07/16 11:45**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-6**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1,1-Trichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1,2,2-Tetrachloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1,2-Trichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1-Dichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,1-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2,3-Trichlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2,3-Trichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2,4-Trichlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2,4-Trimethylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2-Dibromo-3-Chloropropane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2-Dichlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2-Dichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,2-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,3,5-Trimethylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,3-Dichlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,3-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
1,4-Dichlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
2,2-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV64-10**

**Lab Sample ID: 320-21558-6**

**Date Collected: 09/07/16 11:45**

**Matrix: Solid**

**Date Received: 09/08/16 08:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		39		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
2-Chlorotoluene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
2-Hexanone	ND		39		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
4-Chlorotoluene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
4-Isopropyltoluene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
4-Methyl-2-pentanone (MIBK)	ND		39		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
<b>Acetone</b>	<b>48</b>		39		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Benzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Bromobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Bromoform	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Bromomethane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Carbon disulfide	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Carbon tetrachloride	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chlorobromomethane	ND		16		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chlorodibromomethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chloroethane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chloroform	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Chloromethane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
cis-1,2-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
cis-1,3-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Dibromomethane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Dichlorobromomethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Dichlorodifluoromethane	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Ethylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Ethylene Dibromide	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Hexachlorobutadiene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Isopropylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Methyl tert-butyl ether	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Methylene Chloride	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Naphthalene	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
n-Butylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
N-Propylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
sec-Butylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Styrene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
tert-Butylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Tetrachloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Toluene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
trans-1,2-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
trans-1,3-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Trichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Trichlorofluoromethane	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Vinyl acetate	ND		16		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Vinyl chloride	ND		3.9		ug/Kg		09/09/16 09:55	09/09/16 17:27	1
Xylenes, Total	ND		7.8		ug/Kg		09/09/16 09:55	09/09/16 17:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		60 - 140	09/09/16 09:55	09/09/16 17:27	1
4-Bromofluorobenzene	98		45 - 131	09/09/16 09:55	09/09/16 17:27	1
Toluene-d8 (Surr)	103		58 - 140	09/09/16 09:55	09/09/16 17:27	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV65-5**  
**Date Collected: 09/07/16 12:20**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-7**  
**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1,1-Trichloroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1,1,2,2-Tetrachloroethane	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1,2-Trichloroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1-Dichloroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1-Dichloroethene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,1-Dichloropropene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2,3-Trichlorobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2,3-Trichloropropane	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2,4-Trichlorobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2,4-Trimethylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2-Dibromo-3-Chloropropane	ND	*	8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2-Dichlorobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2-Dichloroethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,2-Dichloropropane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,3,5-Trimethylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,3-Dichlorobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,3-Dichloropropane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
1,4-Dichlorobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
2,2-Dichloropropane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
2-Butanone (MEK)	ND	*	41		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
2-Chlorotoluene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
2-Hexanone	ND		41		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
4-Chlorotoluene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
4-Isopropyltoluene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
4-Methyl-2-pentanone (MIBK)	ND		41		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Acetone	ND		41		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Benzene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Bromobenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Bromoform	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Bromomethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Carbon disulfide	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Carbon tetrachloride	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chlorobenzene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chlorobromomethane	ND		16		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chlorodibromomethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chloroethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chloroform	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Chloromethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
cis-1,2-Dichloroethene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
cis-1,3-Dichloropropene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Dibromomethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Dichlorobromomethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Dichlorodifluoromethane	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Ethylbenzene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Ethylene Dibromide	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Hexachlorobutadiene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Isopropylbenzene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1

TestAmerica Sacramento



# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV65-5**

**Date Collected: 09/07/16 12:20**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-7**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Methylene Chloride	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Naphthalene	ND	*	8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
n-Butylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
N-Propylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
sec-Butylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Styrene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
tert-Butylbenzene	ND	*	4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Tetrachloroethene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Toluene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
trans-1,2-Dichloroethene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
trans-1,3-Dichloropropene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Trichloroethene	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Trichlorofluoromethane	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Vinyl acetate	ND		16		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Vinyl chloride	ND		4.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1
Xylenes, Total	ND		8.1		ug/Kg		09/09/16 09:55	09/12/16 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		60 - 140	09/09/16 09:55	09/12/16 12:32	1
4-Bromofluorobenzene	78		45 - 131	09/09/16 09:55	09/12/16 12:32	1
Toluene-d8 (Surr)	97		58 - 140	09/09/16 09:55	09/12/16 12:32	1

**Client Sample ID: SV65-10**

**Date Collected: 09/07/16 12:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-8**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1,1-Trichloroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1,2,2-Tetrachloroethane	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1,2-Trichloroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1-Dichloroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1-Dichloroethene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,1-Dichloropropene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2,3-Trichlorobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2,3-Trichloropropane	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2,4-Trichlorobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2,4-Trimethylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2-Dibromo-3-Chloropropane	ND	*	10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2-Dichlorobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2-Dichloroethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,2-Dichloropropane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,3,5-Trimethylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,3-Dichlorobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,3-Dichloropropane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
1,4-Dichlorobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
2,2-Dichloropropane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV65-10**

**Lab Sample ID: 320-21558-8**

**Date Collected: 09/07/16 12:25**

**Matrix: Solid**

**Date Received: 09/08/16 08:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND	*	51		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
2-Chlorotoluene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
2-Hexanone	ND		51		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
4-Chlorotoluene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
4-Isopropyltoluene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
4-Methyl-2-pentanone (MIBK)	ND		51		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Acetone	ND		51		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Benzene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Bromobenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Bromoform	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Bromomethane	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Carbon disulfide	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Carbon tetrachloride	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chlorobenzene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chlorobromomethane	ND		20		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chlorodibromomethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chloroethane	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chloroform	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Chloromethane	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
cis-1,2-Dichloroethene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
cis-1,3-Dichloropropene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Dibromomethane	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Dichlorobromomethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Ethylbenzene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Ethylene Dibromide	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Hexachlorobutadiene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Isopropylbenzene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Methyl tert-butyl ether	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Methylene Chloride	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Naphthalene	ND	*	10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
n-Butylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
N-Propylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
sec-Butylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Styrene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
tert-Butylbenzene	ND	*	5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Tetrachloroethene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Toluene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
trans-1,2-Dichloroethene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
trans-1,3-Dichloropropene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Trichloroethene	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Trichlorofluoromethane	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Vinyl acetate	ND		20		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Vinyl chloride	ND		5.1		ug/Kg		09/09/16 09:55	09/12/16 13:01	1
Xylenes, Total	ND		10		ug/Kg		09/09/16 09:55	09/12/16 13:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		60 - 140	09/09/16 09:55	09/12/16 13:01	1
4-Bromofluorobenzene	79		45 - 131	09/09/16 09:55	09/12/16 13:01	1
Toluene-d8 (Surr)	96		58 - 140	09/09/16 09:55	09/12/16 13:01	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV66-5**

**Date Collected: 09/07/16 13:20**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-9**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1,1-Trichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1,2,2-Tetrachloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1,2-Trichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1-Dichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,1-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2,3-Trichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2,3-Trichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2,4-Trichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2,4-Trimethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2-Dibromo-3-Chloropropane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,2-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,3,5-Trimethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,3-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,3-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
1,4-Dichlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
2,2-Dichloropropane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
2-Butanone (MEK)	ND		36		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
2-Chlorotoluene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
2-Hexanone	ND		36		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
4-Chlorotoluene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
4-Isopropyltoluene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
4-Methyl-2-pentanone (MIBK)	ND		36		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
<b>Acetone</b>	<b>47</b>		36		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Benzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Bromobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Bromoform	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Bromomethane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Carbon disulfide	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Carbon tetrachloride	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chlorobenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chlorobromomethane	ND		14		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chlorodibromomethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chloroethane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chloroform	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Chloromethane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
cis-1,3-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Dibromomethane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Dichlorobromomethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Dichlorodifluoromethane	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Ethylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Ethylene Dibromide	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Hexachlorobutadiene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Isopropylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV66-5**

**Date Collected: 09/07/16 13:20**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-9**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Methylene Chloride	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Naphthalene	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
n-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
N-Propylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
sec-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Styrene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
tert-Butylbenzene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Tetrachloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Toluene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
trans-1,2-Dichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
trans-1,3-Dichloropropene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Trichloroethene	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Trichlorofluoromethane	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Vinyl acetate	ND		14		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Vinyl chloride	ND		3.6		ug/Kg		09/09/16 09:55	09/10/16 14:01	1
Xylenes, Total	ND		7.2		ug/Kg		09/09/16 09:55	09/10/16 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		60 - 140	09/09/16 09:55	09/10/16 14:01	1
4-Bromofluorobenzene	96		45 - 131	09/09/16 09:55	09/10/16 14:01	1
Toluene-d8 (Surr)	105		58 - 140	09/09/16 09:55	09/10/16 14:01	1

**Client Sample ID: SV66-10**

**Date Collected: 09/07/16 13:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-10**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1,1-Trichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1,1,2-Tetrachloroethane	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1,2-Trichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1-Dichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,1-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2,3-Trichlorobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2,3-Trichloropropane	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2,4-Trichlorobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2,4-Trimethylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2-Dibromo-3-Chloropropane	ND	*	7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2-Dichlorobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2-Dichloroethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,2-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,3,5-Trimethylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,3-Dichlorobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,3-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
1,4-Dichlorobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
2,2-Dichloropropane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV66-10**

**Lab Sample ID: 320-21558-10**

**Date Collected: 09/07/16 13:25**

**Matrix: Solid**

**Date Received: 09/08/16 08:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND	*	39		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
2-Chlorotoluene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
2-Hexanone	ND		39		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
4-Chlorotoluene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
4-Isopropyltoluene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
4-Methyl-2-pentanone (MIBK)	ND		39		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
<b>Acetone</b>	<b>100</b>		39		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Benzene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Bromobenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Bromoform	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Bromomethane	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Carbon disulfide	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Carbon tetrachloride	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chlorobenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chlorobromomethane	ND		15		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chlorodibromomethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chloroethane	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chloroform	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Chloromethane	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
cis-1,2-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
cis-1,3-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Dibromomethane	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Dichlorobromomethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Dichlorodifluoromethane	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Ethylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Ethylene Dibromide	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Hexachlorobutadiene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Isopropylbenzene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Methyl tert-butyl ether	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Methylene Chloride	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Naphthalene	ND	*	7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
n-Butylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
N-Propylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
sec-Butylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Styrene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
tert-Butylbenzene	ND	*	3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Tetrachloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Toluene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
trans-1,2-Dichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
trans-1,3-Dichloropropene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Trichloroethene	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Trichlorofluoromethane	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Vinyl acetate	ND		15		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Vinyl chloride	ND		3.9		ug/Kg		09/09/16 09:55	09/12/16 13:30	1
Xylenes, Total	ND		7.7		ug/Kg		09/09/16 09:55	09/12/16 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		60 - 140	09/09/16 09:55	09/12/16 13:30	1
4-Bromofluorobenzene	89		45 - 131	09/09/16 09:55	09/12/16 13:30	1
Toluene-d8 (Surr)	100		58 - 140	09/09/16 09:55	09/12/16 13:30	1

TestAmerica Sacramento

# Surrogate Summary

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Matrix: Solid**

**Prep Type: Total/NA**

**Percent Surrogate Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (60-140)	BFB (45-131)	TOL (58-140)
320-21558-1	SV62-5	94	85	102
320-21558-2	SV62-10	114	84	99
320-21558-3	SV63-5	114	84	100
320-21558-4	SV63-10	113	94	102
320-21558-5	SV64-5	108	79	98
320-21558-6	SV64-10	118	98	103
320-21558-7	SV65-5	116	78	97
320-21558-8	SV65-10	114	79	96
320-21558-9	SV66-5	115	96	105
320-21558-10	SV66-10	123	89	100
LCS 720-209005/17	Lab Control Sample	102	100	106
LCS 720-209005/5	Lab Control Sample	105	101	106
LCS 720-209065/5	Lab Control Sample	102	100	106
LCS 720-209065/7	Lab Control Sample	103	100	106
LCS 720-209080/6	Lab Control Sample	100	100	106
LCS 720-209080/8	Lab Control Sample	104	99	106
LCSD 720-209005/18	Lab Control Sample Dup	101	100	106
LCSD 720-209005/6	Lab Control Sample Dup	103	100	106
LCSD 720-209065/6	Lab Control Sample Dup	101	99	106
LCSD 720-209065/8	Lab Control Sample Dup	104	101	106
LCSD 720-209080/7	Lab Control Sample Dup	101	100	106
LCSD 720-209080/9	Lab Control Sample Dup	104	99	106
MB 720-209005/4	Method Blank	108	100	105
MB 720-209065/4	Method Blank	103	98	105
MB 720-209080/5	Method Blank	104	97	104

**Surrogate Legend**

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

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: MB 720-209005/4**

**Matrix: Solid**

**Analysis Batch: 209005**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1-Dichloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1-Dichloroethene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,1-Dichloropropene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			09/09/16 09:08	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2-Dichloroethane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,2-Dichloropropane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
1,3-Dichloropropane	ND		5.0		ug/Kg			09/09/16 09:08	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
2,2-Dichloropropane	ND		5.0		ug/Kg			09/09/16 09:08	1
2-Butanone (MEK)	ND		50		ug/Kg			09/09/16 09:08	1
2-Chlorotoluene	ND		5.0		ug/Kg			09/09/16 09:08	1
2-Hexanone	ND		50		ug/Kg			09/09/16 09:08	1
4-Chlorotoluene	ND		5.0		ug/Kg			09/09/16 09:08	1
4-Isopropyltoluene	ND		5.0		ug/Kg			09/09/16 09:08	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			09/09/16 09:08	1
Acetone	ND		50		ug/Kg			09/09/16 09:08	1
Benzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Bromobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Bromoform	ND		5.0		ug/Kg			09/09/16 09:08	1
Bromomethane	ND		10		ug/Kg			09/09/16 09:08	1
Carbon disulfide	ND		5.0		ug/Kg			09/09/16 09:08	1
Carbon tetrachloride	ND		5.0		ug/Kg			09/09/16 09:08	1
Chlorobenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Chlorobromomethane	ND		20		ug/Kg			09/09/16 09:08	1
Chlorodibromomethane	ND		5.0		ug/Kg			09/09/16 09:08	1
Chloroethane	ND		10		ug/Kg			09/09/16 09:08	1
Chloroform	ND		5.0		ug/Kg			09/09/16 09:08	1
Chloromethane	ND		10		ug/Kg			09/09/16 09:08	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			09/09/16 09:08	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			09/09/16 09:08	1
Dibromomethane	ND		10		ug/Kg			09/09/16 09:08	1
Dichlorobromomethane	ND		5.0		ug/Kg			09/09/16 09:08	1
Dichlorodifluoromethane	ND		10		ug/Kg			09/09/16 09:08	1
Ethylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Ethylene Dibromide	ND		5.0		ug/Kg			09/09/16 09:08	1
Hexachlorobutadiene	ND		5.0		ug/Kg			09/09/16 09:08	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: MB 720-209005/4**  
**Matrix: Solid**  
**Analysis Batch: 209005**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Methyl tert-butyl ether	ND		5.0		ug/Kg			09/09/16 09:08	1
Methylene Chloride	ND		10		ug/Kg			09/09/16 09:08	1
Naphthalene	ND		10		ug/Kg			09/09/16 09:08	1
n-Butylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
N-Propylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
sec-Butylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Styrene	ND		5.0		ug/Kg			09/09/16 09:08	1
tert-Butylbenzene	ND		5.0		ug/Kg			09/09/16 09:08	1
Tetrachloroethene	ND		5.0		ug/Kg			09/09/16 09:08	1
Toluene	ND		5.0		ug/Kg			09/09/16 09:08	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			09/09/16 09:08	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			09/09/16 09:08	1
Trichloroethene	ND		5.0		ug/Kg			09/09/16 09:08	1
Trichlorofluoromethane	ND		5.0		ug/Kg			09/09/16 09:08	1
Vinyl acetate	ND		20		ug/Kg			09/09/16 09:08	1
Vinyl chloride	ND		5.0		ug/Kg			09/09/16 09:08	1
Xylenes, Total	ND		10		ug/Kg			09/09/16 09:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		60 - 140		09/09/16 09:08	1
4-Bromofluorobenzene	100		45 - 131		09/09/16 09:08	1
Toluene-d8 (Surr)	105		58 - 140		09/09/16 09:08	1

**Lab Sample ID: LCS 720-209005/17**  
**Matrix: Solid**  
**Analysis Batch: 209005**

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCS 720-209005/5**  
**Matrix: Solid**  
**Analysis Batch: 209005**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/Kg		105	70 - 130
1,1,1-Trichloroethane	50.0	55.1		ug/Kg		110	70 - 130
1,1,2,2-Tetrachloroethane	50.0	56.1		ug/Kg		112	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	59.1		ug/Kg		118	60 - 140
1,1,2-Trichloroethane	50.0	58.7		ug/Kg		117	70 - 130
1,1-Dichloroethane	50.0	51.3		ug/Kg		103	70 - 130
1,1-Dichloroethene	50.0	54.9		ug/Kg		110	74 - 122
1,1-Dichloropropene	50.0	54.1		ug/Kg		108	70 - 130
1,2,3-Trichlorobenzene	50.0	61.6		ug/Kg		123	60 - 140

TestAmerica Sacramento



# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCS 720-209005/5**

**Matrix: Solid**

**Analysis Batch: 209005**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	50.0	59.5		ug/Kg		119	70 - 146
1,2,4-Trichlorobenzene	50.0	61.3		ug/Kg		123	60 - 140
1,2,4-Trimethylbenzene	50.0	51.1		ug/Kg		102	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	69.6		ug/Kg		139	60 - 145
1,2-Dichlorobenzene	50.0	51.0		ug/Kg		102	70 - 130
1,2-Dichloroethane	50.0	54.6		ug/Kg		109	70 - 130
1,2-Dichloropropane	50.0	53.8		ug/Kg		108	73 - 127
1,3,5-Trimethylbenzene	50.0	50.8		ug/Kg		102	70 - 131
1,3-Dichlorobenzene	50.0	50.7		ug/Kg		101	70 - 131
1,3-Dichloropropane	50.0	58.4		ug/Kg		117	70 - 140
1,4-Dichlorobenzene	50.0	50.6		ug/Kg		101	70 - 130
2,2-Dichloropropane	50.0	53.8		ug/Kg		108	70 - 162
2-Butanone (MEK)	250	290		ug/Kg		116	53 - 133
2-Chlorotoluene	50.0	49.2		ug/Kg		98	70 - 138
2-Hexanone	250	278		ug/Kg		111	44 - 133
4-Chlorotoluene	50.0	50.1		ug/Kg		100	70 - 136
4-Isopropyltoluene	50.0	51.0		ug/Kg		102	70 - 133
4-Methyl-2-pentanone (MIBK)	250	270		ug/Kg		108	60 - 160
Acetone	250	262		ug/Kg		105	30 - 162
Benzene	50.0	54.3		ug/Kg		109	70 - 130
Bromobenzene	50.0	51.7		ug/Kg		103	70 - 130
Bromoform	50.0	62.8		ug/Kg		126	59 - 158
Bromomethane	50.0	44.4		ug/Kg		89	59 - 132
Carbon disulfide	50.0	57.4		ug/Kg		115	60 - 140
Carbon tetrachloride	50.0	56.8		ug/Kg		114	70 - 142
Chlorobenzene	50.0	51.5		ug/Kg		103	70 - 130
Chlorobromomethane	50.0	58.7		ug/Kg		117	70 - 130
Chlorodibromomethane	50.0	62.1		ug/Kg		124	70 - 146
Chloroethane	50.0	45.6		ug/Kg		91	65 - 130
Chloroform	50.0	54.0		ug/Kg		108	77 - 127
Chloromethane	50.0	34.2		ug/Kg		68	55 - 140
cis-1,2-Dichloroethene	50.0	51.7		ug/Kg		103	70 - 138
cis-1,3-Dichloropropene	50.0	59.9		ug/Kg		120	68 - 147
Dibromomethane	50.0	60.0		ug/Kg		120	70 - 139
Dichlorobromomethane	50.0	57.5		ug/Kg		115	70 - 140
Dichlorodifluoromethane	50.0	26.9		ug/Kg		54	37 - 158
Ethylbenzene	50.0	50.8		ug/Kg		102	80 - 137
Ethylene Dibromide	50.0	66.5		ug/Kg		133	70 - 140
Hexachlorobutadiene	50.0	61.5		ug/Kg		123	70 - 132
Isopropylbenzene	50.0	54.0		ug/Kg		108	70 - 130
Methyl tert-butyl ether	50.0	64.2		ug/Kg		128	70 - 144
Methylene Chloride	50.0	55.0		ug/Kg		110	70 - 134
m-Xylene & p-Xylene	50.0	51.2		ug/Kg		102	70 - 146
Naphthalene	50.0	65.2		ug/Kg		130	60 - 147
n-Butylbenzene	50.0	51.4		ug/Kg		103	70 - 142
N-Propylbenzene	50.0	51.7		ug/Kg		103	70 - 130
o-Xylene	50.0	50.7		ug/Kg		101	70 - 140
sec-Butylbenzene	50.0	51.5		ug/Kg		103	70 - 136

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCS 720-209005/5**  
**Matrix: Solid**  
**Analysis Batch: 209005**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	50.0	54.8		ug/Kg		110	70 - 130
tert-Butylbenzene	50.0	51.0		ug/Kg		102	70 - 130
Tetrachloroethene	50.0	58.6		ug/Kg		117	70 - 132
Toluene	50.0	49.4		ug/Kg		99	75 - 120
trans-1,2-Dichloroethene	50.0	54.7		ug/Kg		109	67 - 130
trans-1,3-Dichloropropene	50.0	62.3		ug/Kg		125	70 - 155
Trichloroethene	50.0	56.0		ug/Kg		112	70 - 133
Trichlorofluoromethane	50.0	51.4		ug/Kg		103	60 - 140
Vinyl acetate	50.0	62.0		ug/Kg		124	38 - 176
Vinyl chloride	50.0	42.6		ug/Kg		85	58 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		60 - 140
4-Bromofluorobenzene	101		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209005/18**  
**Matrix: Solid**  
**Analysis Batch: 209005**

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209005/6**  
**Matrix: Solid**  
**Analysis Batch: 209005**

**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
1,1,1,2-Tetrachloroethane	50.0	52.9		ug/Kg		106	70 - 130	1	20
1,1,1-Trichloroethane	50.0	55.8		ug/Kg		112	70 - 130	1	20
1,1,1,2-Tetrachloroethane	50.0	56.6		ug/Kg		113	70 - 146	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	59.7		ug/Kg		119	60 - 140	1	20
1,1,2-Trichloroethane	50.0	58.2		ug/Kg		116	70 - 130	1	20
1,1-Dichloroethane	50.0	51.7		ug/Kg		103	70 - 130	1	20
1,1-Dichloroethene	50.0	55.4		ug/Kg		111	74 - 122	1	20
1,1-Dichloropropene	50.0	54.4		ug/Kg		109	70 - 130	1	20
1,2,3-Trichlorobenzene	50.0	62.2		ug/Kg		124	60 - 140	1	20
1,2,3-Trichloropropane	50.0	59.9		ug/Kg		120	70 - 146	1	20
1,2,4-Trichlorobenzene	50.0	61.9		ug/Kg		124	60 - 140	1	20
1,2,4-Trimethylbenzene	50.0	52.2		ug/Kg		104	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	50.0	70.3		ug/Kg		141	60 - 145	1	20
1,2-Dichlorobenzene	50.0	52.1		ug/Kg		104	70 - 130	2	20
1,2-Dichloroethane	50.0	54.7		ug/Kg		109	70 - 130	0	20
1,2-Dichloropropane	50.0	53.7		ug/Kg		107	73 - 127	0	20
1,3,5-Trimethylbenzene	50.0	52.3		ug/Kg		105	70 - 131	3	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCSD 720-209005/6**  
**Matrix: Solid**  
**Analysis Batch: 209005**

**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
1,3-Dichlorobenzene	50.0	51.6		ug/Kg		103	70 - 131	2	20
1,3-Dichloropropane	50.0	57.9		ug/Kg		116	70 - 140	1	20
1,4-Dichlorobenzene	50.0	51.3		ug/Kg		103	70 - 130	1	20
2,2-Dichloropropane	50.0	57.0		ug/Kg		114	70 - 162	6	20
2-Butanone (MEK)	250	293		ug/Kg		117	53 - 133	1	20
2-Chlorotoluene	50.0	50.1		ug/Kg		100	70 - 138	2	20
2-Hexanone	250	277		ug/Kg		111	44 - 133	0	20
4-Chlorotoluene	50.0	51.0		ug/Kg		102	70 - 136	2	20
4-Isopropyltoluene	50.0	52.6		ug/Kg		105	70 - 133	3	20
4-Methyl-2-pentanone (MIBK)	250	268		ug/Kg		107	60 - 160	1	20
Acetone	250	277		ug/Kg		111	30 - 162	6	30
Benzene	50.0	54.2		ug/Kg		108	70 - 130	0	20
Bromobenzene	50.0	52.6		ug/Kg		105	70 - 130	2	20
Bromoform	50.0	61.9		ug/Kg		124	59 - 158	1	20
Bromomethane	50.0	45.0		ug/Kg		90	59 - 132	1	20
Carbon disulfide	50.0	57.9		ug/Kg		116	60 - 140	1	20
Carbon tetrachloride	50.0	57.5		ug/Kg		115	70 - 142	1	20
Chlorobenzene	50.0	51.9		ug/Kg		104	70 - 130	1	20
Chlorobromomethane	50.0	57.3		ug/Kg		115	70 - 130	2	20
Chlorodibromomethane	50.0	61.7		ug/Kg		123	70 - 146	1	20
Chloroethane	50.0	45.8		ug/Kg		92	65 - 130	1	20
Chloroform	50.0	54.1		ug/Kg		108	77 - 127	0	20
Chloromethane	50.0	33.6		ug/Kg		67	55 - 140	2	20
cis-1,2-Dichloroethene	50.0	51.7		ug/Kg		103	70 - 138	0	20
cis-1,3-Dichloropropene	50.0	60.2		ug/Kg		120	68 - 147	0	20
Dibromomethane	50.0	58.9		ug/Kg		118	70 - 139	2	20
Dichlorobromomethane	50.0	57.0		ug/Kg		114	70 - 140	1	20
Dichlorodifluoromethane	50.0	26.1		ug/Kg		52	37 - 158	3	20
Ethylbenzene	50.0	51.4		ug/Kg		103	80 - 137	1	20
Ethylene Dibromide	50.0	65.3		ug/Kg		131	70 - 140	2	20
Hexachlorobutadiene	50.0	63.4		ug/Kg		127	70 - 132	3	20
Isopropylbenzene	50.0	55.2		ug/Kg		110	70 - 130	2	20
Methyl tert-butyl ether	50.0	63.6		ug/Kg		127	70 - 144	1	20
Methylene Chloride	50.0	55.2		ug/Kg		110	70 - 134	0	20
m-Xylene & p-Xylene	50.0	52.4		ug/Kg		105	70 - 146	2	20
Naphthalene	50.0	66.7		ug/Kg		133	60 - 147	2	20
n-Butylbenzene	50.0	53.2		ug/Kg		106	70 - 142	3	20
N-Propylbenzene	50.0	53.3		ug/Kg		107	70 - 130	3	20
o-Xylene	50.0	51.1		ug/Kg		102	70 - 140	1	20
sec-Butylbenzene	50.0	53.0		ug/Kg		106	70 - 136	3	20
Styrene	50.0	55.6		ug/Kg		111	70 - 130	1	20
tert-Butylbenzene	50.0	52.6		ug/Kg		105	70 - 130	3	20
Tetrachloroethene	50.0	58.6		ug/Kg		117	70 - 132	0	20
Toluene	50.0	50.7		ug/Kg		101	75 - 120	3	20
trans-1,2-Dichloroethene	50.0	55.6		ug/Kg		111	67 - 130	2	20
trans-1,3-Dichloropropene	50.0	61.5		ug/Kg		123	70 - 155	1	20
Trichloroethene	50.0	56.3		ug/Kg		113	70 - 133	0	20
Trichlorofluoromethane	50.0	52.7		ug/Kg		105	60 - 140	3	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCSD 720-209005/6**

**Client Sample ID: Lab Control Sample Dup**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 209005**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl acetate	50.0	61.9		ug/Kg		124	38 - 176	0	20
Vinyl chloride	50.0	41.3		ug/Kg		83	58 - 125	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	103		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: MB 720-209065/4**

**Client Sample ID: Method Blank**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 209065**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1-Dichloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1-Dichloroethene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,1-Dichloropropene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			09/10/16 10:35	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2-Dichloroethane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,2-Dichloropropane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
1,3-Dichloropropane	ND		5.0		ug/Kg			09/10/16 10:35	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
2,2-Dichloropropane	ND		5.0		ug/Kg			09/10/16 10:35	1
2-Butanone (MEK)	ND		50		ug/Kg			09/10/16 10:35	1
2-Chlorotoluene	ND		5.0		ug/Kg			09/10/16 10:35	1
2-Hexanone	ND		50		ug/Kg			09/10/16 10:35	1
4-Chlorotoluene	ND		5.0		ug/Kg			09/10/16 10:35	1
4-Isopropyltoluene	ND		5.0		ug/Kg			09/10/16 10:35	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			09/10/16 10:35	1
Acetone	ND		50		ug/Kg			09/10/16 10:35	1
Benzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Bromobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Bromoform	ND		5.0		ug/Kg			09/10/16 10:35	1
Bromomethane	ND		10		ug/Kg			09/10/16 10:35	1
Carbon disulfide	ND		5.0		ug/Kg			09/10/16 10:35	1
Carbon tetrachloride	ND		5.0		ug/Kg			09/10/16 10:35	1
Chlorobenzene	ND		5.0		ug/Kg			09/10/16 10:35	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: MB 720-209065/4**  
**Matrix: Solid**  
**Analysis Batch: 209065**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	ND		20		ug/Kg			09/10/16 10:35	1
Chlorodibromomethane	ND		5.0		ug/Kg			09/10/16 10:35	1
Chloroethane	ND		10		ug/Kg			09/10/16 10:35	1
Chloroform	ND		5.0		ug/Kg			09/10/16 10:35	1
Chloromethane	ND		10		ug/Kg			09/10/16 10:35	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			09/10/16 10:35	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			09/10/16 10:35	1
Dibromomethane	ND		10		ug/Kg			09/10/16 10:35	1
Dichlorobromomethane	ND		5.0		ug/Kg			09/10/16 10:35	1
Dichlorodifluoromethane	ND		10		ug/Kg			09/10/16 10:35	1
Ethylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Ethylene Dibromide	ND		5.0		ug/Kg			09/10/16 10:35	1
Hexachlorobutadiene	ND		5.0		ug/Kg			09/10/16 10:35	1
Isopropylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Methyl tert-butyl ether	ND		5.0		ug/Kg			09/10/16 10:35	1
Methylene Chloride	ND		10		ug/Kg			09/10/16 10:35	1
Naphthalene	ND		10		ug/Kg			09/10/16 10:35	1
n-Butylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
N-Propylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
sec-Butylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Styrene	ND		5.0		ug/Kg			09/10/16 10:35	1
tert-Butylbenzene	ND		5.0		ug/Kg			09/10/16 10:35	1
Tetrachloroethene	ND		5.0		ug/Kg			09/10/16 10:35	1
Toluene	ND		5.0		ug/Kg			09/10/16 10:35	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			09/10/16 10:35	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			09/10/16 10:35	1
Trichloroethene	ND		5.0		ug/Kg			09/10/16 10:35	1
Trichlorofluoromethane	ND		5.0		ug/Kg			09/10/16 10:35	1
Vinyl acetate	ND		20		ug/Kg			09/10/16 10:35	1
Vinyl chloride	ND		5.0		ug/Kg			09/10/16 10:35	1
Xylenes, Total	ND		10		ug/Kg			09/10/16 10:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		60 - 140		09/10/16 10:35	1
4-Bromofluorobenzene	98		45 - 131		09/10/16 10:35	1
Toluene-d8 (Surr)	105		58 - 140		09/10/16 10:35	1

**Lab Sample ID: LCS 720-209065/5**  
**Matrix: Solid**  
**Analysis Batch: 209065**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	51.7		ug/Kg		103	70 - 130
1,1,1-Trichloroethane	50.0	55.4		ug/Kg		111	70 - 130
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/Kg		100	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	60.5		ug/Kg		121	60 - 140
1,1,2-Trichloroethane	50.0	53.5		ug/Kg		107	70 - 130

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCS 720-209065/5**

**Matrix: Solid**

**Analysis Batch: 209065**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	51.2		ug/Kg		102	70 - 130
1,1-Dichloroethene	50.0	56.1		ug/Kg		112	74 - 122
1,1-Dichloropropene	50.0	54.4		ug/Kg		109	70 - 130
1,2,3-Trichlorobenzene	50.0	58.9		ug/Kg		118	60 - 140
1,2,3-Trichloropropane	50.0	53.1		ug/Kg		106	70 - 146
1,2,4-Trichlorobenzene	50.0	59.7		ug/Kg		119	60 - 140
1,2,4-Trimethylbenzene	50.0	51.1		ug/Kg		102	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	58.9		ug/Kg		118	60 - 145
1,2-Dichlorobenzene	50.0	49.9		ug/Kg		100	70 - 130
1,2-Dichloroethane	50.0	52.1		ug/Kg		104	70 - 130
1,2-Dichloropropane	50.0	51.9		ug/Kg		104	73 - 127
1,3,5-Trimethylbenzene	50.0	50.9		ug/Kg		102	70 - 131
1,3-Dichlorobenzene	50.0	50.0		ug/Kg		100	70 - 131
1,3-Dichloropropane	50.0	54.5		ug/Kg		109	70 - 140
1,4-Dichlorobenzene	50.0	49.8		ug/Kg		100	70 - 130
2,2-Dichloropropane	50.0	53.0		ug/Kg		106	70 - 162
2-Butanone (MEK)	250	246		ug/Kg		98	53 - 133
2-Chlorotoluene	50.0	48.8		ug/Kg		98	70 - 138
2-Hexanone	250	224		ug/Kg		89	44 - 133
4-Chlorotoluene	50.0	49.6		ug/Kg		99	70 - 136
4-Isopropyltoluene	50.0	51.8		ug/Kg		104	70 - 133
4-Methyl-2-pentanone (MIBK)	250	222		ug/Kg		89	60 - 160
Acetone	250	232		ug/Kg		93	30 - 162
Benzene	50.0	53.4		ug/Kg		107	70 - 130
Bromobenzene	50.0	49.9		ug/Kg		100	70 - 130
Bromoform	50.0	58.0		ug/Kg		116	59 - 158
Bromomethane	50.0	52.5		ug/Kg		105	59 - 132
Carbon disulfide	50.0	59.4		ug/Kg		119	60 - 140
Carbon tetrachloride	50.0	57.4		ug/Kg		115	70 - 142
Chlorobenzene	50.0	51.1		ug/Kg		102	70 - 130
Chlorobromomethane	50.0	55.7		ug/Kg		111	70 - 130
Chlorodibromomethane	50.0	58.8		ug/Kg		118	70 - 146
Chloroethane	50.0	53.8		ug/Kg		108	65 - 130
Chloroform	50.0	52.5		ug/Kg		105	77 - 127
Chloromethane	50.0	48.9		ug/Kg		98	55 - 140
cis-1,2-Dichloroethene	50.0	51.4		ug/Kg		103	70 - 138
cis-1,3-Dichloropropene	50.0	57.6		ug/Kg		115	68 - 147
Dibromomethane	50.0	54.8		ug/Kg		110	70 - 139
Dichlorobromomethane	50.0	55.3		ug/Kg		111	70 - 140
Dichlorodifluoromethane	50.0	50.3		ug/Kg		101	37 - 158
Ethylbenzene	50.0	50.9		ug/Kg		102	80 - 137
Ethylene Dibromide	50.0	60.5		ug/Kg		121	70 - 140
Hexachlorobutadiene	50.0	61.2		ug/Kg		122	70 - 132
Isopropylbenzene	50.0	54.7		ug/Kg		109	70 - 130
Methyl tert-butyl ether	50.0	58.4		ug/Kg		117	70 - 144
Methylene Chloride	50.0	55.6		ug/Kg		111	70 - 134
m-Xylene & p-Xylene	50.0	51.7		ug/Kg		103	70 - 146
Naphthalene	50.0	58.8		ug/Kg		118	60 - 147

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCS 720-209065/5**  
**Matrix: Solid**  
**Analysis Batch: 209065**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
n-Butylbenzene	50.0	52.7		ug/Kg		105	70 - 142
N-Propylbenzene	50.0	52.1		ug/Kg		104	70 - 130
o-Xylene	50.0	50.3		ug/Kg		101	70 - 140
sec-Butylbenzene	50.0	52.2		ug/Kg		104	70 - 136
Styrene	50.0	54.0		ug/Kg		108	70 - 130
tert-Butylbenzene	50.0	51.8		ug/Kg		104	70 - 130
Tetrachloroethene	50.0	58.1		ug/Kg		116	70 - 132
Toluene	50.0	49.5		ug/Kg		99	75 - 120
trans-1,2-Dichloroethene	50.0	54.8		ug/Kg		110	67 - 130
trans-1,3-Dichloropropene	50.0	58.5		ug/Kg		117	70 - 155
Trichloroethene	50.0	55.8		ug/Kg		112	70 - 133
Trichlorofluoromethane	50.0	59.0		ug/Kg		118	60 - 140
Vinyl acetate	50.0	58.3		ug/Kg		117	38 - 176
Vinyl chloride	50.0	53.7		ug/Kg		107	58 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCS 720-209065/7**  
**Matrix: Solid**  
**Analysis Batch: 209065**

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209065/6**  
**Matrix: Solid**  
**Analysis Batch: 209065**

**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
1,1,1,2-Tetrachloroethane	50.0	51.2		ug/Kg		102	70 - 130	1	20
1,1,1-Trichloroethane	50.0	55.3		ug/Kg		111	70 - 130	0	20
1,1,2,2-Tetrachloroethane	50.0	50.5		ug/Kg		101	70 - 146	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	59.1		ug/Kg		118	60 - 140	2	20
1,1,2-Trichloroethane	50.0	53.2		ug/Kg		106	70 - 130	1	20
1,1-Dichloroethane	50.0	50.8		ug/Kg		102	70 - 130	1	20
1,1-Dichloroethene	50.0	54.3		ug/Kg		109	74 - 122	3	20
1,1-Dichloropropene	50.0	53.7		ug/Kg		107	70 - 130	1	20
1,2,3-Trichlorobenzene	50.0	58.2		ug/Kg		116	60 - 140	1	20
1,2,3-Trichloropropane	50.0	53.2		ug/Kg		106	70 - 146	0	20
1,2,4-Trichlorobenzene	50.0	58.5		ug/Kg		117	60 - 140	2	20
1,2,4-Trimethylbenzene	50.0	51.1		ug/Kg		102	70 - 130	0	20
1,2-Dibromo-3-Chloropropane	50.0	60.2		ug/Kg		120	60 - 145	2	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCSD 720-209065/6**  
**Matrix: Solid**  
**Analysis Batch: 209065**

**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
1,2-Dichlorobenzene	50.0	49.5		ug/Kg		99	70 - 130	1	20
1,2-Dichloroethane	50.0	51.2		ug/Kg		102	70 - 130	2	20
1,2-Dichloropropane	50.0	51.2		ug/Kg		102	73 - 127	1	20
1,3,5-Trimethylbenzene	50.0	50.9		ug/Kg		102	70 - 131	0	20
1,3-Dichlorobenzene	50.0	50.0		ug/Kg		100	70 - 131	0	20
1,3-Dichloropropane	50.0	53.1		ug/Kg		106	70 - 140	2	20
1,4-Dichlorobenzene	50.0	49.8		ug/Kg		100	70 - 130	0	20
2,2-Dichloropropane	50.0	58.5		ug/Kg		117	70 - 162	10	20
2-Butanone (MEK)	250	244		ug/Kg		98	53 - 133	1	20
2-Chlorotoluene	50.0	48.7		ug/Kg		97	70 - 138	0	20
2-Hexanone	250	221		ug/Kg		88	44 - 133	1	20
4-Chlorotoluene	50.0	49.3		ug/Kg		99	70 - 136	0	20
4-Isopropyltoluene	50.0	51.7		ug/Kg		103	70 - 133	0	20
4-Methyl-2-pentanone (MIBK)	250	221		ug/Kg		88	60 - 160	0	20
Acetone	250	227		ug/Kg		91	30 - 162	2	30
Benzene	50.0	52.6		ug/Kg		105	70 - 130	1	20
Bromobenzene	50.0	49.8		ug/Kg		100	70 - 130	0	20
Bromoform	50.0	58.0		ug/Kg		116	59 - 158	0	20
Bromomethane	50.0	51.0		ug/Kg		102	59 - 132	3	20
Carbon disulfide	50.0	58.9		ug/Kg		118	60 - 140	1	20
Carbon tetrachloride	50.0	56.7		ug/Kg		113	70 - 142	1	20
Chlorobenzene	50.0	50.5		ug/Kg		101	70 - 130	1	20
Chlorobromomethane	50.0	55.0		ug/Kg		110	70 - 130	1	20
Chlorodibromomethane	50.0	57.7		ug/Kg		115	70 - 146	2	20
Chloroethane	50.0	51.4		ug/Kg		103	65 - 130	5	20
Chloroform	50.0	52.4		ug/Kg		105	77 - 127	0	20
Chloromethane	50.0	45.6		ug/Kg		91	55 - 140	7	20
cis-1,2-Dichloroethene	50.0	50.7		ug/Kg		101	70 - 138	1	20
cis-1,3-Dichloropropene	50.0	56.5		ug/Kg		113	68 - 147	2	20
Dibromomethane	50.0	53.8		ug/Kg		108	70 - 139	2	20
Dichlorobromomethane	50.0	54.5		ug/Kg		109	70 - 140	2	20
Dichlorodifluoromethane	50.0	47.4		ug/Kg		95	37 - 158	6	20
Ethylbenzene	50.0	50.3		ug/Kg		101	80 - 137	1	20
Ethylene Dibromide	50.0	59.3		ug/Kg		119	70 - 140	2	20
Hexachlorobutadiene	50.0	60.9		ug/Kg		122	70 - 132	1	20
Isopropylbenzene	50.0	54.1		ug/Kg		108	70 - 130	1	20
Methyl tert-butyl ether	50.0	57.8		ug/Kg		116	70 - 144	1	20
Methylene Chloride	50.0	54.4		ug/Kg		109	70 - 134	2	20
m-Xylene & p-Xylene	50.0	50.8		ug/Kg		102	70 - 146	2	20
Naphthalene	50.0	59.1		ug/Kg		118	60 - 147	1	20
n-Butylbenzene	50.0	52.0		ug/Kg		104	70 - 142	1	20
N-Propylbenzene	50.0	52.3		ug/Kg		105	70 - 130	0	20
o-Xylene	50.0	49.7		ug/Kg		99	70 - 140	1	20
sec-Butylbenzene	50.0	52.3		ug/Kg		105	70 - 136	0	20
Styrene	50.0	53.0		ug/Kg		106	70 - 130	2	20
tert-Butylbenzene	50.0	51.6		ug/Kg		103	70 - 130	0	20
Tetrachloroethene	50.0	57.6		ug/Kg		115	70 - 132	1	20
Toluene	50.0	48.8		ug/Kg		98	75 - 120	2	20

TestAmerica Sacramento



# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCSD 720-209065/6**  
**Matrix: Solid**  
**Analysis Batch: 209065**

**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
trans-1,2-Dichloroethene	50.0	54.9		ug/Kg		110	67 - 130	0	20
trans-1,3-Dichloropropene	50.0	57.2		ug/Kg		114	70 - 155	2	20
Trichloroethene	50.0	55.1		ug/Kg		110	70 - 133	1	20
Trichlorofluoromethane	50.0	58.6		ug/Kg		117	60 - 140	1	20
Vinyl acetate	50.0	58.1		ug/Kg		116	38 - 176	0	20
Vinyl chloride	50.0	50.6		ug/Kg		101	58 - 125	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		60 - 140
4-Bromofluorobenzene	99		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209065/8**  
**Matrix: Solid**  
**Analysis Batch: 209065**

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		60 - 140
4-Bromofluorobenzene	101		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: MB 720-209080/5**  
**Matrix: Solid**  
**Analysis Batch: 209080**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1-Dichloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1-Dichloroethene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,1-Dichloropropene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			09/12/16 09:07	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2-Dichloroethane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,2-Dichloropropane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
1,3-Dichloropropane	ND		5.0		ug/Kg			09/12/16 09:07	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
2,2-Dichloropropane	ND		5.0		ug/Kg			09/12/16 09:07	1
2-Butanone (MEK)	ND		50		ug/Kg			09/12/16 09:07	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: MB 720-209080/5**  
**Matrix: Solid**  
**Analysis Batch: 209080**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		5.0		ug/Kg			09/12/16 09:07	1
2-Hexanone	ND		50		ug/Kg			09/12/16 09:07	1
4-Chlorotoluene	ND		5.0		ug/Kg			09/12/16 09:07	1
4-Isopropyltoluene	ND		5.0		ug/Kg			09/12/16 09:07	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			09/12/16 09:07	1
Acetone	ND		50		ug/Kg			09/12/16 09:07	1
Benzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Bromobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Bromoform	ND		5.0		ug/Kg			09/12/16 09:07	1
Bromomethane	ND		10		ug/Kg			09/12/16 09:07	1
Carbon disulfide	ND		5.0		ug/Kg			09/12/16 09:07	1
Carbon tetrachloride	ND		5.0		ug/Kg			09/12/16 09:07	1
Chlorobenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Chlorobromomethane	ND		20		ug/Kg			09/12/16 09:07	1
Chlorodibromomethane	ND		5.0		ug/Kg			09/12/16 09:07	1
Chloroethane	ND		10		ug/Kg			09/12/16 09:07	1
Chloroform	ND		5.0		ug/Kg			09/12/16 09:07	1
Chloromethane	ND		10		ug/Kg			09/12/16 09:07	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			09/12/16 09:07	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			09/12/16 09:07	1
Dibromomethane	ND		10		ug/Kg			09/12/16 09:07	1
Dichlorobromomethane	ND		5.0		ug/Kg			09/12/16 09:07	1
Dichlorodifluoromethane	ND		10		ug/Kg			09/12/16 09:07	1
Ethylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Ethylene Dibromide	ND		5.0		ug/Kg			09/12/16 09:07	1
Hexachlorobutadiene	ND		5.0		ug/Kg			09/12/16 09:07	1
Isopropylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Methyl tert-butyl ether	ND		5.0		ug/Kg			09/12/16 09:07	1
Methylene Chloride	ND		10		ug/Kg			09/12/16 09:07	1
Naphthalene	ND		10		ug/Kg			09/12/16 09:07	1
n-Butylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
N-Propylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
sec-Butylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Styrene	ND		5.0		ug/Kg			09/12/16 09:07	1
tert-Butylbenzene	ND		5.0		ug/Kg			09/12/16 09:07	1
Tetrachloroethene	ND		5.0		ug/Kg			09/12/16 09:07	1
Toluene	ND		5.0		ug/Kg			09/12/16 09:07	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			09/12/16 09:07	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			09/12/16 09:07	1
Trichloroethene	ND		5.0		ug/Kg			09/12/16 09:07	1
Trichlorofluoromethane	ND		5.0		ug/Kg			09/12/16 09:07	1
Vinyl acetate	ND		20		ug/Kg			09/12/16 09:07	1
Vinyl chloride	ND		5.0		ug/Kg			09/12/16 09:07	1
Xylenes, Total	ND		10		ug/Kg			09/12/16 09:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		60 - 140		09/12/16 09:07	1
4-Bromofluorobenzene	97		45 - 131		09/12/16 09:07	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: MB 720-209080/5**  
**Matrix: Solid**  
**Analysis Batch: 209080**

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

Surrogate	MB MB %Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104	58 - 140		09/12/16 09:07	1

**Lab Sample ID: LCS 720-209080/6**  
**Matrix: Solid**  
**Analysis Batch: 209080**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	52.6		ug/Kg		105	70 - 130
1,1,1-Trichloroethane	50.0	58.1		ug/Kg		116	70 - 130
1,1,2,2-Tetrachloroethane	50.0	51.7		ug/Kg		103	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	64.2		ug/Kg		128	60 - 140
1,1,2-Trichloroethane	50.0	55.0		ug/Kg		110	70 - 130
1,1-Dichloroethane	50.0	53.1		ug/Kg		106	70 - 130
1,1-Dichloroethene	50.0	58.5		ug/Kg		117	74 - 122
1,1-Dichloropropene	50.0	56.5		ug/Kg		113	70 - 130
1,2,3-Trichlorobenzene	50.0	58.9		ug/Kg		118	60 - 140
1,2,3-Trichloropropane	50.0	54.2		ug/Kg		108	70 - 146
1,2,4-Trichlorobenzene	50.0	60.6		ug/Kg		121	60 - 140
1,2,4-Trimethylbenzene	50.0	53.1		ug/Kg		106	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	60.7		ug/Kg		121	60 - 145
1,2-Dichlorobenzene	50.0	51.5		ug/Kg		103	70 - 130
1,2-Dichloroethane	50.0	53.1		ug/Kg		106	70 - 130
1,2-Dichloropropane	50.0	53.5		ug/Kg		107	73 - 127
1,3,5-Trimethylbenzene	50.0	53.3		ug/Kg		107	70 - 131
1,3-Dichlorobenzene	50.0	52.3		ug/Kg		105	70 - 131
1,3-Dichloropropane	50.0	55.0		ug/Kg		110	70 - 140
1,4-Dichlorobenzene	50.0	51.2		ug/Kg		102	70 - 130
2,2-Dichloropropane	50.0	60.0		ug/Kg		120	70 - 162
2-Butanone (MEK)	250	322		ug/Kg		129	53 - 133
2-Chlorotoluene	50.0	50.5		ug/Kg		101	70 - 138
2-Hexanone	250	301		ug/Kg		120	44 - 133
4-Chlorotoluene	50.0	52.2		ug/Kg		104	70 - 136
4-Isopropyltoluene	50.0	54.1		ug/Kg		108	70 - 133
4-Methyl-2-pentanone (MIBK)	250	298		ug/Kg		119	60 - 160
Acetone	250	313		ug/Kg		125	30 - 162
Benzene	50.0	55.2		ug/Kg		110	70 - 130
Bromobenzene	50.0	51.9		ug/Kg		104	70 - 130
Bromoform	50.0	58.8		ug/Kg		118	59 - 158
Bromomethane	50.0	51.9		ug/Kg		104	59 - 132
Carbon disulfide	50.0	67.0		ug/Kg		134	60 - 140
Carbon tetrachloride	50.0	59.2		ug/Kg		118	70 - 142
Chlorobenzene	50.0	52.7		ug/Kg		105	70 - 130
Chlorobromomethane	50.0	57.6		ug/Kg		115	70 - 130
Chlorodibromomethane	50.0	59.6		ug/Kg		119	70 - 146
Chloroethane	50.0	52.7		ug/Kg		105	65 - 130
Chloroform	50.0	54.3		ug/Kg		109	77 - 127
Chloromethane	50.0	47.5		ug/Kg		95	55 - 140

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCS 720-209080/6**  
**Matrix: Solid**  
**Analysis Batch: 209080**

**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	53.5		ug/Kg		107	70 - 138
cis-1,3-Dichloropropene	50.0	58.3		ug/Kg		117	68 - 147
Dibromomethane	50.0	55.3		ug/Kg		111	70 - 139
Dichlorobromomethane	50.0	56.9		ug/Kg		114	70 - 140
Dichlorodifluoromethane	50.0	47.6		ug/Kg		95	37 - 158
Ethylbenzene	50.0	52.9		ug/Kg		106	80 - 137
Ethylene Dibromide	50.0	60.9		ug/Kg		122	70 - 140
Hexachlorobutadiene	50.0	62.4		ug/Kg		125	70 - 132
Isopropylbenzene	50.0	56.5		ug/Kg		113	70 - 130
Methyl tert-butyl ether	50.0	58.1		ug/Kg		116	70 - 144
Methylene Chloride	50.0	55.6		ug/Kg		111	70 - 134
m-Xylene & p-Xylene	50.0	53.4		ug/Kg		107	70 - 146
Naphthalene	50.0	59.9		ug/Kg		120	60 - 147
n-Butylbenzene	50.0	54.8		ug/Kg		110	70 - 142
N-Propylbenzene	50.0	54.7		ug/Kg		109	70 - 130
o-Xylene	50.0	51.9		ug/Kg		104	70 - 140
sec-Butylbenzene	50.0	54.7		ug/Kg		109	70 - 136
Styrene	50.0	55.5		ug/Kg		111	70 - 130
tert-Butylbenzene	50.0	54.0		ug/Kg		108	70 - 130
Tetrachloroethene	50.0	60.9		ug/Kg		122	70 - 132
Toluene	50.0	51.4		ug/Kg		103	75 - 120
trans-1,2-Dichloroethene	50.0	58.0		ug/Kg		116	67 - 130
trans-1,3-Dichloropropene	50.0	59.2		ug/Kg		118	70 - 155
Trichloroethene	50.0	57.8		ug/Kg		116	70 - 133
Trichlorofluoromethane	50.0	59.5		ug/Kg		119	60 - 140
Vinyl acetate	50.0	60.5		ug/Kg		121	38 - 176
Vinyl chloride	50.0	52.0		ug/Kg		104	58 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCS 720-209080/8**  
**Matrix: Solid**  
**Analysis Batch: 209080**

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		60 - 140
4-Bromofluorobenzene	99		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209080/7**  
**Matrix: Solid**  
**Analysis Batch: 209080**

**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
1,1,1,2-Tetrachloroethane	50.0	53.1		ug/Kg		106	70 - 130	1	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

Lab Sample ID: LCSD 720-209080/7

Matrix: Solid

Analysis Batch: 209080

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
1,1,1-Trichloroethane	50.0	58.8		ug/Kg		118	70 - 130	1	20
1,1,1,2-Tetrachloroethane	50.0	53.6		ug/Kg		107	70 - 146	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	63.7		ug/Kg		127	60 - 140	1	20
1,1,2-Trichloroethane	50.0	56.0		ug/Kg		112	70 - 130	2	20
1,1-Dichloroethane	50.0	54.1		ug/Kg		108	70 - 130	2	20
1,1-Dichloroethene	50.0	59.3		ug/Kg		119	74 - 122	1	20
1,1-Dichloropropene	50.0	57.3		ug/Kg		115	70 - 130	1	20
1,2,3-Trichlorobenzene	50.0	61.2		ug/Kg		122	60 - 140	4	20
1,2,3-Trichloropropane	50.0	56.0		ug/Kg		112	70 - 146	3	20
1,2,4-Trichlorobenzene	50.0	61.9		ug/Kg		124	60 - 140	2	20
1,2,4-Trimethylbenzene	50.0	53.8		ug/Kg		108	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	50.0	63.0		ug/Kg		126	60 - 145	4	20
1,2-Dichlorobenzene	50.0	52.3		ug/Kg		105	70 - 130	1	20
1,2-Dichloroethane	50.0	54.5		ug/Kg		109	70 - 130	3	20
1,2-Dichloropropane	50.0	54.3		ug/Kg		109	73 - 127	2	20
1,3,5-Trimethylbenzene	50.0	53.9		ug/Kg		108	70 - 131	1	20
1,3-Dichlorobenzene	50.0	53.0		ug/Kg		106	70 - 131	1	20
1,3-Dichloropropane	50.0	56.3		ug/Kg		113	70 - 140	2	20
1,4-Dichlorobenzene	50.0	52.0		ug/Kg		104	70 - 130	2	20
2,2-Dichloropropane	50.0	63.5		ug/Kg		127	70 - 162	6	20
2-Butanone (MEK)	250	336 *		ug/Kg		134	53 - 133	4	20
2-Chlorotoluene	50.0	51.8		ug/Kg		104	70 - 138	3	20
2-Hexanone	250	313		ug/Kg		125	44 - 133	4	20
4-Chlorotoluene	50.0	52.8		ug/Kg		106	70 - 136	1	20
4-Isopropyltoluene	50.0	54.6		ug/Kg		109	70 - 133	1	20
4-Methyl-2-pentanone (MIBK)	250	307		ug/Kg		123	60 - 160	3	20
Acetone	250	314		ug/Kg		126	30 - 162	0	30
Benzene	50.0	55.9		ug/Kg		112	70 - 130	1	20
Bromobenzene	50.0	53.2		ug/Kg		106	70 - 130	2	20
Bromoform	50.0	60.5		ug/Kg		121	59 - 158	3	20
Bromomethane	50.0	52.6		ug/Kg		105	59 - 132	1	20
Carbon disulfide	50.0	67.8		ug/Kg		136	60 - 140	1	20
Carbon tetrachloride	50.0	59.8		ug/Kg		120	70 - 142	1	20
Chlorobenzene	50.0	52.8		ug/Kg		106	70 - 130	0	20
Chlorobromomethane	50.0	59.0		ug/Kg		118	70 - 130	2	20
Chlorodibromomethane	50.0	61.1		ug/Kg		122	70 - 146	2	20
Chloroethane	50.0	53.0		ug/Kg		106	65 - 130	0	20
Chloroform	50.0	54.8		ug/Kg		110	77 - 127	1	20
Chloromethane	50.0	48.0		ug/Kg		96	55 - 140	1	20
cis-1,2-Dichloroethene	50.0	54.5		ug/Kg		109	70 - 138	2	20
cis-1,3-Dichloropropene	50.0	59.7		ug/Kg		119	68 - 147	2	20
Dibromomethane	50.0	57.1		ug/Kg		114	70 - 139	3	20
Dichlorobromomethane	50.0	57.6		ug/Kg		115	70 - 140	1	20
Dichlorodifluoromethane	50.0	48.1		ug/Kg		96	37 - 158	1	20
Ethylbenzene	50.0	53.0		ug/Kg		106	80 - 137	0	20
Ethylene Dibromide	50.0	63.3		ug/Kg		127	70 - 140	4	20
Hexachlorobutadiene	50.0	63.5		ug/Kg		127	70 - 132	2	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

**Lab Sample ID: LCSD 720-209080/7**

**Matrix: Solid**

**Analysis Batch: 209080**

**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
Isopropylbenzene	50.0	57.0		ug/Kg		114	70 - 130	1	20
Methyl tert-butyl ether	50.0	61.2		ug/Kg		122	70 - 144	5	20
Methylene Chloride	50.0	56.6		ug/Kg		113	70 - 134	2	20
m-Xylene & p-Xylene	50.0	53.8		ug/Kg		108	70 - 146	1	20
Naphthalene	50.0	63.1		ug/Kg		126	60 - 147	5	20
n-Butylbenzene	50.0	55.4		ug/Kg		111	70 - 142	1	20
N-Propylbenzene	50.0	55.1		ug/Kg		110	70 - 130	1	20
o-Xylene	50.0	52.4		ug/Kg		105	70 - 140	1	20
sec-Butylbenzene	50.0	55.1		ug/Kg		110	70 - 136	1	20
Styrene	50.0	56.1		ug/Kg		112	70 - 130	1	20
tert-Butylbenzene	50.0	54.4		ug/Kg		109	70 - 130	1	20
Tetrachloroethene	50.0	60.9		ug/Kg		122	70 - 132	0	20
Toluene	50.0	51.8		ug/Kg		104	75 - 120	1	20
trans-1,2-Dichloroethene	50.0	58.2		ug/Kg		116	67 - 130	0	20
trans-1,3-Dichloropropene	50.0	60.8		ug/Kg		122	70 - 155	3	20
Trichloroethene	50.0	57.3		ug/Kg		115	70 - 133	1	20
Trichlorofluoromethane	50.0	60.1		ug/Kg		120	60 - 140	1	20
Vinyl acetate	50.0	62.6		ug/Kg		125	38 - 176	3	20
Vinyl chloride	50.0	52.4		ug/Kg		105	58 - 125	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		60 - 140
4-Bromofluorobenzene	100		45 - 131
Toluene-d8 (Surr)	106		58 - 140

**Lab Sample ID: LCSD 720-209080/9**

**Matrix: Solid**

**Analysis Batch: 209080**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	104		60 - 140
4-Bromofluorobenzene	99		45 - 131
Toluene-d8 (Surr)	106		58 - 140

# QC Association Summary

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

## GC/MS VOA

### Analysis Batch: 209005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-1	SV62-5	Total/NA	Solid	8260B	209014
320-21558-4	SV63-10	Total/NA	Solid	8260B	209014
320-21558-6	SV64-10	Total/NA	Solid	8260B	209014
MB 720-209005/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-209005/17	Lab Control Sample	Total/NA	Solid	8260B	
LCS 720-209005/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-209005/18	Lab Control Sample Dup	Total/NA	Solid	8260B	
LCSD 720-209005/6	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Prep Batch: 209014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-1	SV62-5	Total/NA	Solid	5035	
320-21558-4	SV63-10	Total/NA	Solid	5035	
320-21558-6	SV64-10	Total/NA	Solid	5035	

### Analysis Batch: 209065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-5	SV64-5	Total/NA	Solid	8260B	209072
320-21558-9	SV66-5	Total/NA	Solid	8260B	209072
MB 720-209065/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-209065/5	Lab Control Sample	Total/NA	Solid	8260B	
LCS 720-209065/7	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-209065/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
LCSD 720-209065/8	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Prep Batch: 209072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-5	SV64-5	Total/NA	Solid	5035	
320-21558-9	SV66-5	Total/NA	Solid	5035	

### Analysis Batch: 209080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-2	SV62-10	Total/NA	Solid	8260B	209094
320-21558-3	SV63-5	Total/NA	Solid	8260B	209094
320-21558-7	SV65-5	Total/NA	Solid	8260B	209094
320-21558-8	SV65-10	Total/NA	Solid	8260B	209094
320-21558-10	SV66-10	Total/NA	Solid	8260B	209094
MB 720-209080/5	Method Blank	Total/NA	Solid	8260B	
LCS 720-209080/6	Lab Control Sample	Total/NA	Solid	8260B	
LCS 720-209080/8	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-209080/7	Lab Control Sample Dup	Total/NA	Solid	8260B	
LCSD 720-209080/9	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Prep Batch: 209094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21558-2	SV62-10	Total/NA	Solid	5035	
320-21558-3	SV63-5	Total/NA	Solid	5035	
320-21558-7	SV65-5	Total/NA	Solid	5035	
320-21558-8	SV65-10	Total/NA	Solid	5035	
320-21558-10	SV66-10	Total/NA	Solid	5035	

TestAmerica Sacramento

# Lab Chronicle

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV62-5**  
**Date Collected: 09/07/16 10:25**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.017 g	10 mL	209014	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209005	09/09/16 15:00	LPL	TAL PLS

**Client Sample ID: SV62-10**  
**Date Collected: 09/07/16 10:30**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.009 g	10 mL	209094	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209080	09/12/16 11:33	JRM	TAL PLS

**Client Sample ID: SV63-5**  
**Date Collected: 09/07/16 11:05**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-3**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.203 g	10 mL	209094	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209080	09/12/16 12:02	JRM	TAL PLS

**Client Sample ID: SV63-10**  
**Date Collected: 09/07/16 11:10**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-4**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.021 g	10 mL	209014	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209005	09/09/16 16:28	LPL	TAL PLS

**Client Sample ID: SV64-5**  
**Date Collected: 09/07/16 11:40**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-5**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.4 g	10 mL	209072	09/09/16 09:55	LPL	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209065	09/10/16 15:00	LPL	TAL PLS

**Client Sample ID: SV64-10**  
**Date Collected: 09/07/16 11:45**  
**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-6**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.45 g	10 mL	209014	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209005	09/09/16 17:27	LPL	TAL PLS

TestAmerica Sacramento



# Lab Chronicle

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

**Client Sample ID: SV65-5**

**Date Collected: 09/07/16 12:20**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.151 g	10 mL	209094	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209080	09/12/16 12:32	JRM	TAL PLS

**Client Sample ID: SV65-10**

**Date Collected: 09/07/16 12:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-8**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.89 g	10 mL	209094	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209080	09/12/16 13:01	JRM	TAL PLS

**Client Sample ID: SV66-5**

**Date Collected: 09/07/16 13:20**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-9**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.942 g	10 mL	209072	09/09/16 09:55	LPL	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209065	09/10/16 14:01	LPL	TAL PLS

**Client Sample ID: SV66-10**

**Date Collected: 09/07/16 13:25**

**Date Received: 09/08/16 08:05**

**Lab Sample ID: 320-21558-10**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.479 g	10 mL	209094	09/09/16 09:55	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209080	09/12/16 13:30	JRM	TAL PLS

**Laboratory References:**

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

# Certification Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

## Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4040	01-29-17

## Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-18

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# Method Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

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

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**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: 6701 Shellmound St, Emeryville Soil & Wa

TestAmerica Job ID: 320-21558-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-21558-1	SV62-5	Solid	09/07/16 10:25	09/08/16 08:05
320-21558-2	SV62-10	Solid	09/07/16 10:30	09/08/16 08:05
320-21558-3	SV63-5	Solid	09/07/16 11:05	09/08/16 08:05
320-21558-4	SV63-10	Solid	09/07/16 11:10	09/08/16 08:05
320-21558-5	SV64-5	Solid	09/07/16 11:40	09/08/16 08:05
320-21558-6	SV64-10	Solid	09/07/16 11:45	09/08/16 08:05
320-21558-7	SV65-5	Solid	09/07/16 12:20	09/08/16 08:05
320-21558-8	SV65-10	Solid	09/07/16 12:25	09/08/16 08:05
320-21558-9	SV66-5	Solid	09/07/16 13:20	09/08/16 08:05
320-21558-10	SV66-10	Solid	09/07/16 13:25	09/08/16 08:05





**PES Environmental, Inc.**  
Engineering & Environmental Services

LABORATORY: Test America  
 JOB NUMBER: 1448.001.01.036  
 NAME / LOCATION: Shellmound Street  
 PROJECT MANAGER: Chris Baldassari

# CHAIN OF CUSTODY RECORD

1682 Novato Boulevard, Suite 100  
 Novato, California 94947  
 (415) 899-1600 FAX (415) 899-1601

SAMPLERS: Greg George  
 RECORDER: Greg George

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)	
VXS 8260B	X
RTX 8260B	X
MEK 8260B	X
MIBK 8260B	X
Naphthalene 8260B	X

MATRIX	Vapor	Water	Soil	Sediment	Unpres. En Core	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Meth	# of Containers & Preservatives		DEPTH IN FEET
										21	21	
X	X	X	X	X	X	X	X	X	X	21	21	5
X	X	X	X	X	X	X	X	X	X	21	21	10
X	X	X	X	X	X	X	X	X	X	21	21	5
X	X	X	X	X	X	X	X	X	X	21	21	10
X	X	X	X	X	X	X	X	X	X	21	21	5
X	X	X	X	X	X	X	X	X	X	21	21	10
X	X	X	X	X	X	X	X	X	X	21	21	5
X	X	X	X	X	X	X	X	X	X	21	21	10
X	X	X	X	X	X	X	X	X	X	21	21	5
X	X	X	X	X	X	X	X	X	X	21	21	10

YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION
			1030S	V62-10
			1105S	V63-5
			1110S	V63-10
			1140S	V64-5
			1145S	V64-10
			1220S	V65-5
			1225S	V65-10
			1320S	V66-5
			1325S	V66-10

NOTES		CHAIN OF CUSTODY RECORD	
Turn Around Time: <u>57AT</u>	RELINQUISHED BY: (Signature) <u>J. P. [Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE TIME <u>9/15/08</u>
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE TIME
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE TIME
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE TIME
	DISPATCHED BY: (Signature)	RECEIVED FOR LAB BY:	DATE TIME
METHOD OF SHIPMENT:			



320-21558 Chain of Custody

Page 1 of 1

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

6.0°C



**TestAmerica Sacramento**  
 880 Riverside Parkway  
 West Sacramento, CA 95605  
 Phone (916) 373-5800 Fax (916) 372-1059

**Chain of Custody Record**



**TestAmerica**  
 5400 N. Greenway Blvd., Suite 100  
 Sacramento, CA 95831  
 Phone: (916) 373-5800 Fax: (916) 372-1059

**Client Information (Sub Contract Lab)**

Company: TestAmerica Laboratories, Inc  
 Address: 1220 Quarry Lane,  
 City: Pleasanton  
 State, Zip: CA, 94566  
 Phone: 925-484-1919(Tel) 925-600-3002(Fax)  
 Email: 925-484-1919(Tel) 925-600-3002(Fax)

Sampler: Riley, Beth  
 Lab P/N: Beth.Riley@testamericainc.com  
 E-Mail: betn.riley@testamericainc.com

Carrier Tracking No(s):  
 Job #: 320-21558-1

COC No: 320-75063-1  
 Page: 1 of 1

Due Date Requested: 9/20/2016  
 TAT Requested (days):

Project #: 32007196  
 SSOV#:

Analysis Requested

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Arsenic  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDTA  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - NaCO3S  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecylhydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 Z - other (specify)

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, Overstain, ST-Tissue, Adh)	Field Filtered Sample (Yes or No)	Retain in MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note
SV/62-5 (320-21558-1)	9/7/16	10:25	Pacific	Solid	X	X	8260B_LL/6036A_FW_7 (MOD) VOCs, Standard List	3	
SV/62-10 (320-21558-2)	9/7/16	10:30	Pacific	Solid	X	X		3	
SV/63-5 (320-21558-3)	9/7/16	11:05	Pacific	Solid	X	X		3	
SV/63-10 (320-21558-4)	9/7/16	11:10	Pacific	Solid	X	X		3	
SV/64-5 (320-21558-5)	9/7/16	11:40	Pacific	Solid	X	X			
SV/64-10 (320-21558-6)	9/7/16	11:45	Pacific	Solid	X	X			
SV/65-5 (320-21558-7)	9/7/16	12:20	Pacific	Solid	X	X			
SV/65-10 (320-21558-8)	9/7/16	12:25	Pacific	Solid	X	X			
SV/66-5 (320-21558-9)	9/7/16	13:20	Pacific	Solid	X	X			
SV/66-10 (320-21558-10)	9/7/16	13:25	Pacific	Solid	X	X			



**Possible Hazard Identification**

Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Relinquished by: [Signature] Date/Time: 9/18/16 16:30 Company: TADS  
 Relinquished by: [Signature] Date/Time: 9/5-16 10:05 Company: Pears  
 Relinquished by: [Signature] Date/Time: [Blank] Company: [Blank]  
 Custody Seal Intact: A Yes A No Custody Seal No.: [Blank]  
 Cooler Temperature(s) °C and Other Remarks: [Blank]

# Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21558-1

**Login Number: 21558**

**List Source: TestAmerica Sacramento**

**List Number: 1**

**Creator: Turpen, Troy**

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.	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	



## Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21558-1

**Login Number: 21558**

**List Number: 2**

**Creator: Mullen, Joan**

**List Source: TestAmerica Pleasanton**

**List Creation: 09/09/16 01:15 PM**

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)	False	
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

## ANALYTICAL REPORT

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

TestAmerica Job ID: 320-21562-1

Client Project/Site: 6701 Shellmound St, Emeryville Air

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

Attn: Mr. Kyle Flory

*Beth Riley*

---

Authorized for release by:  
9/19/2016 12:34:46 PM

Beth Riley, Project Manager II  
(714)258-8610  
[beth.riley@testamericainc.com](mailto:beth.riley@testamericainc.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

# Case Narrative

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Job ID: 320-21562-1**

**Laboratory: TestAmerica Sacramento**

## Narrative

### Job Narrative 320-21562-1

#### Receipt

The samples were received on 9/8/2016 8:13 AM; the samples arrived in good condition.

#### Except:

Canisters for Job number 320-21562 were all received below 6 psia which are considered insufficient sample pressures and will require pressurization greater than the SOP stipulates. As a result, the data may be reported at a dilution and reporting limits will be raised accordingly.

Listed below are sample numbers and their associated initial pressures for job 320-21562:

320-21562-1: -19.85 "Hg  
320-21562-2: -22.91 "Hg  
320-21562-3: -22.95 "Hg  
320-21562-4: -22.50 "Hg  
320-21562-5: -18.71 "Hg  
320-21562-6: -24.31 "Hg  
320-21562-7: -20.24 "Hg  
320-21562-8: -19.08 "Hg  
320-21562-9: -22.17 "Hg  
320-21562-10: -22.07 "Hg

#### Air - GC VOA

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

#### Air - GC/MS VOA

Method(s) TO-15: The following samples was diluted due to the abundance of non-target analytes: SV62-10 (320-21562-2), SV63-10 (320-21562-4) and SV66-10 (320-21562-10). Elevated reporting limits (RLs) are provided.

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: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Client Sample ID: SV62-5

## Lab Sample ID: 320-21562-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	250		46	ppb v/v	9.22		TO-15	Total/NA
Benzene	39		3.7	ppb v/v	9.22		TO-15	Total/NA
2-Butanone (MEK)	31		7.4	ppb v/v	9.22		TO-15	Total/NA
Carbon disulfide	13		7.4	ppb v/v	9.22		TO-15	Total/NA
Chloroform	3.5		2.8	ppb v/v	9.22		TO-15	Total/NA
Ethylbenzene	13		3.7	ppb v/v	9.22		TO-15	Total/NA
Toluene	67		3.7	ppb v/v	9.22		TO-15	Total/NA
1,2,4-Trimethylbenzene	10		7.4	ppb v/v	9.22		TO-15	Total/NA
1,3,5-Trimethylbenzene	5.5		3.7	ppb v/v	9.22		TO-15	Total/NA
m,p-Xylene	89		7.4	ppb v/v	9.22		TO-15	Total/NA
o-Xylene	22		3.7	ppb v/v	9.22		TO-15	Total/NA
Helium	0.77		0.46	% v/v	4.61		D1946	Total/NA
Oxygen	8.3		0.92	% v/v	4.61		D1946	Total/NA
Methane (FID)	5.0		0.014	% v/v	138.3		D1946	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	590		110	ug/m3	9.22		TO-15	Total/NA
Benzene	120		12	ug/m3	9.22		TO-15	Total/NA
2-Butanone (MEK)	93		22	ug/m3	9.22		TO-15	Total/NA
Carbon disulfide	41		23	ug/m3	9.22		TO-15	Total/NA
Chloroform	17		14	ug/m3	9.22		TO-15	Total/NA
Ethylbenzene	55		16	ug/m3	9.22		TO-15	Total/NA
Toluene	250		14	ug/m3	9.22		TO-15	Total/NA
1,2,4-Trimethylbenzene	50		36	ug/m3	9.22		TO-15	Total/NA
1,3,5-Trimethylbenzene	27		18	ug/m3	9.22		TO-15	Total/NA
m,p-Xylene	390		32	ug/m3	9.22		TO-15	Total/NA
o-Xylene	94		16	ug/m3	9.22		TO-15	Total/NA

## Client Sample ID: SV62-10

## Lab Sample ID: 320-21562-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Helium	2.1		1.0	% v/v	10.09		D1946	Total/NA
Oxygen	6.1		2.0	% v/v	10.09		D1946	Total/NA
Methane (FID)	5.6		0.020	% v/v	201.9		D1946	Total/NA

## Client Sample ID: SV63-5

## Lab Sample ID: 320-21562-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	130		11	ppb v/v	2.22		TO-15	Total/NA
Benzene	8.4		0.89	ppb v/v	2.22		TO-15	Total/NA
2-Butanone (MEK)	24		1.8	ppb v/v	2.22		TO-15	Total/NA
Carbon disulfide	8.0		1.8	ppb v/v	2.22		TO-15	Total/NA
Chloroform	1.8		0.67	ppb v/v	2.22		TO-15	Total/NA
Ethylbenzene	5.2		0.89	ppb v/v	2.22		TO-15	Total/NA
4-Ethyltoluene	0.92		0.89	ppb v/v	2.22		TO-15	Total/NA
2-Hexanone	1.7		0.89	ppb v/v	2.22		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.3		0.89	ppb v/v	2.22		TO-15	Total/NA
Toluene	18		0.89	ppb v/v	2.22		TO-15	Total/NA
1,2,4-Trimethylbenzene	2.6		1.8	ppb v/v	2.22		TO-15	Total/NA
1,3,5-Trimethylbenzene	1.3		0.89	ppb v/v	2.22		TO-15	Total/NA
m,p-Xylene	21		1.8	ppb v/v	2.22		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Client Sample ID: SV63-5 (Continued)

## Lab Sample ID: 320-21562-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
o-Xylene	6.3		0.89	ppb v/v	2.22		TO-15	Total/NA
Helium	1.1		0.67	% v/v	6.67		D1946	Total/NA
Oxygen	9.0		1.3	% v/v	6.67		D1946	Total/NA
Methane (FID)	0.22		0.0013	% v/v	12.56		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	310		26	ug/m3	2.22		TO-15	Total/NA
Benzene	27		2.8	ug/m3	2.22		TO-15	Total/NA
2-Butanone (MEK)	71		5.2	ug/m3	2.22		TO-15	Total/NA
Carbon disulfide	25		5.5	ug/m3	2.22		TO-15	Total/NA
Chloroform	8.7		3.3	ug/m3	2.22		TO-15	Total/NA
Ethylbenzene	23		3.9	ug/m3	2.22		TO-15	Total/NA
4-Ethyltoluene	4.5		4.4	ug/m3	2.22		TO-15	Total/NA
2-Hexanone	6.8		3.6	ug/m3	2.22		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	14		3.6	ug/m3	2.22		TO-15	Total/NA
Toluene	68		3.3	ug/m3	2.22		TO-15	Total/NA
1,2,4-Trimethylbenzene	13		8.7	ug/m3	2.22		TO-15	Total/NA
1,3,5-Trimethylbenzene	6.3		4.4	ug/m3	2.22		TO-15	Total/NA
m,p-Xylene	92		7.7	ug/m3	2.22		TO-15	Total/NA
o-Xylene	27		3.9	ug/m3	2.22		TO-15	Total/NA

## Client Sample ID: SV63-10

## Lab Sample ID: 320-21562-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	53		25	ppb v/v	62.3		TO-15	Total/NA
m,p-Xylene	140		50	ppb v/v	62.3		TO-15	Total/NA
Helium	1.0		0.62	% v/v	6.23		D1946	Total/NA
Methane (TCD)	15		3.1	% v/v	6.23		D1946	Total/NA
Oxygen	2.9		1.2	% v/v	6.23		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	170		80	ug/m3	62.3		TO-15	Total/NA
m,p-Xylene	620		220	ug/m3	62.3		TO-15	Total/NA

## Client Sample ID: SV64-5

## Lab Sample ID: 320-21562-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	78		7.0	ppb v/v	1.39		TO-15	Total/NA
Benzene	3.8		0.56	ppb v/v	1.39		TO-15	Total/NA
2-Butanone (MEK)	14		1.1	ppb v/v	1.39		TO-15	Total/NA
Carbon disulfide	3.1		1.1	ppb v/v	1.39		TO-15	Total/NA
Ethylbenzene	1.7		0.56	ppb v/v	1.39		TO-15	Total/NA
2-Hexanone	0.68		0.56	ppb v/v	1.39		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.96		0.56	ppb v/v	1.39		TO-15	Total/NA
Toluene	9.5		0.56	ppb v/v	1.39		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.3		1.1	ppb v/v	1.39		TO-15	Total/NA
m,p-Xylene	6.0		1.1	ppb v/v	1.39		TO-15	Total/NA
o-Xylene	1.8		0.56	ppb v/v	1.39		TO-15	Total/NA
Helium	1.2		0.42	% v/v	4.17		D1946	Total/NA
Oxygen	17		0.83	% v/v	4.17		D1946	Total/NA
Methane (FID)	0.0024		0.00086	% v/v	8.57		D1946	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Client Sample ID: SV64-5 (Continued)

## Lab Sample ID: 320-21562-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	190		17	ug/m3	1.39		TO-15	Total/NA
Benzene	12		1.8	ug/m3	1.39		TO-15	Total/NA
2-Butanone (MEK)	40		3.3	ug/m3	1.39		TO-15	Total/NA
Carbon disulfide	9.8		3.5	ug/m3	1.39		TO-15	Total/NA
Ethylbenzene	7.5		2.4	ug/m3	1.39		TO-15	Total/NA
2-Hexanone	2.8		2.3	ug/m3	1.39		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.9		2.3	ug/m3	1.39		TO-15	Total/NA
Toluene	36		2.1	ug/m3	1.39		TO-15	Total/NA
1,2,4-Trimethylbenzene	6.6		5.5	ug/m3	1.39		TO-15	Total/NA
m,p-Xylene	26		4.8	ug/m3	1.39		TO-15	Total/NA
o-Xylene	7.6		2.4	ug/m3	1.39		TO-15	Total/NA

## Client Sample ID: SV64-10

## Lab Sample ID: 320-21562-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	42		23	ppb v/v	4.5		TO-15	Total/NA
Benzene	5.9		1.8	ppb v/v	4.5		TO-15	Total/NA
2-Butanone (MEK)	8.9		3.6	ppb v/v	4.5		TO-15	Total/NA
Carbon disulfide	12		3.6	ppb v/v	4.5		TO-15	Total/NA
Ethylbenzene	1.9		1.8	ppb v/v	4.5		TO-15	Total/NA
Toluene	7.5		1.8	ppb v/v	4.5		TO-15	Total/NA
m,p-Xylene	4.6		3.6	ppb v/v	4.5		TO-15	Total/NA
Helium	4.0		1.4	% v/v	13.51		D1946	Total/NA
Oxygen	26		2.7	% v/v	13.51		D1946	Total/NA
Methane (FID)	0.0057		0.0021	% v/v	20.65		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	100		53	ug/m3	4.5		TO-15	Total/NA
Benzene	19		5.8	ug/m3	4.5		TO-15	Total/NA
2-Butanone (MEK)	26		11	ug/m3	4.5		TO-15	Total/NA
Carbon disulfide	37		11	ug/m3	4.5		TO-15	Total/NA
Ethylbenzene	8.1		7.8	ug/m3	4.5		TO-15	Total/NA
Toluene	28		6.8	ug/m3	4.5		TO-15	Total/NA
m,p-Xylene	20		16	ug/m3	4.5		TO-15	Total/NA

## Client Sample ID: SV65-5

## Lab Sample ID: 320-21562-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	82		12	ppb v/v	2.47		TO-15	Total/NA
Benzene	7.1		0.99	ppb v/v	2.47		TO-15	Total/NA
2-Butanone (MEK)	17		2.0	ppb v/v	2.47		TO-15	Total/NA
Ethylbenzene	1.4		0.99	ppb v/v	2.47		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.9		0.99	ppb v/v	2.47		TO-15	Total/NA
Toluene	4.6		0.99	ppb v/v	2.47		TO-15	Total/NA
m,p-Xylene	5.1		2.0	ppb v/v	2.47		TO-15	Total/NA
o-Xylene	1.8		0.99	ppb v/v	2.47		TO-15	Total/NA
Carbon Dioxide (TCD)	6.3		3.7	% v/v	7.42		D1946	Total/NA
Helium	2.8		0.74	% v/v	7.42		D1946	Total/NA
Oxygen	14		1.5	% v/v	7.42		D1946	Total/NA
Methane (FID)	0.0033		0.0012	% v/v	11.81		D1946	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Client Sample ID: SV65-5 (Continued)

## Lab Sample ID: 320-21562-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	200		29	ug/m3	2.47		TO-15	Total/NA
Benzene	23		3.2	ug/m3	2.47		TO-15	Total/NA
2-Butanone (MEK)	50		5.8	ug/m3	2.47		TO-15	Total/NA
Ethylbenzene	6.3		4.3	ug/m3	2.47		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	7.6		4.0	ug/m3	2.47		TO-15	Total/NA
Toluene	17		3.7	ug/m3	2.47		TO-15	Total/NA
m,p-Xylene	22		8.6	ug/m3	2.47		TO-15	Total/NA
o-Xylene	7.8		4.3	ug/m3	2.47		TO-15	Total/NA

## Client Sample ID: SV65-10

## Lab Sample ID: 320-21562-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	31		12	ppb v/v	2.36		TO-15	Total/NA
Benzene	26		0.94	ppb v/v	2.36		TO-15	Total/NA
2-Butanone (MEK)	6.3		1.9	ppb v/v	2.36		TO-15	Total/NA
Carbon disulfide	3.4		1.9	ppb v/v	2.36		TO-15	Total/NA
Chloromethane	2.2		1.9	ppb v/v	2.36		TO-15	Total/NA
Ethylbenzene	3.4		0.94	ppb v/v	2.36		TO-15	Total/NA
Toluene	5.7		0.94	ppb v/v	2.36		TO-15	Total/NA
m,p-Xylene	16		1.9	ppb v/v	2.36		TO-15	Total/NA
o-Xylene	7.2		0.94	ppb v/v	2.36		TO-15	Total/NA
Helium	1.5		0.71	% v/v	7.08		D1946	Total/NA
Oxygen	16		1.4	% v/v	7.08		D1946	Total/NA
Methane (FID)	0.0027		0.0010	% v/v	10.39		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	73		28	ug/m3	2.36		TO-15	Total/NA
Benzene	83		3.0	ug/m3	2.36		TO-15	Total/NA
2-Butanone (MEK)	19		5.6	ug/m3	2.36		TO-15	Total/NA
Carbon disulfide	11		5.9	ug/m3	2.36		TO-15	Total/NA
Chloromethane	4.6		3.9	ug/m3	2.36		TO-15	Total/NA
Ethylbenzene	15		4.1	ug/m3	2.36		TO-15	Total/NA
Toluene	21		3.6	ug/m3	2.36		TO-15	Total/NA
m,p-Xylene	69		8.2	ug/m3	2.36		TO-15	Total/NA
o-Xylene	31		4.1	ug/m3	2.36		TO-15	Total/NA

## Client Sample ID: SV66-5

## Lab Sample ID: 320-21562-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	69		10	ppb v/v	2.04		TO-15	Total/NA
Benzene	9.1		0.82	ppb v/v	2.04		TO-15	Total/NA
2-Butanone (MEK)	10		1.6	ppb v/v	2.04		TO-15	Total/NA
Carbon disulfide	2.7		1.6	ppb v/v	2.04		TO-15	Total/NA
Chloroform	8.6		0.61	ppb v/v	2.04		TO-15	Total/NA
Chloromethane	1.9		1.6	ppb v/v	2.04		TO-15	Total/NA
cis-1,2-Dichloroethene	3.5		0.82	ppb v/v	2.04		TO-15	Total/NA
Ethylbenzene	3.9		0.82	ppb v/v	2.04		TO-15	Total/NA
Toluene	23		0.82	ppb v/v	2.04		TO-15	Total/NA
Trichloroethene	1.1		0.82	ppb v/v	2.04		TO-15	Total/NA
1,2,4-Trimethylbenzene	2.4		1.6	ppb v/v	2.04		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.84		0.82	ppb v/v	2.04		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento



# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Client Sample ID: SV66-5 (Continued)

## Lab Sample ID: 320-21562-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
m,p-Xylene	12		1.6	ppb v/v	2.04		TO-15	Total/NA
o-Xylene	4.1		0.82	ppb v/v	2.04		TO-15	Total/NA
Helium	1.7		0.61	% v/v	6.11		D1946	Total/NA
Oxygen	14		1.2	% v/v	6.11		D1946	Total/NA
Methane (FID)	0.0029		0.0011	% v/v	10.7		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	160		24	ug/m3	2.04		TO-15	Total/NA
Benzene	29		2.6	ug/m3	2.04		TO-15	Total/NA
2-Butanone (MEK)	30		4.8	ug/m3	2.04		TO-15	Total/NA
Carbon disulfide	8.3		5.1	ug/m3	2.04		TO-15	Total/NA
Chloroform	42		3.0	ug/m3	2.04		TO-15	Total/NA
Chloromethane	3.9		3.4	ug/m3	2.04		TO-15	Total/NA
cis-1,2-Dichloroethene	14		3.2	ug/m3	2.04		TO-15	Total/NA
Ethylbenzene	17		3.5	ug/m3	2.04		TO-15	Total/NA
Toluene	86		3.1	ug/m3	2.04		TO-15	Total/NA
Trichloroethene	6.1		4.4	ug/m3	2.04		TO-15	Total/NA
1,2,4-Trimethylbenzene	12		8.0	ug/m3	2.04		TO-15	Total/NA
1,3,5-Trimethylbenzene	4.1		4.0	ug/m3	2.04		TO-15	Total/NA
m,p-Xylene	54		7.1	ug/m3	2.04		TO-15	Total/NA
o-Xylene	18		3.5	ug/m3	2.04		TO-15	Total/NA

## Client Sample ID: SV66-10

## Lab Sample ID: 320-21562-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	82		45	ppb v/v	9.05		TO-15	Total/NA
Benzene	39		3.6	ppb v/v	9.05		TO-15	Total/NA
2-Butanone (MEK)	19		7.2	ppb v/v	9.05		TO-15	Total/NA
Carbon disulfide	9.3		7.2	ppb v/v	9.05		TO-15	Total/NA
cis-1,2-Dichloroethene	5.7		3.6	ppb v/v	9.05		TO-15	Total/NA
Toluene	9.8		3.6	ppb v/v	9.05		TO-15	Total/NA
m,p-Xylene	8.5		7.2	ppb v/v	9.05		TO-15	Total/NA
Helium	2.1		0.91	% v/v	9.05		D1946	Total/NA
Oxygen	15		1.8	% v/v	9.05		D1946	Total/NA
Methane (FID)	0.60		0.0018	% v/v	18.09		D1946	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	190		110	ug/m3	9.05		TO-15	Total/NA
Benzene	120		12	ug/m3	9.05		TO-15	Total/NA
2-Butanone (MEK)	57		21	ug/m3	9.05		TO-15	Total/NA
Carbon disulfide	29		23	ug/m3	9.05		TO-15	Total/NA
cis-1,2-Dichloroethene	23		14	ug/m3	9.05		TO-15	Total/NA
Toluene	37		14	ug/m3	9.05		TO-15	Total/NA
m,p-Xylene	37		31	ug/m3	9.05		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-5**

**Date Collected: 09/07/16 12:30**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 320-21562-1**

**Matrix: Air**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>250</b>		46	ppb v/v			09/13/16 18:06	9.22
<b>Benzene</b>	<b>39</b>		3.7	ppb v/v			09/13/16 18:06	9.22
Benzyl chloride	ND		7.4	ppb v/v			09/13/16 18:06	9.22
Bromodichloromethane	ND		2.8	ppb v/v			09/13/16 18:06	9.22
Bromoform	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Bromomethane	ND		7.4	ppb v/v			09/13/16 18:06	9.22
<b>2-Butanone (MEK)</b>	<b>31</b>		7.4	ppb v/v			09/13/16 18:06	9.22
<b>Carbon disulfide</b>	<b>13</b>		7.4	ppb v/v			09/13/16 18:06	9.22
Carbon tetrachloride	ND		7.4	ppb v/v			09/13/16 18:06	9.22
Chlorobenzene	ND		2.8	ppb v/v			09/13/16 18:06	9.22
Dibromochloromethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Chloroethane	ND		7.4	ppb v/v			09/13/16 18:06	9.22
<b>Chloroform</b>	<b>3.5</b>		2.8	ppb v/v			09/13/16 18:06	9.22
Chloromethane	ND		7.4	ppb v/v			09/13/16 18:06	9.22
1,2-Dibromoethane (EDB)	ND		7.4	ppb v/v			09/13/16 18:06	9.22
1,2-Dichlorobenzene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,3-Dichlorobenzene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,4-Dichlorobenzene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Dichlorodifluoromethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,1-Dichloroethane	ND		2.8	ppb v/v			09/13/16 18:06	9.22
1,2-Dichloroethane	ND		7.4	ppb v/v			09/13/16 18:06	9.22
1,1-Dichloroethene	ND		7.4	ppb v/v			09/13/16 18:06	9.22
cis-1,2-Dichloroethene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
trans-1,2-Dichloroethene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,2-Dichloropropane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
cis-1,3-Dichloropropene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
trans-1,3-Dichloropropene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
<b>Ethylbenzene</b>	<b>13</b>		3.7	ppb v/v			09/13/16 18:06	9.22
4-Ethyltoluene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Hexachlorobutadiene	ND		18	ppb v/v			09/13/16 18:06	9.22
2-Hexanone	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Methylene Chloride	ND		3.7	ppb v/v			09/13/16 18:06	9.22
4-Methyl-2-pentanone (MIBK)	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Styrene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,1,2,2-Tetrachloroethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Tetrachloroethene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
<b>Toluene</b>	<b>67</b>		3.7	ppb v/v			09/13/16 18:06	9.22
1,2,4-Trichlorobenzene	ND		18	ppb v/v			09/13/16 18:06	9.22
1,1,1-Trichloroethane	ND		2.8	ppb v/v			09/13/16 18:06	9.22
1,1,2-Trichloroethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
Trichloroethene	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,4-Dioxane	ND		7.4	ppb v/v			09/13/16 18:06	9.22
Trichlorofluoromethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.7	ppb v/v			09/13/16 18:06	9.22
<b>1,2,4-Trimethylbenzene</b>	<b>10</b>		7.4	ppb v/v			09/13/16 18:06	9.22
<b>1,3,5-Trimethylbenzene</b>	<b>5.5</b>		3.7	ppb v/v			09/13/16 18:06	9.22
Vinyl acetate	ND		7.4	ppb v/v			09/13/16 18:06	9.22

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-5**

**Lab Sample ID: 320-21562-1**

**Date Collected: 09/07/16 12:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		3.7	ppb v/v			09/13/16 18:06	9.22
<b>m,p-Xylene</b>	<b>89</b>		7.4	ppb v/v			09/13/16 18:06	9.22
<b>o-Xylene</b>	<b>22</b>		3.7	ppb v/v			09/13/16 18:06	9.22
Naphthalene	ND		7.4	ppb v/v			09/13/16 18:06	9.22
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>590</b>		110	ug/m3			09/13/16 18:06	9.22
<b>Benzene</b>	<b>120</b>		12	ug/m3			09/13/16 18:06	9.22
Benzyl chloride	ND		38	ug/m3			09/13/16 18:06	9.22
Bromodichloromethane	ND		19	ug/m3			09/13/16 18:06	9.22
Bromoform	ND		38	ug/m3			09/13/16 18:06	9.22
Bromomethane	ND		29	ug/m3			09/13/16 18:06	9.22
<b>2-Butanone (MEK)</b>	<b>93</b>		22	ug/m3			09/13/16 18:06	9.22
<b>Carbon disulfide</b>	<b>41</b>		23	ug/m3			09/13/16 18:06	9.22
Carbon tetrachloride	ND		46	ug/m3			09/13/16 18:06	9.22
Chlorobenzene	ND		13	ug/m3			09/13/16 18:06	9.22
Dibromochloromethane	ND		31	ug/m3			09/13/16 18:06	9.22
Chloroethane	ND		19	ug/m3			09/13/16 18:06	9.22
<b>Chloroform</b>	<b>17</b>		14	ug/m3			09/13/16 18:06	9.22
Chloromethane	ND		15	ug/m3			09/13/16 18:06	9.22
1,2-Dibromoethane (EDB)	ND		57	ug/m3			09/13/16 18:06	9.22
1,2-Dichlorobenzene	ND		22	ug/m3			09/13/16 18:06	9.22
1,3-Dichlorobenzene	ND		22	ug/m3			09/13/16 18:06	9.22
1,4-Dichlorobenzene	ND		22	ug/m3			09/13/16 18:06	9.22
Dichlorodifluoromethane	ND		18	ug/m3			09/13/16 18:06	9.22
1,1-Dichloroethane	ND		11	ug/m3			09/13/16 18:06	9.22
1,2-Dichloroethane	ND		30	ug/m3			09/13/16 18:06	9.22
1,1-Dichloroethene	ND		29	ug/m3			09/13/16 18:06	9.22
cis-1,2-Dichloroethene	ND		15	ug/m3			09/13/16 18:06	9.22
trans-1,2-Dichloroethene	ND		15	ug/m3			09/13/16 18:06	9.22
1,2-Dichloropropane	ND		17	ug/m3			09/13/16 18:06	9.22
cis-1,3-Dichloropropene	ND		17	ug/m3			09/13/16 18:06	9.22
trans-1,3-Dichloropropene	ND		17	ug/m3			09/13/16 18:06	9.22
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		26	ug/m3			09/13/16 18:06	9.22
<b>Ethylbenzene</b>	<b>55</b>		16	ug/m3			09/13/16 18:06	9.22
4-Ethyltoluene	ND		18	ug/m3			09/13/16 18:06	9.22
Hexachlorobutadiene	ND		200	ug/m3			09/13/16 18:06	9.22
2-Hexanone	ND		15	ug/m3			09/13/16 18:06	9.22
Methylene Chloride	ND		13	ug/m3			09/13/16 18:06	9.22
4-Methyl-2-pentanone (MIBK)	ND		15	ug/m3			09/13/16 18:06	9.22
Styrene	ND		16	ug/m3			09/13/16 18:06	9.22
1,1,2,2-Tetrachloroethane	ND		25	ug/m3			09/13/16 18:06	9.22
Tetrachloroethene	ND		25	ug/m3			09/13/16 18:06	9.22
<b>Toluene</b>	<b>250</b>		14	ug/m3			09/13/16 18:06	9.22
1,2,4-Trichlorobenzene	ND		140	ug/m3			09/13/16 18:06	9.22
1,1,1-Trichloroethane	ND		15	ug/m3			09/13/16 18:06	9.22
1,1,2-Trichloroethane	ND		20	ug/m3			09/13/16 18:06	9.22
Trichloroethene	ND		20	ug/m3			09/13/16 18:06	9.22
1,4-Dioxane	ND		27	ug/m3			09/13/16 18:06	9.22

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-5**

**Lab Sample ID: 320-21562-1**

**Date Collected: 09/07/16 12:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		21	ug/m3			09/13/16 18:06	9.22
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		28	ug/m3			09/13/16 18:06	9.22
<b>1,2,4-Trimethylbenzene</b>	<b>50</b>		36	ug/m3			09/13/16 18:06	9.22
<b>1,3,5-Trimethylbenzene</b>	<b>27</b>		18	ug/m3			09/13/16 18:06	9.22
Vinyl acetate	ND		26	ug/m3			09/13/16 18:06	9.22
Vinyl chloride	ND		9.4	ug/m3			09/13/16 18:06	9.22
<b>m,p-Xylene</b>	<b>390</b>		32	ug/m3			09/13/16 18:06	9.22
<b>o-Xylene</b>	<b>94</b>		16	ug/m3			09/13/16 18:06	9.22
Naphthalene	ND		39	ug/m3			09/13/16 18:06	9.22
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	97		70 - 130				09/13/16 18:06	9.22
1,2-Dichloroethane-d4 (Surr)	89		70 - 130				09/13/16 18:06	9.22
Toluene-d8 (Surr)	99		70 - 130				09/13/16 18:06	9.22

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		2.3	% v/v			09/13/16 11:41	4.61
<b>Helium</b>	<b>0.77</b>		0.46	% v/v			09/13/16 11:41	4.61
<b>Oxygen</b>	<b>8.3</b>		0.92	% v/v			09/13/16 11:41	4.61
<b>Methane (FID)</b>	<b>5.0</b>		0.014	% v/v			09/14/16 15:37	138.3

**Client Sample ID: SV62-10**

**Lab Sample ID: 320-21562-2**

**Date Collected: 09/07/16 12:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		510	ppb v/v			09/13/16 18:58	101
Benzene	ND		40	ppb v/v			09/13/16 18:58	101
Benzyl chloride	ND		81	ppb v/v			09/13/16 18:58	101
Bromodichloromethane	ND		30	ppb v/v			09/13/16 18:58	101
Bromoform	ND		40	ppb v/v			09/13/16 18:58	101
Bromomethane	ND		81	ppb v/v			09/13/16 18:58	101
2-Butanone (MEK)	ND		81	ppb v/v			09/13/16 18:58	101
Carbon disulfide	ND		81	ppb v/v			09/13/16 18:58	101
Carbon tetrachloride	ND		81	ppb v/v			09/13/16 18:58	101
Chlorobenzene	ND		30	ppb v/v			09/13/16 18:58	101
Dibromochloromethane	ND		40	ppb v/v			09/13/16 18:58	101
Chloroethane	ND		81	ppb v/v			09/13/16 18:58	101
Chloroform	ND		30	ppb v/v			09/13/16 18:58	101
Chloromethane	ND		81	ppb v/v			09/13/16 18:58	101
1,2-Dibromoethane (EDB)	ND		81	ppb v/v			09/13/16 18:58	101
1,2-Dichlorobenzene	ND		40	ppb v/v			09/13/16 18:58	101
1,3-Dichlorobenzene	ND		40	ppb v/v			09/13/16 18:58	101
1,4-Dichlorobenzene	ND		40	ppb v/v			09/13/16 18:58	101
Dichlorodifluoromethane	ND		40	ppb v/v			09/13/16 18:58	101
1,1-Dichloroethane	ND		30	ppb v/v			09/13/16 18:58	101

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-10**

**Lab Sample ID: 320-21562-2**

**Date Collected: 09/07/16 12:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		81	ppb v/v			09/13/16 18:58	101
1,1-Dichloroethene	ND		81	ppb v/v			09/13/16 18:58	101
cis-1,2-Dichloroethene	ND		40	ppb v/v			09/13/16 18:58	101
trans-1,2-Dichloroethene	ND		40	ppb v/v			09/13/16 18:58	101
1,2-Dichloropropane	ND		40	ppb v/v			09/13/16 18:58	101
cis-1,3-Dichloropropene	ND		40	ppb v/v			09/13/16 18:58	101
trans-1,3-Dichloropropene	ND		40	ppb v/v			09/13/16 18:58	101
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		40	ppb v/v			09/13/16 18:58	101
Ethylbenzene	ND		40	ppb v/v			09/13/16 18:58	101
4-Ethyltoluene	ND		40	ppb v/v			09/13/16 18:58	101
Hexachlorobutadiene	ND		200	ppb v/v			09/13/16 18:58	101
2-Hexanone	ND		40	ppb v/v			09/13/16 18:58	101
Methylene Chloride	ND		40	ppb v/v			09/13/16 18:58	101
4-Methyl-2-pentanone (MIBK)	ND		40	ppb v/v			09/13/16 18:58	101
Styrene	ND		40	ppb v/v			09/13/16 18:58	101
1,1,2,2-Tetrachloroethane	ND		40	ppb v/v			09/13/16 18:58	101
Tetrachloroethene	ND		40	ppb v/v			09/13/16 18:58	101
Toluene	ND		40	ppb v/v			09/13/16 18:58	101
1,2,4-Trichlorobenzene	ND		200	ppb v/v			09/13/16 18:58	101
1,1,1-Trichloroethane	ND		30	ppb v/v			09/13/16 18:58	101
1,1,2-Trichloroethane	ND		40	ppb v/v			09/13/16 18:58	101
Trichloroethene	ND		40	ppb v/v			09/13/16 18:58	101
1,4-Dioxane	ND		81	ppb v/v			09/13/16 18:58	101
Trichlorofluoromethane	ND		40	ppb v/v			09/13/16 18:58	101
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		40	ppb v/v			09/13/16 18:58	101
1,2,4-Trimethylbenzene	ND		81	ppb v/v			09/13/16 18:58	101
1,3,5-Trimethylbenzene	ND		40	ppb v/v			09/13/16 18:58	101
Vinyl acetate	ND		81	ppb v/v			09/13/16 18:58	101
Vinyl chloride	ND		40	ppb v/v			09/13/16 18:58	101
m,p-Xylene	ND		81	ppb v/v			09/13/16 18:58	101
o-Xylene	ND		40	ppb v/v			09/13/16 18:58	101
Naphthalene	ND		81	ppb v/v			09/13/16 18:58	101
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1200	ug/m3			09/13/16 18:58	101
Benzene	ND		130	ug/m3			09/13/16 18:58	101
Benzyl chloride	ND		420	ug/m3			09/13/16 18:58	101
Bromodichloromethane	ND		200	ug/m3			09/13/16 18:58	101
Bromoform	ND		420	ug/m3			09/13/16 18:58	101
Bromomethane	ND		310	ug/m3			09/13/16 18:58	101
2-Butanone (MEK)	ND		240	ug/m3			09/13/16 18:58	101
Carbon disulfide	ND		250	ug/m3			09/13/16 18:58	101
Carbon tetrachloride	ND		510	ug/m3			09/13/16 18:58	101
Chlorobenzene	ND		140	ug/m3			09/13/16 18:58	101
Dibromochloromethane	ND		340	ug/m3			09/13/16 18:58	101
Chloroethane	ND		210	ug/m3			09/13/16 18:58	101
Chloroform	ND		150	ug/m3			09/13/16 18:58	101
Chloromethane	ND		170	ug/m3			09/13/16 18:58	101
1,2-Dibromoethane (EDB)	ND		620	ug/m3			09/13/16 18:58	101

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-10**

**Lab Sample ID: 320-21562-2**

**Date Collected: 09/07/16 12:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		240	ug/m3			09/13/16 18:58	101
1,3-Dichlorobenzene	ND		240	ug/m3			09/13/16 18:58	101
1,4-Dichlorobenzene	ND		240	ug/m3			09/13/16 18:58	101
Dichlorodifluoromethane	ND		200	ug/m3			09/13/16 18:58	101
1,1-Dichloroethane	ND		120	ug/m3			09/13/16 18:58	101
1,2-Dichloroethane	ND		330	ug/m3			09/13/16 18:58	101
1,1-Dichloroethene	ND		320	ug/m3			09/13/16 18:58	101
cis-1,2-Dichloroethene	ND		160	ug/m3			09/13/16 18:58	101
trans-1,2-Dichloroethene	ND		160	ug/m3			09/13/16 18:58	101
1,2-Dichloropropane	ND		190	ug/m3			09/13/16 18:58	101
cis-1,3-Dichloropropene	ND		180	ug/m3			09/13/16 18:58	101
trans-1,3-Dichloropropene	ND		180	ug/m3			09/13/16 18:58	101
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		280	ug/m3			09/13/16 18:58	101
Ethylbenzene	ND		180	ug/m3			09/13/16 18:58	101
4-Ethyltoluene	ND		200	ug/m3			09/13/16 18:58	101
Hexachlorobutadiene	ND		2200	ug/m3			09/13/16 18:58	101
2-Hexanone	ND		170	ug/m3			09/13/16 18:58	101
Methylene Chloride	ND		140	ug/m3			09/13/16 18:58	101
4-Methyl-2-pentanone (MIBK)	ND		170	ug/m3			09/13/16 18:58	101
Styrene	ND		170	ug/m3			09/13/16 18:58	101
1,1,2,2-Tetrachloroethane	ND		280	ug/m3			09/13/16 18:58	101
Tetrachloroethene	ND		270	ug/m3			09/13/16 18:58	101
Toluene	ND		150	ug/m3			09/13/16 18:58	101
1,2,4-Trichlorobenzene	ND		1500	ug/m3			09/13/16 18:58	101
1,1,1-Trichloroethane	ND		170	ug/m3			09/13/16 18:58	101
1,1,2-Trichloroethane	ND		220	ug/m3			09/13/16 18:58	101
Trichloroethene	ND		220	ug/m3			09/13/16 18:58	101
1,4-Dioxane	ND		290	ug/m3			09/13/16 18:58	101
Trichlorofluoromethane	ND		230	ug/m3			09/13/16 18:58	101
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		310	ug/m3			09/13/16 18:58	101
1,2,4-Trimethylbenzene	ND		400	ug/m3			09/13/16 18:58	101
1,3,5-Trimethylbenzene	ND		200	ug/m3			09/13/16 18:58	101
Vinyl acetate	ND		280	ug/m3			09/13/16 18:58	101
Vinyl chloride	ND		100	ug/m3			09/13/16 18:58	101
m,p-Xylene	ND		350	ug/m3			09/13/16 18:58	101
o-Xylene	ND		180	ug/m3			09/13/16 18:58	101
Naphthalene	ND		420	ug/m3			09/13/16 18:58	101

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130		09/13/16 18:58	101
1,2-Dichloroethane-d4 (Surr)	86		70 - 130		09/13/16 18:58	101
Toluene-d8 (Surr)	96		70 - 130		09/13/16 18:58	101

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		5.0	% v/v			09/13/16 11:57	10.09
Helium	2.1		1.0	% v/v			09/13/16 11:57	10.09
Oxygen	6.1		2.0	% v/v			09/13/16 11:57	10.09
Methane (FID)	5.6		0.020	% v/v			09/14/16 16:02	201.9

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV63-5**

**Lab Sample ID: 320-21562-3**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>130</b>		11	ppb v/v			09/13/16 20:25	2.22
<b>Benzene</b>	<b>8.4</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Benzyl chloride	ND		1.8	ppb v/v			09/13/16 20:25	2.22
Bromodichloromethane	ND		0.67	ppb v/v			09/13/16 20:25	2.22
Bromoform	ND		0.89	ppb v/v			09/13/16 20:25	2.22
Bromomethane	ND		1.8	ppb v/v			09/13/16 20:25	2.22
<b>2-Butanone (MEK)</b>	<b>24</b>		1.8	ppb v/v			09/13/16 20:25	2.22
<b>Carbon disulfide</b>	<b>8.0</b>		1.8	ppb v/v			09/13/16 20:25	2.22
Carbon tetrachloride	ND		1.8	ppb v/v			09/13/16 20:25	2.22
Chlorobenzene	ND		0.67	ppb v/v			09/13/16 20:25	2.22
Dibromochloromethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
Chloroethane	ND		1.8	ppb v/v			09/13/16 20:25	2.22
<b>Chloroform</b>	<b>1.8</b>		0.67	ppb v/v			09/13/16 20:25	2.22
Chloromethane	ND		1.8	ppb v/v			09/13/16 20:25	2.22
1,2-Dibromoethane (EDB)	ND		1.8	ppb v/v			09/13/16 20:25	2.22
1,2-Dichlorobenzene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,3-Dichlorobenzene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,4-Dichlorobenzene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
Dichlorodifluoromethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,1-Dichloroethane	ND		0.67	ppb v/v			09/13/16 20:25	2.22
1,2-Dichloroethane	ND		1.8	ppb v/v			09/13/16 20:25	2.22
1,1-Dichloroethene	ND		1.8	ppb v/v			09/13/16 20:25	2.22
cis-1,2-Dichloroethene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
trans-1,2-Dichloroethene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,2-Dichloropropane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
cis-1,3-Dichloropropene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
trans-1,3-Dichloropropene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
<b>Ethylbenzene</b>	<b>5.2</b>		0.89	ppb v/v			09/13/16 20:25	2.22
<b>4-Ethyltoluene</b>	<b>0.92</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Hexachlorobutadiene	ND		4.4	ppb v/v			09/13/16 20:25	2.22
<b>2-Hexanone</b>	<b>1.7</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Methylene Chloride	ND		0.89	ppb v/v			09/13/16 20:25	2.22
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>3.3</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Styrene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,1,2,2-Tetrachloroethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
Tetrachloroethene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
<b>Toluene</b>	<b>18</b>		0.89	ppb v/v			09/13/16 20:25	2.22
1,2,4-Trichlorobenzene	ND		4.4	ppb v/v			09/13/16 20:25	2.22
1,1,1-Trichloroethane	ND		0.67	ppb v/v			09/13/16 20:25	2.22
1,1,2-Trichloroethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
Trichloroethene	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,4-Dioxane	ND		1.8	ppb v/v			09/13/16 20:25	2.22
Trichlorofluoromethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.89	ppb v/v			09/13/16 20:25	2.22
<b>1,2,4-Trimethylbenzene</b>	<b>2.6</b>		1.8	ppb v/v			09/13/16 20:25	2.22
<b>1,3,5-Trimethylbenzene</b>	<b>1.3</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Vinyl acetate	ND		1.8	ppb v/v			09/13/16 20:25	2.22

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV63-5**

**Lab Sample ID: 320-21562-3**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.89	ppb v/v			09/13/16 20:25	2.22
<b>m,p-Xylene</b>	<b>21</b>		1.8	ppb v/v			09/13/16 20:25	2.22
<b>o-Xylene</b>	<b>6.3</b>		0.89	ppb v/v			09/13/16 20:25	2.22
Naphthalene	ND		1.8	ppb v/v			09/13/16 20:25	2.22
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>310</b>		26	ug/m3			09/13/16 20:25	2.22
<b>Benzene</b>	<b>27</b>		2.8	ug/m3			09/13/16 20:25	2.22
Benzyl chloride	ND		9.2	ug/m3			09/13/16 20:25	2.22
Bromodichloromethane	ND		4.5	ug/m3			09/13/16 20:25	2.22
Bromoform	ND		9.2	ug/m3			09/13/16 20:25	2.22
Bromomethane	ND		6.9	ug/m3			09/13/16 20:25	2.22
<b>2-Butanone (MEK)</b>	<b>71</b>		5.2	ug/m3			09/13/16 20:25	2.22
<b>Carbon disulfide</b>	<b>25</b>		5.5	ug/m3			09/13/16 20:25	2.22
Carbon tetrachloride	ND		11	ug/m3			09/13/16 20:25	2.22
Chlorobenzene	ND		3.1	ug/m3			09/13/16 20:25	2.22
Dibromochloromethane	ND		7.6	ug/m3			09/13/16 20:25	2.22
Chloroethane	ND		4.7	ug/m3			09/13/16 20:25	2.22
<b>Chloroform</b>	<b>8.7</b>		3.3	ug/m3			09/13/16 20:25	2.22
Chloromethane	ND		3.7	ug/m3			09/13/16 20:25	2.22
1,2-Dibromoethane (EDB)	ND		14	ug/m3			09/13/16 20:25	2.22
1,2-Dichlorobenzene	ND		5.3	ug/m3			09/13/16 20:25	2.22
1,3-Dichlorobenzene	ND		5.3	ug/m3			09/13/16 20:25	2.22
1,4-Dichlorobenzene	ND		5.3	ug/m3			09/13/16 20:25	2.22
Dichlorodifluoromethane	ND		4.4	ug/m3			09/13/16 20:25	2.22
1,1-Dichloroethane	ND		2.7	ug/m3			09/13/16 20:25	2.22
1,2-Dichloroethane	ND		7.2	ug/m3			09/13/16 20:25	2.22
1,1-Dichloroethene	ND		7.0	ug/m3			09/13/16 20:25	2.22
cis-1,2-Dichloroethene	ND		3.5	ug/m3			09/13/16 20:25	2.22
trans-1,2-Dichloroethene	ND		3.5	ug/m3			09/13/16 20:25	2.22
1,2-Dichloropropane	ND		4.1	ug/m3			09/13/16 20:25	2.22
cis-1,3-Dichloropropene	ND		4.0	ug/m3			09/13/16 20:25	2.22
trans-1,3-Dichloropropene	ND		4.0	ug/m3			09/13/16 20:25	2.22
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.2	ug/m3			09/13/16 20:25	2.22
<b>Ethylbenzene</b>	<b>23</b>		3.9	ug/m3			09/13/16 20:25	2.22
<b>4-Ethyltoluene</b>	<b>4.5</b>		4.4	ug/m3			09/13/16 20:25	2.22
Hexachlorobutadiene	ND		47	ug/m3			09/13/16 20:25	2.22
<b>2-Hexanone</b>	<b>6.8</b>		3.6	ug/m3			09/13/16 20:25	2.22
Methylene Chloride	ND		3.1	ug/m3			09/13/16 20:25	2.22
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>14</b>		3.6	ug/m3			09/13/16 20:25	2.22
Styrene	ND		3.8	ug/m3			09/13/16 20:25	2.22
1,1,2,2-Tetrachloroethane	ND		6.1	ug/m3			09/13/16 20:25	2.22
Tetrachloroethene	ND		6.0	ug/m3			09/13/16 20:25	2.22
<b>Toluene</b>	<b>68</b>		3.3	ug/m3			09/13/16 20:25	2.22
1,2,4-Trichlorobenzene	ND		33	ug/m3			09/13/16 20:25	2.22
1,1,1-Trichloroethane	ND		3.6	ug/m3			09/13/16 20:25	2.22
1,1,2-Trichloroethane	ND		4.8	ug/m3			09/13/16 20:25	2.22
Trichloroethene	ND		4.8	ug/m3			09/13/16 20:25	2.22
1,4-Dioxane	ND		6.4	ug/m3			09/13/16 20:25	2.22

TestAmerica Sacramento



# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV63-5**

**Lab Sample ID: 320-21562-3**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		5.0	ug/m3			09/13/16 20:25	2.22
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.8	ug/m3			09/13/16 20:25	2.22
<b>1,2,4-Trimethylbenzene</b>	<b>13</b>		8.7	ug/m3			09/13/16 20:25	2.22
<b>1,3,5-Trimethylbenzene</b>	<b>6.3</b>		4.4	ug/m3			09/13/16 20:25	2.22
Vinyl acetate	ND		6.3	ug/m3			09/13/16 20:25	2.22
Vinyl chloride	ND		2.3	ug/m3			09/13/16 20:25	2.22
<b>m,p-Xylene</b>	<b>92</b>		7.7	ug/m3			09/13/16 20:25	2.22
<b>o-Xylene</b>	<b>27</b>		3.9	ug/m3			09/13/16 20:25	2.22
Naphthalene	ND		9.3	ug/m3			09/13/16 20:25	2.22
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	97		70 - 130				09/13/16 20:25	2.22
1,2-Dichloroethane-d4 (Surr)	88		70 - 130				09/13/16 20:25	2.22
Toluene-d8 (Surr)	98		70 - 130				09/13/16 20:25	2.22

## Method: D1946 - Fixed Gases in Air (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		3.3	% v/v			09/13/16 12:08	6.67
<b>Helium</b>	<b>1.1</b>		0.67	% v/v			09/13/16 12:08	6.67
<b>Oxygen</b>	<b>9.0</b>		1.3	% v/v			09/13/16 12:08	6.67
<b>Methane (FID)</b>	<b>0.22</b>		0.0013	% v/v			09/14/16 16:41	12.56

**Client Sample ID: SV63-10**

**Lab Sample ID: 320-21562-4**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		310	ppb v/v			09/13/16 21:17	62.3
<b>Benzene</b>	<b>53</b>		25	ppb v/v			09/13/16 21:17	62.3
Benzyl chloride	ND		50	ppb v/v			09/13/16 21:17	62.3
Bromodichloromethane	ND		19	ppb v/v			09/13/16 21:17	62.3
Bromoform	ND		25	ppb v/v			09/13/16 21:17	62.3
Bromomethane	ND		50	ppb v/v			09/13/16 21:17	62.3
2-Butanone (MEK)	ND		50	ppb v/v			09/13/16 21:17	62.3
Carbon disulfide	ND		50	ppb v/v			09/13/16 21:17	62.3
Carbon tetrachloride	ND		50	ppb v/v			09/13/16 21:17	62.3
Chlorobenzene	ND		19	ppb v/v			09/13/16 21:17	62.3
Dibromochloromethane	ND		25	ppb v/v			09/13/16 21:17	62.3
Chloroethane	ND		50	ppb v/v			09/13/16 21:17	62.3
Chloroform	ND		19	ppb v/v			09/13/16 21:17	62.3
Chloromethane	ND		50	ppb v/v			09/13/16 21:17	62.3
1,2-Dibromoethane (EDB)	ND		50	ppb v/v			09/13/16 21:17	62.3
1,2-Dichlorobenzene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,3-Dichlorobenzene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,4-Dichlorobenzene	ND		25	ppb v/v			09/13/16 21:17	62.3
Dichlorodifluoromethane	ND		25	ppb v/v			09/13/16 21:17	62.3
1,1-Dichloroethane	ND		19	ppb v/v			09/13/16 21:17	62.3

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV63-10**

**Lab Sample ID: 320-21562-4**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		50	ppb v/v			09/13/16 21:17	62.3
1,1-Dichloroethene	ND		50	ppb v/v			09/13/16 21:17	62.3
cis-1,2-Dichloroethene	ND		25	ppb v/v			09/13/16 21:17	62.3
trans-1,2-Dichloroethene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,2-Dichloropropane	ND		25	ppb v/v			09/13/16 21:17	62.3
cis-1,3-Dichloropropene	ND		25	ppb v/v			09/13/16 21:17	62.3
trans-1,3-Dichloropropene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		25	ppb v/v			09/13/16 21:17	62.3
Ethylbenzene	ND		25	ppb v/v			09/13/16 21:17	62.3
4-Ethyltoluene	ND		25	ppb v/v			09/13/16 21:17	62.3
Hexachlorobutadiene	ND		120	ppb v/v			09/13/16 21:17	62.3
2-Hexanone	ND		25	ppb v/v			09/13/16 21:17	62.3
Methylene Chloride	ND		25	ppb v/v			09/13/16 21:17	62.3
4-Methyl-2-pentanone (MIBK)	ND		25	ppb v/v			09/13/16 21:17	62.3
Styrene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,1,2,2-Tetrachloroethane	ND		25	ppb v/v			09/13/16 21:17	62.3
Tetrachloroethene	ND		25	ppb v/v			09/13/16 21:17	62.3
Toluene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,2,4-Trichlorobenzene	ND		120	ppb v/v			09/13/16 21:17	62.3
1,1,1-Trichloroethane	ND		19	ppb v/v			09/13/16 21:17	62.3
1,1,2-Trichloroethane	ND		25	ppb v/v			09/13/16 21:17	62.3
Trichloroethene	ND		25	ppb v/v			09/13/16 21:17	62.3
1,4-Dioxane	ND		50	ppb v/v			09/13/16 21:17	62.3
Trichlorofluoromethane	ND		25	ppb v/v			09/13/16 21:17	62.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25	ppb v/v			09/13/16 21:17	62.3
1,2,4-Trimethylbenzene	ND		50	ppb v/v			09/13/16 21:17	62.3
1,3,5-Trimethylbenzene	ND		25	ppb v/v			09/13/16 21:17	62.3
Vinyl acetate	ND		50	ppb v/v			09/13/16 21:17	62.3
Vinyl chloride	ND		25	ppb v/v			09/13/16 21:17	62.3
<b>m,p-Xylene</b>	<b>140</b>		50	ppb v/v			09/13/16 21:17	62.3
o-Xylene	ND		25	ppb v/v			09/13/16 21:17	62.3
Naphthalene	ND		50	ppb v/v			09/13/16 21:17	62.3
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		740	ug/m3			09/13/16 21:17	62.3
<b>Benzene</b>	<b>170</b>		80	ug/m3			09/13/16 21:17	62.3
Benzyl chloride	ND		260	ug/m3			09/13/16 21:17	62.3
Bromodichloromethane	ND		130	ug/m3			09/13/16 21:17	62.3
Bromoform	ND		260	ug/m3			09/13/16 21:17	62.3
Bromomethane	ND		190	ug/m3			09/13/16 21:17	62.3
2-Butanone (MEK)	ND		150	ug/m3			09/13/16 21:17	62.3
Carbon disulfide	ND		160	ug/m3			09/13/16 21:17	62.3
Carbon tetrachloride	ND		310	ug/m3			09/13/16 21:17	62.3
Chlorobenzene	ND		86	ug/m3			09/13/16 21:17	62.3
Dibromochloromethane	ND		210	ug/m3			09/13/16 21:17	62.3
Chloroethane	ND		130	ug/m3			09/13/16 21:17	62.3
Chloroform	ND		91	ug/m3			09/13/16 21:17	62.3
Chloromethane	ND		100	ug/m3			09/13/16 21:17	62.3
1,2-Dibromoethane (EDB)	ND		380	ug/m3			09/13/16 21:17	62.3

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV63-10**

**Lab Sample ID: 320-21562-4**

**Date Collected: 09/07/16 13:15**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		150	ug/m3			09/13/16 21:17	62.3
1,3-Dichlorobenzene	ND		150	ug/m3			09/13/16 21:17	62.3
1,4-Dichlorobenzene	ND		150	ug/m3			09/13/16 21:17	62.3
Dichlorodifluoromethane	ND		120	ug/m3			09/13/16 21:17	62.3
1,1-Dichloroethane	ND		76	ug/m3			09/13/16 21:17	62.3
1,2-Dichloroethane	ND		200	ug/m3			09/13/16 21:17	62.3
1,1-Dichloroethene	ND		200	ug/m3			09/13/16 21:17	62.3
cis-1,2-Dichloroethene	ND		99	ug/m3			09/13/16 21:17	62.3
trans-1,2-Dichloroethene	ND		99	ug/m3			09/13/16 21:17	62.3
1,2-Dichloropropane	ND		120	ug/m3			09/13/16 21:17	62.3
cis-1,3-Dichloropropene	ND		110	ug/m3			09/13/16 21:17	62.3
trans-1,3-Dichloropropene	ND		110	ug/m3			09/13/16 21:17	62.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		170	ug/m3			09/13/16 21:17	62.3
Ethylbenzene	ND		110	ug/m3			09/13/16 21:17	62.3
4-Ethyltoluene	ND		120	ug/m3			09/13/16 21:17	62.3
Hexachlorobutadiene	ND		1300	ug/m3			09/13/16 21:17	62.3
2-Hexanone	ND		100	ug/m3			09/13/16 21:17	62.3
Methylene Chloride	ND		87	ug/m3			09/13/16 21:17	62.3
4-Methyl-2-pentanone (MIBK)	ND		100	ug/m3			09/13/16 21:17	62.3
Styrene	ND		110	ug/m3			09/13/16 21:17	62.3
1,1,2,2-Tetrachloroethane	ND		170	ug/m3			09/13/16 21:17	62.3
Tetrachloroethene	ND		170	ug/m3			09/13/16 21:17	62.3
Toluene	ND		94	ug/m3			09/13/16 21:17	62.3
1,2,4-Trichlorobenzene	ND		920	ug/m3			09/13/16 21:17	62.3
1,1,1-Trichloroethane	ND		100	ug/m3			09/13/16 21:17	62.3
1,1,2-Trichloroethane	ND		140	ug/m3			09/13/16 21:17	62.3
Trichloroethene	ND		130	ug/m3			09/13/16 21:17	62.3
1,4-Dioxane	ND		180	ug/m3			09/13/16 21:17	62.3
Trichlorofluoromethane	ND		140	ug/m3			09/13/16 21:17	62.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		190	ug/m3			09/13/16 21:17	62.3
1,2,4-Trimethylbenzene	ND		250	ug/m3			09/13/16 21:17	62.3
1,3,5-Trimethylbenzene	ND		120	ug/m3			09/13/16 21:17	62.3
Vinyl acetate	ND		180	ug/m3			09/13/16 21:17	62.3
Vinyl chloride	ND		64	ug/m3			09/13/16 21:17	62.3
<b>m,p-Xylene</b>	<b>620</b>		220	ug/m3			09/13/16 21:17	62.3
o-Xylene	ND		110	ug/m3			09/13/16 21:17	62.3
Naphthalene	ND		260	ug/m3			09/13/16 21:17	62.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		09/13/16 21:17	62.3
1,2-Dichloroethane-d4 (Surr)	84		70 - 130		09/13/16 21:17	62.3
Toluene-d8 (Surr)	98		70 - 130		09/13/16 21:17	62.3

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		3.1	% v/v			09/13/16 15:14	6.23
<b>Helium</b>	<b>1.0</b>		0.62	% v/v			09/13/16 15:14	6.23
<b>Methane (TCD)</b>	<b>15</b>		3.1	% v/v			09/13/16 15:14	6.23
<b>Oxygen</b>	<b>2.9</b>		1.2	% v/v			09/13/16 15:14	6.23

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-5**

**Lab Sample ID: 320-21562-5**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>78</b>		7.0	ppb v/v			09/13/16 22:44	1.39
<b>Benzene</b>	<b>3.8</b>		0.56	ppb v/v			09/13/16 22:44	1.39
Benzyl chloride	ND		1.1	ppb v/v			09/13/16 22:44	1.39
Bromodichloromethane	ND		0.42	ppb v/v			09/13/16 22:44	1.39
Bromoform	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Bromomethane	ND		1.1	ppb v/v			09/13/16 22:44	1.39
<b>2-Butanone (MEK)</b>	<b>14</b>		1.1	ppb v/v			09/13/16 22:44	1.39
<b>Carbon disulfide</b>	<b>3.1</b>		1.1	ppb v/v			09/13/16 22:44	1.39
Carbon tetrachloride	ND		1.1	ppb v/v			09/13/16 22:44	1.39
Chlorobenzene	ND		0.42	ppb v/v			09/13/16 22:44	1.39
Dibromochloromethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Chloroethane	ND		1.1	ppb v/v			09/13/16 22:44	1.39
Chloroform	ND		0.42	ppb v/v			09/13/16 22:44	1.39
Chloromethane	ND		1.1	ppb v/v			09/13/16 22:44	1.39
1,2-Dibromoethane (EDB)	ND		1.1	ppb v/v			09/13/16 22:44	1.39
1,2-Dichlorobenzene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,3-Dichlorobenzene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,4-Dichlorobenzene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Dichlorodifluoromethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,1-Dichloroethane	ND		0.42	ppb v/v			09/13/16 22:44	1.39
1,2-Dichloroethane	ND		1.1	ppb v/v			09/13/16 22:44	1.39
1,1-Dichloroethene	ND		1.1	ppb v/v			09/13/16 22:44	1.39
cis-1,2-Dichloroethene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
trans-1,2-Dichloroethene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,2-Dichloropropane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
cis-1,3-Dichloropropene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
trans-1,3-Dichloropropene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
<b>Ethylbenzene</b>	<b>1.7</b>		0.56	ppb v/v			09/13/16 22:44	1.39
4-Ethyltoluene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Hexachlorobutadiene	ND		2.8	ppb v/v			09/13/16 22:44	1.39
<b>2-Hexanone</b>	<b>0.68</b>		0.56	ppb v/v			09/13/16 22:44	1.39
Methylene Chloride	ND		0.56	ppb v/v			09/13/16 22:44	1.39
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>0.96</b>		0.56	ppb v/v			09/13/16 22:44	1.39
Styrene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,1,2,2-Tetrachloroethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Tetrachloroethene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
<b>Toluene</b>	<b>9.5</b>		0.56	ppb v/v			09/13/16 22:44	1.39
1,2,4-Trichlorobenzene	ND		2.8	ppb v/v			09/13/16 22:44	1.39
1,1,1-Trichloroethane	ND		0.42	ppb v/v			09/13/16 22:44	1.39
1,1,2-Trichloroethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Trichloroethene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,4-Dioxane	ND		1.1	ppb v/v			09/13/16 22:44	1.39
Trichlorofluoromethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.56	ppb v/v			09/13/16 22:44	1.39
<b>1,2,4-Trimethylbenzene</b>	<b>1.3</b>		1.1	ppb v/v			09/13/16 22:44	1.39
1,3,5-Trimethylbenzene	ND		0.56	ppb v/v			09/13/16 22:44	1.39
Vinyl acetate	ND		1.1	ppb v/v			09/13/16 22:44	1.39

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-5**

**Lab Sample ID: 320-21562-5**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.56	ppb v/v			09/13/16 22:44	1.39
<b>m,p-Xylene</b>	<b>6.0</b>		1.1	ppb v/v			09/13/16 22:44	1.39
<b>o-Xylene</b>	<b>1.8</b>		0.56	ppb v/v			09/13/16 22:44	1.39
Naphthalene	ND		1.1	ppb v/v			09/13/16 22:44	1.39
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>190</b>		17	ug/m3			09/13/16 22:44	1.39
<b>Benzene</b>	<b>12</b>		1.8	ug/m3			09/13/16 22:44	1.39
Benzyl chloride	ND		5.8	ug/m3			09/13/16 22:44	1.39
Bromodichloromethane	ND		2.8	ug/m3			09/13/16 22:44	1.39
Bromoform	ND		5.7	ug/m3			09/13/16 22:44	1.39
Bromomethane	ND		4.3	ug/m3			09/13/16 22:44	1.39
<b>2-Butanone (MEK)</b>	<b>40</b>		3.3	ug/m3			09/13/16 22:44	1.39
<b>Carbon disulfide</b>	<b>9.8</b>		3.5	ug/m3			09/13/16 22:44	1.39
Carbon tetrachloride	ND		7.0	ug/m3			09/13/16 22:44	1.39
Chlorobenzene	ND		1.9	ug/m3			09/13/16 22:44	1.39
Dibromochloromethane	ND		4.7	ug/m3			09/13/16 22:44	1.39
Chloroethane	ND		2.9	ug/m3			09/13/16 22:44	1.39
Chloroform	ND		2.0	ug/m3			09/13/16 22:44	1.39
Chloromethane	ND		2.3	ug/m3			09/13/16 22:44	1.39
1,2-Dibromoethane (EDB)	ND		8.5	ug/m3			09/13/16 22:44	1.39
1,2-Dichlorobenzene	ND		3.3	ug/m3			09/13/16 22:44	1.39
1,3-Dichlorobenzene	ND		3.3	ug/m3			09/13/16 22:44	1.39
1,4-Dichlorobenzene	ND		3.3	ug/m3			09/13/16 22:44	1.39
Dichlorodifluoromethane	ND		2.7	ug/m3			09/13/16 22:44	1.39
1,1-Dichloroethane	ND		1.7	ug/m3			09/13/16 22:44	1.39
1,2-Dichloroethane	ND		4.5	ug/m3			09/13/16 22:44	1.39
1,1-Dichloroethene	ND		4.4	ug/m3			09/13/16 22:44	1.39
cis-1,2-Dichloroethene	ND		2.2	ug/m3			09/13/16 22:44	1.39
trans-1,2-Dichloroethene	ND		2.2	ug/m3			09/13/16 22:44	1.39
1,2-Dichloropropane	ND		2.6	ug/m3			09/13/16 22:44	1.39
cis-1,3-Dichloropropene	ND		2.5	ug/m3			09/13/16 22:44	1.39
trans-1,3-Dichloropropene	ND		2.5	ug/m3			09/13/16 22:44	1.39
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		3.9	ug/m3			09/13/16 22:44	1.39
<b>Ethylbenzene</b>	<b>7.5</b>		2.4	ug/m3			09/13/16 22:44	1.39
4-Ethyltoluene	ND		2.7	ug/m3			09/13/16 22:44	1.39
Hexachlorobutadiene	ND		30	ug/m3			09/13/16 22:44	1.39
<b>2-Hexanone</b>	<b>2.8</b>		2.3	ug/m3			09/13/16 22:44	1.39
Methylene Chloride	ND		1.9	ug/m3			09/13/16 22:44	1.39
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>3.9</b>		2.3	ug/m3			09/13/16 22:44	1.39
Styrene	ND		2.4	ug/m3			09/13/16 22:44	1.39
1,1,2,2-Tetrachloroethane	ND		3.8	ug/m3			09/13/16 22:44	1.39
Tetrachloroethene	ND		3.8	ug/m3			09/13/16 22:44	1.39
<b>Toluene</b>	<b>36</b>		2.1	ug/m3			09/13/16 22:44	1.39
1,2,4-Trichlorobenzene	ND		21	ug/m3			09/13/16 22:44	1.39
1,1,1-Trichloroethane	ND		2.3	ug/m3			09/13/16 22:44	1.39
1,1,2-Trichloroethane	ND		3.0	ug/m3			09/13/16 22:44	1.39
Trichloroethene	ND		3.0	ug/m3			09/13/16 22:44	1.39
1,4-Dioxane	ND		4.0	ug/m3			09/13/16 22:44	1.39

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-5**

**Lab Sample ID: 320-21562-5**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		3.1	ug/m3			09/13/16 22:44	1.39
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	ug/m3			09/13/16 22:44	1.39
<b>1,2,4-Trimethylbenzene</b>	<b>6.6</b>		5.5	ug/m3			09/13/16 22:44	1.39
1,3,5-Trimethylbenzene	ND		2.7	ug/m3			09/13/16 22:44	1.39
Vinyl acetate	ND		3.9	ug/m3			09/13/16 22:44	1.39
Vinyl chloride	ND		1.4	ug/m3			09/13/16 22:44	1.39
<b>m,p-Xylene</b>	<b>26</b>		4.8	ug/m3			09/13/16 22:44	1.39
<b>o-Xylene</b>	<b>7.6</b>		2.4	ug/m3			09/13/16 22:44	1.39
Naphthalene	ND		5.8	ug/m3			09/13/16 22:44	1.39
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	94		70 - 130				09/13/16 22:44	1.39
1,2-Dichloroethane-d4 (Surr)	84		70 - 130				09/13/16 22:44	1.39
Toluene-d8 (Surr)	99		70 - 130				09/13/16 22:44	1.39

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		2.1	% v/v			09/13/16 15:23	4.17
<b>Helium</b>	<b>1.2</b>		0.42	% v/v			09/13/16 15:23	4.17
<b>Oxygen</b>	<b>17</b>		0.83	% v/v			09/13/16 15:23	4.17
<b>Methane (FID)</b>	<b>0.0024</b>		0.00086	% v/v			09/14/16 16:55	8.57

**Client Sample ID: SV64-10**

**Lab Sample ID: 320-21562-6**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>42</b>		23	ppb v/v			09/13/16 23:45	4.5
<b>Benzene</b>	<b>5.9</b>		1.8	ppb v/v			09/13/16 23:45	4.5
Benzyl chloride	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Bromodichloromethane	ND		1.4	ppb v/v			09/13/16 23:45	4.5
Bromoform	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Bromomethane	ND		3.6	ppb v/v			09/13/16 23:45	4.5
<b>2-Butanone (MEK)</b>	<b>8.9</b>		3.6	ppb v/v			09/13/16 23:45	4.5
<b>Carbon disulfide</b>	<b>12</b>		3.6	ppb v/v			09/13/16 23:45	4.5
Carbon tetrachloride	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Chlorobenzene	ND		1.4	ppb v/v			09/13/16 23:45	4.5
Dibromochloromethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Chloroethane	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Chloroform	ND		1.4	ppb v/v			09/13/16 23:45	4.5
Chloromethane	ND		3.6	ppb v/v			09/13/16 23:45	4.5
1,2-Dibromoethane (EDB)	ND		3.6	ppb v/v			09/13/16 23:45	4.5
1,2-Dichlorobenzene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,3-Dichlorobenzene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,4-Dichlorobenzene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Dichlorodifluoromethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,1-Dichloroethane	ND		1.4	ppb v/v			09/13/16 23:45	4.5

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-10**

**Lab Sample ID: 320-21562-6**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		3.6	ppb v/v			09/13/16 23:45	4.5
1,1-Dichloroethene	ND		3.6	ppb v/v			09/13/16 23:45	4.5
cis-1,2-Dichloroethene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
trans-1,2-Dichloroethene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,2-Dichloropropane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
cis-1,3-Dichloropropene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
trans-1,3-Dichloropropene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
<b>Ethylbenzene</b>	<b>1.9</b>		1.8	ppb v/v			09/13/16 23:45	4.5
4-Ethyltoluene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Hexachlorobutadiene	ND		9.0	ppb v/v			09/13/16 23:45	4.5
2-Hexanone	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Methylene Chloride	ND		1.8	ppb v/v			09/13/16 23:45	4.5
4-Methyl-2-pentanone (MIBK)	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Styrene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,1,2,2-Tetrachloroethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Tetrachloroethene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
<b>Toluene</b>	<b>7.5</b>		1.8	ppb v/v			09/13/16 23:45	4.5
1,2,4-Trichlorobenzene	ND		9.0	ppb v/v			09/13/16 23:45	4.5
1,1,1-Trichloroethane	ND		1.4	ppb v/v			09/13/16 23:45	4.5
1,1,2-Trichloroethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Trichloroethene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,4-Dioxane	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Trichlorofluoromethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.8	ppb v/v			09/13/16 23:45	4.5
1,2,4-Trimethylbenzene	ND		3.6	ppb v/v			09/13/16 23:45	4.5
1,3,5-Trimethylbenzene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Vinyl acetate	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Vinyl chloride	ND		1.8	ppb v/v			09/13/16 23:45	4.5
<b>m,p-Xylene</b>	<b>4.6</b>		3.6	ppb v/v			09/13/16 23:45	4.5
o-Xylene	ND		1.8	ppb v/v			09/13/16 23:45	4.5
Naphthalene	ND		3.6	ppb v/v			09/13/16 23:45	4.5
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>100</b>		53	ug/m3			09/13/16 23:45	4.5
<b>Benzene</b>	<b>19</b>		5.8	ug/m3			09/13/16 23:45	4.5
Benzyl chloride	ND		19	ug/m3			09/13/16 23:45	4.5
Bromodichloromethane	ND		9.0	ug/m3			09/13/16 23:45	4.5
Bromoform	ND		19	ug/m3			09/13/16 23:45	4.5
Bromomethane	ND		14	ug/m3			09/13/16 23:45	4.5
<b>2-Butanone (MEK)</b>	<b>26</b>		11	ug/m3			09/13/16 23:45	4.5
<b>Carbon disulfide</b>	<b>37</b>		11	ug/m3			09/13/16 23:45	4.5
Carbon tetrachloride	ND		23	ug/m3			09/13/16 23:45	4.5
Chlorobenzene	ND		6.2	ug/m3			09/13/16 23:45	4.5
Dibromochloromethane	ND		15	ug/m3			09/13/16 23:45	4.5
Chloroethane	ND		9.5	ug/m3			09/13/16 23:45	4.5
Chloroform	ND		6.6	ug/m3			09/13/16 23:45	4.5
Chloromethane	ND		7.4	ug/m3			09/13/16 23:45	4.5
1,2-Dibromoethane (EDB)	ND		28	ug/m3			09/13/16 23:45	4.5

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-10**

**Lab Sample ID: 320-21562-6**

**Date Collected: 09/07/16 13:55**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		11	ug/m3			09/13/16 23:45	4.5
1,3-Dichlorobenzene	ND		11	ug/m3			09/13/16 23:45	4.5
1,4-Dichlorobenzene	ND		11	ug/m3			09/13/16 23:45	4.5
Dichlorodifluoromethane	ND		8.9	ug/m3			09/13/16 23:45	4.5
1,1-Dichloroethane	ND		5.5	ug/m3			09/13/16 23:45	4.5
1,2-Dichloroethane	ND		15	ug/m3			09/13/16 23:45	4.5
1,1-Dichloroethene	ND		14	ug/m3			09/13/16 23:45	4.5
cis-1,2-Dichloroethene	ND		7.1	ug/m3			09/13/16 23:45	4.5
trans-1,2-Dichloroethene	ND		7.1	ug/m3			09/13/16 23:45	4.5
1,2-Dichloropropane	ND		8.3	ug/m3			09/13/16 23:45	4.5
cis-1,3-Dichloropropene	ND		8.2	ug/m3			09/13/16 23:45	4.5
trans-1,3-Dichloropropene	ND		8.2	ug/m3			09/13/16 23:45	4.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		13	ug/m3			09/13/16 23:45	4.5
<b>Ethylbenzene</b>	<b>8.1</b>		7.8	ug/m3			09/13/16 23:45	4.5
4-Ethyltoluene	ND		8.8	ug/m3			09/13/16 23:45	4.5
Hexachlorobutadiene	ND		96	ug/m3			09/13/16 23:45	4.5
2-Hexanone	ND		7.4	ug/m3			09/13/16 23:45	4.5
Methylene Chloride	ND		6.3	ug/m3			09/13/16 23:45	4.5
4-Methyl-2-pentanone (MIBK)	ND		7.4	ug/m3			09/13/16 23:45	4.5
Styrene	ND		7.7	ug/m3			09/13/16 23:45	4.5
1,1,2,2-Tetrachloroethane	ND		12	ug/m3			09/13/16 23:45	4.5
Tetrachloroethene	ND		12	ug/m3			09/13/16 23:45	4.5
<b>Toluene</b>	<b>28</b>		6.8	ug/m3			09/13/16 23:45	4.5
1,2,4-Trichlorobenzene	ND		67	ug/m3			09/13/16 23:45	4.5
1,1,1-Trichloroethane	ND		7.4	ug/m3			09/13/16 23:45	4.5
1,1,2-Trichloroethane	ND		9.8	ug/m3			09/13/16 23:45	4.5
Trichloroethene	ND		9.7	ug/m3			09/13/16 23:45	4.5
1,4-Dioxane	ND		13	ug/m3			09/13/16 23:45	4.5
Trichlorofluoromethane	ND		10	ug/m3			09/13/16 23:45	4.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		14	ug/m3			09/13/16 23:45	4.5
1,2,4-Trimethylbenzene	ND		18	ug/m3			09/13/16 23:45	4.5
1,3,5-Trimethylbenzene	ND		8.8	ug/m3			09/13/16 23:45	4.5
Vinyl acetate	ND		13	ug/m3			09/13/16 23:45	4.5
Vinyl chloride	ND		4.6	ug/m3			09/13/16 23:45	4.5
<b>m,p-Xylene</b>	<b>20</b>		16	ug/m3			09/13/16 23:45	4.5
o-Xylene	ND		7.8	ug/m3			09/13/16 23:45	4.5
Naphthalene	ND		19	ug/m3			09/13/16 23:45	4.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130		09/13/16 23:45	4.5
1,2-Dichloroethane-d4 (Surr)	80		70 - 130		09/13/16 23:45	4.5
Toluene-d8 (Surr)	99		70 - 130		09/13/16 23:45	4.5

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		6.8	% v/v			09/13/16 15:30	13.51
<b>Helium</b>	<b>4.0</b>		1.4	% v/v			09/13/16 15:30	13.51
<b>Oxygen</b>	<b>26</b>		2.7	% v/v			09/13/16 15:30	13.51
<b>Methane (FID)</b>	<b>0.0057</b>		0.0021	% v/v			09/14/16 17:22	20.65

TestAmerica Sacramento



# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV65-5**

**Lab Sample ID: 320-21562-7**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>82</b>		12	ppb v/v			09/14/16 00:47	2.47
<b>Benzene</b>	<b>7.1</b>		0.99	ppb v/v			09/14/16 00:47	2.47
Benzyl chloride	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Bromodichloromethane	ND		0.74	ppb v/v			09/14/16 00:47	2.47
Bromoform	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Bromomethane	ND		2.0	ppb v/v			09/14/16 00:47	2.47
<b>2-Butanone (MEK)</b>	<b>17</b>		2.0	ppb v/v			09/14/16 00:47	2.47
Carbon disulfide	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Carbon tetrachloride	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Chlorobenzene	ND		0.74	ppb v/v			09/14/16 00:47	2.47
Dibromochloromethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Chloroethane	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Chloroform	ND		0.74	ppb v/v			09/14/16 00:47	2.47
Chloromethane	ND		2.0	ppb v/v			09/14/16 00:47	2.47
1,2-Dibromoethane (EDB)	ND		2.0	ppb v/v			09/14/16 00:47	2.47
1,2-Dichlorobenzene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,3-Dichlorobenzene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,4-Dichlorobenzene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Dichlorodifluoromethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,1-Dichloroethane	ND		0.74	ppb v/v			09/14/16 00:47	2.47
1,2-Dichloroethane	ND		2.0	ppb v/v			09/14/16 00:47	2.47
1,1-Dichloroethene	ND		2.0	ppb v/v			09/14/16 00:47	2.47
cis-1,2-Dichloroethene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
trans-1,2-Dichloroethene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,2-Dichloropropane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
cis-1,3-Dichloropropene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
trans-1,3-Dichloropropene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
<b>Ethylbenzene</b>	<b>1.4</b>		0.99	ppb v/v			09/14/16 00:47	2.47
4-Ethyltoluene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Hexachlorobutadiene	ND		4.9	ppb v/v			09/14/16 00:47	2.47
2-Hexanone	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Methylene Chloride	ND		0.99	ppb v/v			09/14/16 00:47	2.47
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>1.9</b>		0.99	ppb v/v			09/14/16 00:47	2.47
Styrene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,1,2,2-Tetrachloroethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Tetrachloroethene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
<b>Toluene</b>	<b>4.6</b>		0.99	ppb v/v			09/14/16 00:47	2.47
1,2,4-Trichlorobenzene	ND		4.9	ppb v/v			09/14/16 00:47	2.47
1,1,1-Trichloroethane	ND		0.74	ppb v/v			09/14/16 00:47	2.47
1,1,2-Trichloroethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Trichloroethene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,4-Dioxane	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Trichlorofluoromethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.99	ppb v/v			09/14/16 00:47	2.47
1,2,4-Trimethylbenzene	ND		2.0	ppb v/v			09/14/16 00:47	2.47
1,3,5-Trimethylbenzene	ND		0.99	ppb v/v			09/14/16 00:47	2.47
Vinyl acetate	ND		2.0	ppb v/v			09/14/16 00:47	2.47

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV65-5**

**Lab Sample ID: 320-21562-7**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.99	ppb v/v			09/14/16 00:47	2.47
<b>m,p-Xylene</b>	<b>5.1</b>		2.0	ppb v/v			09/14/16 00:47	2.47
<b>o-Xylene</b>	<b>1.8</b>		0.99	ppb v/v			09/14/16 00:47	2.47
Naphthalene	ND		2.0	ppb v/v			09/14/16 00:47	2.47
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>200</b>		29	ug/m3			09/14/16 00:47	2.47
<b>Benzene</b>	<b>23</b>		3.2	ug/m3			09/14/16 00:47	2.47
Benzyl chloride	ND		10	ug/m3			09/14/16 00:47	2.47
Bromodichloromethane	ND		5.0	ug/m3			09/14/16 00:47	2.47
Bromoform	ND		10	ug/m3			09/14/16 00:47	2.47
Bromomethane	ND		7.7	ug/m3			09/14/16 00:47	2.47
<b>2-Butanone (MEK)</b>	<b>50</b>		5.8	ug/m3			09/14/16 00:47	2.47
Carbon disulfide	ND		6.2	ug/m3			09/14/16 00:47	2.47
Carbon tetrachloride	ND		12	ug/m3			09/14/16 00:47	2.47
Chlorobenzene	ND		3.4	ug/m3			09/14/16 00:47	2.47
Dibromochloromethane	ND		8.4	ug/m3			09/14/16 00:47	2.47
Chloroethane	ND		5.2	ug/m3			09/14/16 00:47	2.47
Chloroform	ND		3.6	ug/m3			09/14/16 00:47	2.47
Chloromethane	ND		4.1	ug/m3			09/14/16 00:47	2.47
1,2-Dibromoethane (EDB)	ND		15	ug/m3			09/14/16 00:47	2.47
1,2-Dichlorobenzene	ND		5.9	ug/m3			09/14/16 00:47	2.47
1,3-Dichlorobenzene	ND		5.9	ug/m3			09/14/16 00:47	2.47
1,4-Dichlorobenzene	ND		5.9	ug/m3			09/14/16 00:47	2.47
Dichlorodifluoromethane	ND		4.9	ug/m3			09/14/16 00:47	2.47
1,1-Dichloroethane	ND		3.0	ug/m3			09/14/16 00:47	2.47
1,2-Dichloroethane	ND		8.0	ug/m3			09/14/16 00:47	2.47
1,1-Dichloroethene	ND		7.8	ug/m3			09/14/16 00:47	2.47
cis-1,2-Dichloroethene	ND		3.9	ug/m3			09/14/16 00:47	2.47
trans-1,2-Dichloroethene	ND		3.9	ug/m3			09/14/16 00:47	2.47
1,2-Dichloropropane	ND		4.6	ug/m3			09/14/16 00:47	2.47
cis-1,3-Dichloropropene	ND		4.5	ug/m3			09/14/16 00:47	2.47
trans-1,3-Dichloropropene	ND		4.5	ug/m3			09/14/16 00:47	2.47
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.9	ug/m3			09/14/16 00:47	2.47
<b>Ethylbenzene</b>	<b>6.3</b>		4.3	ug/m3			09/14/16 00:47	2.47
4-Ethyltoluene	ND		4.9	ug/m3			09/14/16 00:47	2.47
Hexachlorobutadiene	ND		53	ug/m3			09/14/16 00:47	2.47
2-Hexanone	ND		4.0	ug/m3			09/14/16 00:47	2.47
Methylene Chloride	ND		3.4	ug/m3			09/14/16 00:47	2.47
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>7.6</b>		4.0	ug/m3			09/14/16 00:47	2.47
Styrene	ND		4.2	ug/m3			09/14/16 00:47	2.47
1,1,2,2-Tetrachloroethane	ND		6.8	ug/m3			09/14/16 00:47	2.47
Tetrachloroethene	ND		6.7	ug/m3			09/14/16 00:47	2.47
<b>Toluene</b>	<b>17</b>		3.7	ug/m3			09/14/16 00:47	2.47
1,2,4-Trichlorobenzene	ND		37	ug/m3			09/14/16 00:47	2.47
1,1,1-Trichloroethane	ND		4.0	ug/m3			09/14/16 00:47	2.47
1,1,2-Trichloroethane	ND		5.4	ug/m3			09/14/16 00:47	2.47
Trichloroethene	ND		5.3	ug/m3			09/14/16 00:47	2.47
1,4-Dioxane	ND		7.1	ug/m3			09/14/16 00:47	2.47

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV65-5**

**Lab Sample ID: 320-21562-7**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		5.6	ug/m3			09/14/16 00:47	2.47
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.6	ug/m3			09/14/16 00:47	2.47
1,2,4-Trimethylbenzene	ND		9.7	ug/m3			09/14/16 00:47	2.47
1,3,5-Trimethylbenzene	ND		4.9	ug/m3			09/14/16 00:47	2.47
Vinyl acetate	ND		7.0	ug/m3			09/14/16 00:47	2.47
Vinyl chloride	ND		2.5	ug/m3			09/14/16 00:47	2.47
<b>m,p-Xylene</b>	<b>22</b>		8.6	ug/m3			09/14/16 00:47	2.47
<b>o-Xylene</b>	<b>7.8</b>		4.3	ug/m3			09/14/16 00:47	2.47
Naphthalene	ND		10	ug/m3			09/14/16 00:47	2.47
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	89		70 - 130				09/14/16 00:47	2.47
1,2-Dichloroethane-d4 (Surr)	83		70 - 130				09/14/16 00:47	2.47
Toluene-d8 (Surr)	93		70 - 130				09/14/16 00:47	2.47

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Carbon Dioxide (TCD)</b>	<b>6.3</b>		3.7	% v/v			09/13/16 15:42	7.42
<b>Helium</b>	<b>2.8</b>		0.74	% v/v			09/13/16 15:42	7.42
<b>Oxygen</b>	<b>14</b>		1.5	% v/v			09/13/16 15:42	7.42
<b>Methane (FID)</b>	<b>0.0033</b>		0.0012	% v/v			09/14/16 17:36	11.81

**Client Sample ID: SV65-10**

**Lab Sample ID: 320-21562-8**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>31</b>		12	ppb v/v			09/14/16 01:48	2.36
<b>Benzene</b>	<b>26</b>		0.94	ppb v/v			09/14/16 01:48	2.36
Benzyl chloride	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Bromodichloromethane	ND		0.71	ppb v/v			09/14/16 01:48	2.36
Bromoform	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Bromomethane	ND		1.9	ppb v/v			09/14/16 01:48	2.36
<b>2-Butanone (MEK)</b>	<b>6.3</b>		1.9	ppb v/v			09/14/16 01:48	2.36
<b>Carbon disulfide</b>	<b>3.4</b>		1.9	ppb v/v			09/14/16 01:48	2.36
Carbon tetrachloride	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Chlorobenzene	ND		0.71	ppb v/v			09/14/16 01:48	2.36
Dibromochloromethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Chloroethane	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Chloroform	ND		0.71	ppb v/v			09/14/16 01:48	2.36
<b>Chloromethane</b>	<b>2.2</b>		1.9	ppb v/v			09/14/16 01:48	2.36
1,2-Dibromoethane (EDB)	ND		1.9	ppb v/v			09/14/16 01:48	2.36
1,2-Dichlorobenzene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,3-Dichlorobenzene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,4-Dichlorobenzene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Dichlorodifluoromethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,1-Dichloroethane	ND		0.71	ppb v/v			09/14/16 01:48	2.36

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV65-10**

**Lab Sample ID: 320-21562-8**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.9	ppb v/v			09/14/16 01:48	2.36
1,1-Dichloroethene	ND		1.9	ppb v/v			09/14/16 01:48	2.36
cis-1,2-Dichloroethene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
trans-1,2-Dichloroethene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,2-Dichloropropane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
cis-1,3-Dichloropropene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
trans-1,3-Dichloropropene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
<b>Ethylbenzene</b>	<b>3.4</b>		0.94	ppb v/v			09/14/16 01:48	2.36
4-Ethyltoluene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Hexachlorobutadiene	ND		4.7	ppb v/v			09/14/16 01:48	2.36
2-Hexanone	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Methylene Chloride	ND		0.94	ppb v/v			09/14/16 01:48	2.36
4-Methyl-2-pentanone (MIBK)	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Styrene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,1,2,2-Tetrachloroethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Tetrachloroethene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
<b>Toluene</b>	<b>5.7</b>		0.94	ppb v/v			09/14/16 01:48	2.36
1,2,4-Trichlorobenzene	ND		4.7	ppb v/v			09/14/16 01:48	2.36
1,1,1-Trichloroethane	ND		0.71	ppb v/v			09/14/16 01:48	2.36
1,1,2-Trichloroethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Trichloroethene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,4-Dioxane	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Trichlorofluoromethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.94	ppb v/v			09/14/16 01:48	2.36
1,2,4-Trimethylbenzene	ND		1.9	ppb v/v			09/14/16 01:48	2.36
1,3,5-Trimethylbenzene	ND		0.94	ppb v/v			09/14/16 01:48	2.36
Vinyl acetate	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Vinyl chloride	ND		0.94	ppb v/v			09/14/16 01:48	2.36
<b>m,p-Xylene</b>	<b>16</b>		1.9	ppb v/v			09/14/16 01:48	2.36
<b>o-Xylene</b>	<b>7.2</b>		0.94	ppb v/v			09/14/16 01:48	2.36
Naphthalene	ND		1.9	ppb v/v			09/14/16 01:48	2.36
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>73</b>		28	ug/m3			09/14/16 01:48	2.36
<b>Benzene</b>	<b>83</b>		3.0	ug/m3			09/14/16 01:48	2.36
Benzyl chloride	ND		9.8	ug/m3			09/14/16 01:48	2.36
Bromodichloromethane	ND		4.7	ug/m3			09/14/16 01:48	2.36
Bromoform	ND		9.8	ug/m3			09/14/16 01:48	2.36
Bromomethane	ND		7.3	ug/m3			09/14/16 01:48	2.36
<b>2-Butanone (MEK)</b>	<b>19</b>		5.6	ug/m3			09/14/16 01:48	2.36
<b>Carbon disulfide</b>	<b>11</b>		5.9	ug/m3			09/14/16 01:48	2.36
Carbon tetrachloride	ND		12	ug/m3			09/14/16 01:48	2.36
Chlorobenzene	ND		3.3	ug/m3			09/14/16 01:48	2.36
Dibromochloromethane	ND		8.0	ug/m3			09/14/16 01:48	2.36
Chloroethane	ND		5.0	ug/m3			09/14/16 01:48	2.36
Chloroform	ND		3.5	ug/m3			09/14/16 01:48	2.36
<b>Chloromethane</b>	<b>4.6</b>		3.9	ug/m3			09/14/16 01:48	2.36
1,2-Dibromoethane (EDB)	ND		15	ug/m3			09/14/16 01:48	2.36

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV65-10**

**Lab Sample ID: 320-21562-8**

**Date Collected: 09/07/16 14:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		5.7	ug/m3			09/14/16 01:48	2.36
1,3-Dichlorobenzene	ND		5.7	ug/m3			09/14/16 01:48	2.36
1,4-Dichlorobenzene	ND		5.7	ug/m3			09/14/16 01:48	2.36
Dichlorodifluoromethane	ND		4.7	ug/m3			09/14/16 01:48	2.36
1,1-Dichloroethane	ND		2.9	ug/m3			09/14/16 01:48	2.36
1,2-Dichloroethane	ND		7.6	ug/m3			09/14/16 01:48	2.36
1,1-Dichloroethene	ND		7.5	ug/m3			09/14/16 01:48	2.36
cis-1,2-Dichloroethene	ND		3.7	ug/m3			09/14/16 01:48	2.36
trans-1,2-Dichloroethene	ND		3.7	ug/m3			09/14/16 01:48	2.36
1,2-Dichloropropane	ND		4.4	ug/m3			09/14/16 01:48	2.36
cis-1,3-Dichloropropene	ND		4.3	ug/m3			09/14/16 01:48	2.36
trans-1,3-Dichloropropene	ND		4.3	ug/m3			09/14/16 01:48	2.36
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.6	ug/m3			09/14/16 01:48	2.36
<b>Ethylbenzene</b>	<b>15</b>		4.1	ug/m3			09/14/16 01:48	2.36
4-Ethyltoluene	ND		4.6	ug/m3			09/14/16 01:48	2.36
Hexachlorobutadiene	ND		50	ug/m3			09/14/16 01:48	2.36
2-Hexanone	ND		3.9	ug/m3			09/14/16 01:48	2.36
Methylene Chloride	ND		3.3	ug/m3			09/14/16 01:48	2.36
4-Methyl-2-pentanone (MIBK)	ND		3.9	ug/m3			09/14/16 01:48	2.36
Styrene	ND		4.0	ug/m3			09/14/16 01:48	2.36
1,1,2,2-Tetrachloroethane	ND		6.5	ug/m3			09/14/16 01:48	2.36
Tetrachloroethene	ND		6.4	ug/m3			09/14/16 01:48	2.36
<b>Toluene</b>	<b>21</b>		3.6	ug/m3			09/14/16 01:48	2.36
1,2,4-Trichlorobenzene	ND		35	ug/m3			09/14/16 01:48	2.36
1,1,1-Trichloroethane	ND		3.9	ug/m3			09/14/16 01:48	2.36
1,1,2-Trichloroethane	ND		5.2	ug/m3			09/14/16 01:48	2.36
Trichloroethene	ND		5.1	ug/m3			09/14/16 01:48	2.36
1,4-Dioxane	ND		6.8	ug/m3			09/14/16 01:48	2.36
Trichlorofluoromethane	ND		5.3	ug/m3			09/14/16 01:48	2.36
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.2	ug/m3			09/14/16 01:48	2.36
1,2,4-Trimethylbenzene	ND		9.3	ug/m3			09/14/16 01:48	2.36
1,3,5-Trimethylbenzene	ND		4.6	ug/m3			09/14/16 01:48	2.36
Vinyl acetate	ND		6.6	ug/m3			09/14/16 01:48	2.36
Vinyl chloride	ND		2.4	ug/m3			09/14/16 01:48	2.36
<b>m,p-Xylene</b>	<b>69</b>		8.2	ug/m3			09/14/16 01:48	2.36
<b>o-Xylene</b>	<b>31</b>		4.1	ug/m3			09/14/16 01:48	2.36
Naphthalene	ND		9.9	ug/m3			09/14/16 01:48	2.36

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130		09/14/16 01:48	2.36
1,2-Dichloroethane-d4 (Surr)	81		70 - 130		09/14/16 01:48	2.36
Toluene-d8 (Surr)	95		70 - 130		09/14/16 01:48	2.36

## Method: D1946 - Fixed Gases in Air (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		3.5	% v/v			09/13/16 15:50	7.08
<b>Helium</b>	<b>1.5</b>		0.71	% v/v			09/13/16 15:50	7.08
<b>Oxygen</b>	<b>16</b>		1.4	% v/v			09/13/16 15:50	7.08
<b>Methane (FID)</b>	<b>0.0027</b>		0.0010	% v/v			09/14/16 17:55	10.39

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV66-5**

**Lab Sample ID: 320-21562-9**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>69</b>		10	ppb v/v			09/14/16 03:15	2.04
<b>Benzene</b>	<b>9.1</b>		0.82	ppb v/v			09/14/16 03:15	2.04
Benzyl chloride	ND		1.6	ppb v/v			09/14/16 03:15	2.04
Bromodichloromethane	ND		0.61	ppb v/v			09/14/16 03:15	2.04
Bromoform	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Bromomethane	ND		1.6	ppb v/v			09/14/16 03:15	2.04
<b>2-Butanone (MEK)</b>	<b>10</b>		1.6	ppb v/v			09/14/16 03:15	2.04
<b>Carbon disulfide</b>	<b>2.7</b>		1.6	ppb v/v			09/14/16 03:15	2.04
Carbon tetrachloride	ND		1.6	ppb v/v			09/14/16 03:15	2.04
Chlorobenzene	ND		0.61	ppb v/v			09/14/16 03:15	2.04
Dibromochloromethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Chloroethane	ND		1.6	ppb v/v			09/14/16 03:15	2.04
<b>Chloroform</b>	<b>8.6</b>		0.61	ppb v/v			09/14/16 03:15	2.04
<b>Chloromethane</b>	<b>1.9</b>		1.6	ppb v/v			09/14/16 03:15	2.04
1,2-Dibromoethane (EDB)	ND		1.6	ppb v/v			09/14/16 03:15	2.04
1,2-Dichlorobenzene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,3-Dichlorobenzene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,4-Dichlorobenzene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Dichlorodifluoromethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,1-Dichloroethane	ND		0.61	ppb v/v			09/14/16 03:15	2.04
1,2-Dichloroethane	ND		1.6	ppb v/v			09/14/16 03:15	2.04
1,1-Dichloroethene	ND		1.6	ppb v/v			09/14/16 03:15	2.04
<b>cis-1,2-Dichloroethene</b>	<b>3.5</b>		0.82	ppb v/v			09/14/16 03:15	2.04
trans-1,2-Dichloroethene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,2-Dichloropropane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
cis-1,3-Dichloropropene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
trans-1,3-Dichloropropene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
<b>Ethylbenzene</b>	<b>3.9</b>		0.82	ppb v/v			09/14/16 03:15	2.04
4-Ethyltoluene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Hexachlorobutadiene	ND		4.1	ppb v/v			09/14/16 03:15	2.04
2-Hexanone	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Methylene Chloride	ND		0.82	ppb v/v			09/14/16 03:15	2.04
4-Methyl-2-pentanone (MIBK)	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Styrene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,1,2,2-Tetrachloroethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
Tetrachloroethene	ND		0.82	ppb v/v			09/14/16 03:15	2.04
<b>Toluene</b>	<b>23</b>		0.82	ppb v/v			09/14/16 03:15	2.04
1,2,4-Trichlorobenzene	ND		4.1	ppb v/v			09/14/16 03:15	2.04
1,1,1-Trichloroethane	ND		0.61	ppb v/v			09/14/16 03:15	2.04
1,1,2-Trichloroethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
<b>Trichloroethene</b>	<b>1.1</b>		0.82	ppb v/v			09/14/16 03:15	2.04
1,4-Dioxane	ND		1.6	ppb v/v			09/14/16 03:15	2.04
Trichlorofluoromethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.82	ppb v/v			09/14/16 03:15	2.04
<b>1,2,4-Trimethylbenzene</b>	<b>2.4</b>		1.6	ppb v/v			09/14/16 03:15	2.04
<b>1,3,5-Trimethylbenzene</b>	<b>0.84</b>		0.82	ppb v/v			09/14/16 03:15	2.04
Vinyl acetate	ND		1.6	ppb v/v			09/14/16 03:15	2.04

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV66-5**

**Lab Sample ID: 320-21562-9**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.82	ppb v/v			09/14/16 03:15	2.04
<b>m,p-Xylene</b>	<b>12</b>		1.6	ppb v/v			09/14/16 03:15	2.04
<b>o-Xylene</b>	<b>4.1</b>		0.82	ppb v/v			09/14/16 03:15	2.04
Naphthalene	ND		1.6	ppb v/v			09/14/16 03:15	2.04
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>160</b>		24	ug/m3			09/14/16 03:15	2.04
<b>Benzene</b>	<b>29</b>		2.6	ug/m3			09/14/16 03:15	2.04
Benzyl chloride	ND		8.4	ug/m3			09/14/16 03:15	2.04
Bromodichloromethane	ND		4.1	ug/m3			09/14/16 03:15	2.04
Bromoform	ND		8.4	ug/m3			09/14/16 03:15	2.04
Bromomethane	ND		6.3	ug/m3			09/14/16 03:15	2.04
<b>2-Butanone (MEK)</b>	<b>30</b>		4.8	ug/m3			09/14/16 03:15	2.04
<b>Carbon disulfide</b>	<b>8.3</b>		5.1	ug/m3			09/14/16 03:15	2.04
Carbon tetrachloride	ND		10	ug/m3			09/14/16 03:15	2.04
Chlorobenzene	ND		2.8	ug/m3			09/14/16 03:15	2.04
Dibromochloromethane	ND		7.0	ug/m3			09/14/16 03:15	2.04
Chloroethane	ND		4.3	ug/m3			09/14/16 03:15	2.04
<b>Chloroform</b>	<b>42</b>		3.0	ug/m3			09/14/16 03:15	2.04
<b>Chloromethane</b>	<b>3.9</b>		3.4	ug/m3			09/14/16 03:15	2.04
1,2-Dibromoethane (EDB)	ND		13	ug/m3			09/14/16 03:15	2.04
1,2-Dichlorobenzene	ND		4.9	ug/m3			09/14/16 03:15	2.04
1,3-Dichlorobenzene	ND		4.9	ug/m3			09/14/16 03:15	2.04
1,4-Dichlorobenzene	ND		4.9	ug/m3			09/14/16 03:15	2.04
Dichlorodifluoromethane	ND		4.0	ug/m3			09/14/16 03:15	2.04
1,1-Dichloroethane	ND		2.5	ug/m3			09/14/16 03:15	2.04
1,2-Dichloroethane	ND		6.6	ug/m3			09/14/16 03:15	2.04
1,1-Dichloroethene	ND		6.5	ug/m3			09/14/16 03:15	2.04
<b>cis-1,2-Dichloroethene</b>	<b>14</b>		3.2	ug/m3			09/14/16 03:15	2.04
trans-1,2-Dichloroethene	ND		3.2	ug/m3			09/14/16 03:15	2.04
1,2-Dichloropropane	ND		3.8	ug/m3			09/14/16 03:15	2.04
cis-1,3-Dichloropropene	ND		3.7	ug/m3			09/14/16 03:15	2.04
trans-1,3-Dichloropropene	ND		3.7	ug/m3			09/14/16 03:15	2.04
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		5.7	ug/m3			09/14/16 03:15	2.04
<b>Ethylbenzene</b>	<b>17</b>		3.5	ug/m3			09/14/16 03:15	2.04
4-Ethyltoluene	ND		4.0	ug/m3			09/14/16 03:15	2.04
Hexachlorobutadiene	ND		44	ug/m3			09/14/16 03:15	2.04
2-Hexanone	ND		3.3	ug/m3			09/14/16 03:15	2.04
Methylene Chloride	ND		2.8	ug/m3			09/14/16 03:15	2.04
4-Methyl-2-pentanone (MIBK)	ND		3.3	ug/m3			09/14/16 03:15	2.04
Styrene	ND		3.5	ug/m3			09/14/16 03:15	2.04
1,1,2,2-Tetrachloroethane	ND		5.6	ug/m3			09/14/16 03:15	2.04
Tetrachloroethene	ND		5.5	ug/m3			09/14/16 03:15	2.04
<b>Toluene</b>	<b>86</b>		3.1	ug/m3			09/14/16 03:15	2.04
1,2,4-Trichlorobenzene	ND		30	ug/m3			09/14/16 03:15	2.04
1,1,1-Trichloroethane	ND		3.3	ug/m3			09/14/16 03:15	2.04
1,1,2-Trichloroethane	ND		4.5	ug/m3			09/14/16 03:15	2.04
<b>Trichloroethene</b>	<b>6.1</b>		4.4	ug/m3			09/14/16 03:15	2.04
1,4-Dioxane	ND		5.9	ug/m3			09/14/16 03:15	2.04

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV66-5**

**Lab Sample ID: 320-21562-9**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		4.6	ug/m3			09/14/16 03:15	2.04
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.3	ug/m3			09/14/16 03:15	2.04
<b>1,2,4-Trimethylbenzene</b>	<b>12</b>		8.0	ug/m3			09/14/16 03:15	2.04
<b>1,3,5-Trimethylbenzene</b>	<b>4.1</b>		4.0	ug/m3			09/14/16 03:15	2.04
Vinyl acetate	ND		5.7	ug/m3			09/14/16 03:15	2.04
Vinyl chloride	ND		2.1	ug/m3			09/14/16 03:15	2.04
<b>m,p-Xylene</b>	<b>54</b>		7.1	ug/m3			09/14/16 03:15	2.04
<b>o-Xylene</b>	<b>18</b>		3.5	ug/m3			09/14/16 03:15	2.04
Naphthalene	ND		8.6	ug/m3			09/14/16 03:15	2.04
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92		70 - 130				09/14/16 03:15	2.04
1,2-Dichloroethane-d4 (Surr)	82		70 - 130				09/14/16 03:15	2.04
Toluene-d8 (Surr)	94		70 - 130				09/14/16 03:15	2.04

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		3.1	% v/v			09/13/16 16:00	6.11
<b>Helium</b>	<b>1.7</b>		0.61	% v/v			09/13/16 16:00	6.11
<b>Oxygen</b>	<b>14</b>		1.2	% v/v			09/13/16 16:00	6.11
<b>Methane (FID)</b>	<b>0.0029</b>		0.0011	% v/v			09/14/16 18:08	10.7

**Client Sample ID: SV66-10**

**Lab Sample ID: 320-21562-10**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>82</b>		45	ppb v/v			09/14/16 04:10	9.05
<b>Benzene</b>	<b>39</b>		3.6	ppb v/v			09/14/16 04:10	9.05
Benzyl chloride	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Bromodichloromethane	ND		2.7	ppb v/v			09/14/16 04:10	9.05
Bromoform	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Bromomethane	ND		7.2	ppb v/v			09/14/16 04:10	9.05
<b>2-Butanone (MEK)</b>	<b>19</b>		7.2	ppb v/v			09/14/16 04:10	9.05
<b>Carbon disulfide</b>	<b>9.3</b>		7.2	ppb v/v			09/14/16 04:10	9.05
Carbon tetrachloride	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Chlorobenzene	ND		2.7	ppb v/v			09/14/16 04:10	9.05
Dibromochloromethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Chloroethane	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Chloroform	ND		2.7	ppb v/v			09/14/16 04:10	9.05
Chloromethane	ND		7.2	ppb v/v			09/14/16 04:10	9.05
1,2-Dibromoethane (EDB)	ND		7.2	ppb v/v			09/14/16 04:10	9.05
1,2-Dichlorobenzene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,3-Dichlorobenzene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,4-Dichlorobenzene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Dichlorodifluoromethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,1-Dichloroethane	ND		2.7	ppb v/v			09/14/16 04:10	9.05

TestAmerica Sacramento



# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV66-10**

**Lab Sample ID: 320-21562-10**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		7.2	ppb v/v			09/14/16 04:10	9.05
1,1-Dichloroethene	ND		7.2	ppb v/v			09/14/16 04:10	9.05
<b>cis-1,2-Dichloroethene</b>	<b>5.7</b>		3.6	ppb v/v			09/14/16 04:10	9.05
trans-1,2-Dichloroethene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,2-Dichloropropane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
cis-1,3-Dichloropropene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
trans-1,3-Dichloropropene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Ethylbenzene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
4-Ethyltoluene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Hexachlorobutadiene	ND		18	ppb v/v			09/14/16 04:10	9.05
2-Hexanone	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Methylene Chloride	ND		3.6	ppb v/v			09/14/16 04:10	9.05
4-Methyl-2-pentanone (MIBK)	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Styrene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,1,2,2-Tetrachloroethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Tetrachloroethene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
<b>Toluene</b>	<b>9.8</b>		3.6	ppb v/v			09/14/16 04:10	9.05
1,2,4-Trichlorobenzene	ND		18	ppb v/v			09/14/16 04:10	9.05
1,1,1-Trichloroethane	ND		2.7	ppb v/v			09/14/16 04:10	9.05
1,1,2-Trichloroethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Trichloroethene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,4-Dioxane	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Trichlorofluoromethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.6	ppb v/v			09/14/16 04:10	9.05
1,2,4-Trimethylbenzene	ND		7.2	ppb v/v			09/14/16 04:10	9.05
1,3,5-Trimethylbenzene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Vinyl acetate	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Vinyl chloride	ND		3.6	ppb v/v			09/14/16 04:10	9.05
<b>m,p-Xylene</b>	<b>8.5</b>		7.2	ppb v/v			09/14/16 04:10	9.05
o-Xylene	ND		3.6	ppb v/v			09/14/16 04:10	9.05
Naphthalene	ND		7.2	ppb v/v			09/14/16 04:10	9.05
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>190</b>		110	ug/m3			09/14/16 04:10	9.05
<b>Benzene</b>	<b>120</b>		12	ug/m3			09/14/16 04:10	9.05
Benzyl chloride	ND		37	ug/m3			09/14/16 04:10	9.05
Bromodichloromethane	ND		18	ug/m3			09/14/16 04:10	9.05
Bromoform	ND		37	ug/m3			09/14/16 04:10	9.05
Bromomethane	ND		28	ug/m3			09/14/16 04:10	9.05
<b>2-Butanone (MEK)</b>	<b>57</b>		21	ug/m3			09/14/16 04:10	9.05
<b>Carbon disulfide</b>	<b>29</b>		23	ug/m3			09/14/16 04:10	9.05
Carbon tetrachloride	ND		46	ug/m3			09/14/16 04:10	9.05
Chlorobenzene	ND		12	ug/m3			09/14/16 04:10	9.05
Dibromochloromethane	ND		31	ug/m3			09/14/16 04:10	9.05
Chloroethane	ND		19	ug/m3			09/14/16 04:10	9.05
Chloroform	ND		13	ug/m3			09/14/16 04:10	9.05
Chloromethane	ND		15	ug/m3			09/14/16 04:10	9.05
1,2-Dibromoethane (EDB)	ND		56	ug/m3			09/14/16 04:10	9.05

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV66-10**

**Lab Sample ID: 320-21562-10**

**Date Collected: 09/07/16 15:30**

**Matrix: Air**

**Date Received: 09/08/16 08:13**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		22	ug/m3			09/14/16 04:10	9.05
1,3-Dichlorobenzene	ND		22	ug/m3			09/14/16 04:10	9.05
1,4-Dichlorobenzene	ND		22	ug/m3			09/14/16 04:10	9.05
Dichlorodifluoromethane	ND		18	ug/m3			09/14/16 04:10	9.05
1,1-Dichloroethane	ND		11	ug/m3			09/14/16 04:10	9.05
1,2-Dichloroethane	ND		29	ug/m3			09/14/16 04:10	9.05
1,1-Dichloroethene	ND		29	ug/m3			09/14/16 04:10	9.05
<b>cis-1,2-Dichloroethene</b>	<b>23</b>		14	ug/m3			09/14/16 04:10	9.05
trans-1,2-Dichloroethene	ND		14	ug/m3			09/14/16 04:10	9.05
1,2-Dichloropropane	ND		17	ug/m3			09/14/16 04:10	9.05
cis-1,3-Dichloropropene	ND		16	ug/m3			09/14/16 04:10	9.05
trans-1,3-Dichloropropene	ND		16	ug/m3			09/14/16 04:10	9.05
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		25	ug/m3			09/14/16 04:10	9.05
Ethylbenzene	ND		16	ug/m3			09/14/16 04:10	9.05
4-Ethyltoluene	ND		18	ug/m3			09/14/16 04:10	9.05
Hexachlorobutadiene	ND		190	ug/m3			09/14/16 04:10	9.05
2-Hexanone	ND		15	ug/m3			09/14/16 04:10	9.05
Methylene Chloride	ND		13	ug/m3			09/14/16 04:10	9.05
4-Methyl-2-pentanone (MIBK)	ND		15	ug/m3			09/14/16 04:10	9.05
Styrene	ND		15	ug/m3			09/14/16 04:10	9.05
1,1,2,2-Tetrachloroethane	ND		25	ug/m3			09/14/16 04:10	9.05
Tetrachloroethene	ND		25	ug/m3			09/14/16 04:10	9.05
<b>Toluene</b>	<b>37</b>		14	ug/m3			09/14/16 04:10	9.05
1,2,4-Trichlorobenzene	ND		130	ug/m3			09/14/16 04:10	9.05
1,1,1-Trichloroethane	ND		15	ug/m3			09/14/16 04:10	9.05
1,1,2-Trichloroethane	ND		20	ug/m3			09/14/16 04:10	9.05
Trichloroethene	ND		19	ug/m3			09/14/16 04:10	9.05
1,4-Dioxane	ND		26	ug/m3			09/14/16 04:10	9.05
Trichlorofluoromethane	ND		20	ug/m3			09/14/16 04:10	9.05
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		28	ug/m3			09/14/16 04:10	9.05
1,2,4-Trimethylbenzene	ND		36	ug/m3			09/14/16 04:10	9.05
1,3,5-Trimethylbenzene	ND		18	ug/m3			09/14/16 04:10	9.05
Vinyl acetate	ND		25	ug/m3			09/14/16 04:10	9.05
Vinyl chloride	ND		9.3	ug/m3			09/14/16 04:10	9.05
<b>m,p-Xylene</b>	<b>37</b>		31	ug/m3			09/14/16 04:10	9.05
o-Xylene	ND		16	ug/m3			09/14/16 04:10	9.05
Naphthalene	ND		38	ug/m3			09/14/16 04:10	9.05

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		09/14/16 04:10	9.05
1,2-Dichloroethane-d4 (Surr)	80		70 - 130		09/14/16 04:10	9.05
Toluene-d8 (Surr)	95		70 - 130		09/14/16 04:10	9.05

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		4.5	% v/v			09/13/16 16:12	9.05
<b>Helium</b>	<b>2.1</b>		0.91	% v/v			09/13/16 16:12	9.05
<b>Oxygen</b>	<b>15</b>		1.8	% v/v			09/13/16 16:12	9.05
<b>Methane (FID)</b>	<b>0.60</b>		0.0018	% v/v			09/14/16 16:20	18.09

TestAmerica Sacramento

# Surrogate Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

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

Matrix: Air

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	12DCE	TOL
		(70-130)	(70-130)	(70-130)
320-21562-1	SV62-5	97	89	99
320-21562-2	SV62-10	91	86	96
320-21562-3	SV63-5	97	88	98
320-21562-4	SV63-10	92	84	98
320-21562-5	SV64-5	94	84	99
320-21562-6	SV64-10	91	80	99
320-21562-7	SV65-5	89	83	93
320-21562-8	SV65-10	89	81	95
320-21562-9	SV66-5	92	82	94
320-21562-10	SV66-10	86	80	95
LCS 320-126903/3	Lab Control Sample	105	95	99
LCSD 320-126903/4	Lab Control Sample Dup	100	89	97
MB 320-126903/6	Method Blank	85	85	95

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

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

**Lab Sample ID: MB 320-126903/6**

**Matrix: Air**

**Analysis Batch: 126903**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/13/16 16:10	1
Benzene	ND		0.40	ppb v/v			09/13/16 16:10	1
Benzyl chloride	ND		0.80	ppb v/v			09/13/16 16:10	1
Bromodichloromethane	ND		0.30	ppb v/v			09/13/16 16:10	1
Bromoform	ND		0.40	ppb v/v			09/13/16 16:10	1
Bromomethane	ND		0.80	ppb v/v			09/13/16 16:10	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/13/16 16:10	1
Carbon disulfide	ND		0.80	ppb v/v			09/13/16 16:10	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/13/16 16:10	1
Chlorobenzene	ND		0.30	ppb v/v			09/13/16 16:10	1
Dibromochloromethane	ND		0.40	ppb v/v			09/13/16 16:10	1
Chloroethane	ND		0.80	ppb v/v			09/13/16 16:10	1
Chloroform	ND		0.30	ppb v/v			09/13/16 16:10	1
Chloromethane	ND		0.80	ppb v/v			09/13/16 16:10	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/13/16 16:10	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/13/16 16:10	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/13/16 16:10	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/13/16 16:10	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/13/16 16:10	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/13/16 16:10	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/13/16 16:10	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/13/16 16:10	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/13/16 16:10	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/13/16 16:10	1
Ethylbenzene	ND		0.40	ppb v/v			09/13/16 16:10	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/13/16 16:10	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/13/16 16:10	1
2-Hexanone	ND		0.40	ppb v/v			09/13/16 16:10	1
Methylene Chloride	ND		0.40	ppb v/v			09/13/16 16:10	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/13/16 16:10	1
Styrene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/13/16 16:10	1
Tetrachloroethene	ND		0.40	ppb v/v			09/13/16 16:10	1
Toluene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/13/16 16:10	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/13/16 16:10	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/13/16 16:10	1
Trichloroethene	ND		0.40	ppb v/v			09/13/16 16:10	1
1,4-Dioxane	ND		0.80	ppb v/v			09/13/16 16:10	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/13/16 16:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/13/16 16:10	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/13/16 16:10	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/13/16 16:10	1
Vinyl acetate	ND		0.80	ppb v/v			09/13/16 16:10	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 320-126903/6**  
**Matrix: Air**  
**Analysis Batch: 126903**

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Vinyl chloride	ND		0.40	ppb v/v			09/13/16 16:10	1
m,p-Xylene	ND		0.80	ppb v/v			09/13/16 16:10	1
o-Xylene	ND		0.40	ppb v/v			09/13/16 16:10	1
Naphthalene	ND		0.80	ppb v/v			09/13/16 16:10	1
Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Acetone	ND		12	ug/m3			09/13/16 16:10	1
Benzene	ND		1.3	ug/m3			09/13/16 16:10	1
Benzyl chloride	ND		4.1	ug/m3			09/13/16 16:10	1
Bromodichloromethane	ND		2.0	ug/m3			09/13/16 16:10	1
Bromoform	ND		4.1	ug/m3			09/13/16 16:10	1
Bromomethane	ND		3.1	ug/m3			09/13/16 16:10	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/13/16 16:10	1
Carbon disulfide	ND		2.5	ug/m3			09/13/16 16:10	1
Carbon tetrachloride	ND		5.0	ug/m3			09/13/16 16:10	1
Chlorobenzene	ND		1.4	ug/m3			09/13/16 16:10	1
Dibromochloromethane	ND		3.4	ug/m3			09/13/16 16:10	1
Chloroethane	ND		2.1	ug/m3			09/13/16 16:10	1
Chloroform	ND		1.5	ug/m3			09/13/16 16:10	1
Chloromethane	ND		1.7	ug/m3			09/13/16 16:10	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/13/16 16:10	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/13/16 16:10	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/13/16 16:10	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/13/16 16:10	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/13/16 16:10	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/13/16 16:10	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/13/16 16:10	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/13/16 16:10	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/13/16 16:10	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/13/16 16:10	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/13/16 16:10	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/13/16 16:10	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/13/16 16:10	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/13/16 16:10	1
Ethylbenzene	ND		1.7	ug/m3			09/13/16 16:10	1
4-Ethyltoluene	ND		2.0	ug/m3			09/13/16 16:10	1
Hexachlorobutadiene	ND		21	ug/m3			09/13/16 16:10	1
2-Hexanone	ND		1.6	ug/m3			09/13/16 16:10	1
Methylene Chloride	ND		1.4	ug/m3			09/13/16 16:10	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/13/16 16:10	1
Styrene	ND		1.7	ug/m3			09/13/16 16:10	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/13/16 16:10	1
Tetrachloroethene	ND		2.7	ug/m3			09/13/16 16:10	1
Toluene	ND		1.5	ug/m3			09/13/16 16:10	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/13/16 16:10	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/13/16 16:10	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/13/16 16:10	1
Trichloroethene	ND		2.1	ug/m3			09/13/16 16:10	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 320-126903/6**

**Matrix: Air**

**Analysis Batch: 126903**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		2.9	ug/m3			09/13/16 16:10	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/13/16 16:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/13/16 16:10	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/13/16 16:10	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/13/16 16:10	1
Vinyl acetate	ND		2.8	ug/m3			09/13/16 16:10	1
Vinyl chloride	ND		1.0	ug/m3			09/13/16 16:10	1
m,p-Xylene	ND		3.5	ug/m3			09/13/16 16:10	1
o-Xylene	ND		1.7	ug/m3			09/13/16 16:10	1
Naphthalene	ND		4.2	ug/m3			09/13/16 16:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130		09/13/16 16:10	1
1,2-Dichloroethane-d4 (Surr)	85		70 - 130		09/13/16 16:10	1
Toluene-d8 (Surr)	95		70 - 130		09/13/16 16:10	1

**Lab Sample ID: LCS 320-126903/3**

**Matrix: Air**

**Analysis Batch: 126903**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	15.8		ppb v/v		79	71 - 131
Benzene	20.0	18.1		ppb v/v		91	68 - 128
Benzyl chloride	20.0	16.1		ppb v/v		81	58 - 120
Bromodichloromethane	20.0	19.1		ppb v/v		95	65 - 130
Bromoform	20.0	21.7		ppb v/v		109	64 - 144
Bromomethane	20.0	21.6		ppb v/v		108	70 - 131
2-Butanone (MEK)	20.0	18.4		ppb v/v		92	71 - 131
Carbon disulfide	20.0	16.5		ppb v/v		82	63 - 123
Carbon tetrachloride	20.0	20.9		ppb v/v		105	67 - 127
Chlorobenzene	20.0	20.2		ppb v/v		101	70 - 132
Dibromochloromethane	20.0	20.6		ppb v/v		103	68 - 128
Chloroethane	20.0	18.1		ppb v/v		90	70 - 131
Chloroform	20.0	18.2		ppb v/v		91	69 - 129
Chloromethane	20.0	16.3		ppb v/v		82	67 - 127
1,2-Dibromoethane (EDB)	20.0	20.0		ppb v/v		100	68 - 131
1,2-Dichlorobenzene	20.0	20.6		ppb v/v		103	73 - 143
1,3-Dichlorobenzene	20.0	21.0		ppb v/v		105	77 - 136
1,4-Dichlorobenzene	20.0	21.6		ppb v/v		108	73 - 143
Dichlorodifluoromethane	20.0	18.7		ppb v/v		93	69 - 129
1,1-Dichloroethane	20.0	17.0		ppb v/v		85	65 - 125
1,2-Dichloroethane	20.0	19.2		ppb v/v		96	71 - 131
1,1-Dichloroethene	20.0	16.2		ppb v/v		81	53 - 128
cis-1,2-Dichloroethene	20.0	19.1		ppb v/v		95	68 - 128
trans-1,2-Dichloroethene	20.0	17.3		ppb v/v		87	70 - 130
1,2-Dichloropropane	20.0	20.1		ppb v/v		101	74 - 128
cis-1,3-Dichloropropene	20.0	20.7		ppb v/v		104	78 - 132
trans-1,3-Dichloropropene	20.0	16.8		ppb v/v		84	56 - 136

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-126903/3

Matrix: Air

Analysis Batch: 126903

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.6		ppb v/v		108	64 - 124
Ethylbenzene	20.0	18.7		ppb v/v		94	76 - 136
4-Ethyltoluene	20.0	17.0		ppb v/v		85	62 - 136
Hexachlorobutadiene	20.0	22.9		ppb v/v		115	42 - 150
2-Hexanone	20.0	17.6		ppb v/v		88	70 - 128
Methylene Chloride	20.0	15.4		ppb v/v		77	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	17.4		ppb v/v		87	73 - 133
Styrene	20.0	21.5		ppb v/v		108	76 - 144
1,1,2,2-Tetrachloroethane	20.0	17.2		ppb v/v		86	75 - 135
Tetrachloroethene	20.0	20.5		ppb v/v		102	56 - 138
Toluene	20.0	19.7		ppb v/v		99	71 - 132
1,2,4-Trichlorobenzene	20.0	25.4		ppb v/v		127	59 - 150
1,1,1-Trichloroethane	20.0	18.9		ppb v/v		94	65 - 124
1,1,2-Trichloroethane	20.0	19.5		ppb v/v		97	71 - 131
Trichloroethene	20.0	22.2		ppb v/v		111	64 - 127
1,4-Dioxane	20.0	20.4		ppb v/v		102	55 - 141
Trichlorofluoromethane	20.0	19.9		ppb v/v		99	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.4		ppb v/v		87	50 - 132
1,2,4-Trimethylbenzene	20.0	20.8		ppb v/v		104	61 - 145
1,3,5-Trimethylbenzene	20.0	19.1		ppb v/v		95	65 - 136
Vinyl acetate	20.0	18.5		ppb v/v		93	77 - 134
Vinyl chloride	20.0	19.3		ppb v/v		97	69 - 129
m,p-Xylene	40.0	38.5		ppb v/v		96	75 - 138
o-Xylene	20.0	19.4		ppb v/v		97	77 - 132
Naphthalene	20.0	24.1		ppb v/v		120	58 - 150
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	37.6		ug/m3		79	71 - 131
Benzene	64	58.0		ug/m3		91	68 - 128
Benzyl chloride	100	83.4		ug/m3		81	58 - 120
Bromodichloromethane	130	128		ug/m3		95	65 - 130
Bromoform	210	224		ug/m3		109	64 - 144
Bromomethane	78	83.7		ug/m3		108	70 - 131
2-Butanone (MEK)	59	54.3		ug/m3		92	71 - 131
Carbon disulfide	62	51.3		ug/m3		82	63 - 123
Carbon tetrachloride	130	131		ug/m3		105	67 - 127
Chlorobenzene	92	92.8		ug/m3		101	70 - 132
Dibromochloromethane	170	176		ug/m3		103	68 - 128
Chloroethane	53	47.7		ug/m3		90	70 - 131
Chloroform	98	88.9		ug/m3		91	69 - 129
Chloromethane	41	33.7		ug/m3		82	67 - 127
1,2-Dibromoethane (EDB)	150	154		ug/m3		100	68 - 131
1,2-Dichlorobenzene	120	124		ug/m3		103	73 - 143
1,3-Dichlorobenzene	120	126		ug/m3		105	77 - 136
1,4-Dichlorobenzene	120	130		ug/m3		108	73 - 143
Dichlorodifluoromethane	99	92.4		ug/m3		93	69 - 129
1,1-Dichloroethane	81	68.6		ug/m3		85	65 - 125

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 320-126903/3**  
**Matrix: Air**  
**Analysis Batch: 126903**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	81	77.9		ug/m3		96	71 - 131
1,1-Dichloroethene	79	64.1		ug/m3		81	53 - 128
cis-1,2-Dichloroethene	79	75.5		ug/m3		95	68 - 128
trans-1,2-Dichloroethene	79	68.7		ug/m3		87	70 - 130
1,2-Dichloropropane	92	93.0		ug/m3		101	74 - 128
cis-1,3-Dichloropropene	91	94.0		ug/m3		104	78 - 132
trans-1,3-Dichloropropene	91	76.0		ug/m3		84	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	151		ug/m3		108	64 - 124
Ethylbenzene	87	81.4		ug/m3		94	76 - 136
4-Ethyltoluene	98	83.7		ug/m3		85	62 - 136
Hexachlorobutadiene	210	245		ug/m3		115	42 - 150
2-Hexanone	82	72.1		ug/m3		88	70 - 128
Methylene Chloride	69	53.4		ug/m3		77	65 - 125
4-Methyl-2-pentanone (MIBK)	82	71.3		ug/m3		87	73 - 133
Styrene	85	91.8		ug/m3		108	76 - 144
1,1,2,2-Tetrachloroethane	140	118		ug/m3		86	75 - 135
Tetrachloroethene	140	139		ug/m3		102	56 - 138
Toluene	75	74.3		ug/m3		99	71 - 132
1,2,4-Trichlorobenzene	150	188		ug/m3		127	59 - 150
1,1,1-Trichloroethane	110	103		ug/m3		94	65 - 124
1,1,2-Trichloroethane	110	106		ug/m3		97	71 - 131
Trichloroethene	110	120		ug/m3		111	64 - 127
1,4-Dioxane	72	73.6		ug/m3		102	55 - 141
Trichlorofluoromethane	110	112		ug/m3		99	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	134		ug/m3		87	50 - 132
1,2,4-Trimethylbenzene	98	102		ug/m3		104	61 - 145
1,3,5-Trimethylbenzene	98	93.9		ug/m3		95	65 - 136
Vinyl acetate	70	65.3		ug/m3		93	77 - 134
Vinyl chloride	51	49.3		ug/m3		97	69 - 129
m,p-Xylene	170	167		ug/m3		96	75 - 138
o-Xylene	87	84.2		ug/m3		97	77 - 132
Naphthalene	100	126		ug/m3		120	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
Toluene-d8 (Surr)	99		70 - 130

**Lab Sample ID: LCSD 320-126903/4**  
**Matrix: Air**  
**Analysis Batch: 126903**

**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
Acetone	20.0	14.9		ppb v/v		74	71 - 131	6	25
Benzene	20.0	17.3		ppb v/v		86	68 - 128	5	25
Benzyl chloride	20.0	16.3		ppb v/v		82	58 - 120	1	25

TestAmerica Sacramento



# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 320-126903/4**  
**Matrix: Air**  
**Analysis Batch: 126903**

**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
Bromodichloromethane	20.0	18.2		ppb v/v		91	65 - 130	4	25
Bromoform	20.0	22.3		ppb v/v		112	64 - 144	3	25
Bromomethane	20.0	19.1		ppb v/v		96	70 - 131	12	25
2-Butanone (MEK)	20.0	16.9		ppb v/v		84	71 - 131	8	25
Carbon disulfide	20.0	15.7		ppb v/v		79	63 - 123	5	25
Carbon tetrachloride	20.0	20.4		ppb v/v		102	67 - 127	3	25
Chlorobenzene	20.0	20.5		ppb v/v		103	70 - 132	2	25
Dibromochloromethane	20.0	20.7		ppb v/v		104	68 - 128	1	25
Chloroethane	20.0	16.8		ppb v/v		84	70 - 131	8	25
Chloroform	20.0	17.3		ppb v/v		87	69 - 129	5	25
Chloromethane	20.0	15.8		ppb v/v		79	67 - 127	3	25
1,2-Dibromoethane (EDB)	20.0	20.2		ppb v/v		101	68 - 131	1	25
1,2-Dichlorobenzene	20.0	21.1		ppb v/v		106	73 - 143	3	25
1,3-Dichlorobenzene	20.0	21.6		ppb v/v		108	77 - 136	3	25
1,4-Dichlorobenzene	20.0	22.1		ppb v/v		111	73 - 143	3	25
Dichlorodifluoromethane	20.0	18.0		ppb v/v		90	69 - 129	4	25
1,1-Dichloroethane	20.0	15.9		ppb v/v		79	65 - 125	7	25
1,2-Dichloroethane	20.0	18.1		ppb v/v		91	71 - 131	6	25
1,1-Dichloroethene	20.0	15.3		ppb v/v		76	53 - 128	6	25
cis-1,2-Dichloroethene	20.0	18.5		ppb v/v		92	68 - 128	3	25
trans-1,2-Dichloroethene	20.0	16.2		ppb v/v		81	70 - 130	7	25
1,2-Dichloropropane	20.0	19.2		ppb v/v		96	74 - 128	5	25
cis-1,3-Dichloropropene	20.0	19.6		ppb v/v		98	78 - 132	6	25
trans-1,3-Dichloropropene	20.0	16.3		ppb v/v		82	56 - 136	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.6		ppb v/v		108	64 - 124	0	25
Ethylbenzene	20.0	18.9		ppb v/v		95	76 - 136	1	25
4-Ethyltoluene	20.0	17.3		ppb v/v		86	62 - 136	2	25
Hexachlorobutadiene	20.0	23.7		ppb v/v		118	42 - 150	3	25
2-Hexanone	20.0	17.0		ppb v/v		85	70 - 128	3	25
Methylene Chloride	20.0	14.2		ppb v/v		71	65 - 125	8	25
4-Methyl-2-pentanone (MIBK)	20.0	16.1		ppb v/v		81	73 - 133	8	25
Styrene	20.0	22.2		ppb v/v		111	76 - 144	3	25
1,1,2,2-Tetrachloroethane	20.0	17.3		ppb v/v		86	75 - 135	0	25
Tetrachloroethene	20.0	21.0		ppb v/v		105	56 - 138	3	25
Toluene	20.0	19.2		ppb v/v		96	71 - 132	3	25
1,2,4-Trichlorobenzene	20.0	26.6		ppb v/v		133	59 - 150	5	25
1,1,1-Trichloroethane	20.0	18.1		ppb v/v		91	65 - 124	4	25
1,1,2-Trichloroethane	20.0	19.3		ppb v/v		97	71 - 131	1	25
Trichloroethene	20.0	22.4		ppb v/v		112	64 - 127	0	25
1,4-Dioxane	20.0	19.7		ppb v/v		99	55 - 141	4	25
Trichlorofluoromethane	20.0	19.2		ppb v/v		96	68 - 128	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.3		ppb v/v		87	50 - 132	1	25
1,2,4-Trimethylbenzene	20.0	21.1		ppb v/v		105	61 - 145	1	25
1,3,5-Trimethylbenzene	20.0	19.9		ppb v/v		99	65 - 136	4	25
Vinyl acetate	20.0	17.0		ppb v/v		85	77 - 134	9	25
Vinyl chloride	20.0	19.3		ppb v/v		96	69 - 129	0	25
m,p-Xylene	40.0	39.0		ppb v/v		97	75 - 138	1	25

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 320-126903/4**

**Client Sample ID: Lab Control Sample Dup**

**Matrix: Air**

**Prep Type: Total/NA**

**Analysis Batch: 126903**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	20.0	19.7		ppb v/v		98	77 - 132	1	25
Naphthalene	20.0	25.3		ppb v/v		127	58 - 150	5	25
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	35.3		ug/m3		74	71 - 131	6	25
Benzene	64	55.2		ug/m3		86	68 - 128	5	25
Benzyl chloride	100	84.6		ug/m3		82	58 - 120	1	25
Bromodichloromethane	130	122		ug/m3		91	65 - 130	4	25
Bromoform	210	231		ug/m3		112	64 - 144	3	25
Bromomethane	78	74.3		ug/m3		96	70 - 131	12	25
2-Butanone (MEK)	59	49.8		ug/m3		84	71 - 131	8	25
Carbon disulfide	62	48.9		ug/m3		79	63 - 123	5	25
Carbon tetrachloride	130	128		ug/m3		102	67 - 127	3	25
Chlorobenzene	92	94.4		ug/m3		103	70 - 132	2	25
Dibromochloromethane	170	177		ug/m3		104	68 - 128	1	25
Chloroethane	53	44.2		ug/m3		84	70 - 131	8	25
Chloroform	98	84.6		ug/m3		87	69 - 129	5	25
Chloromethane	41	32.7		ug/m3		79	67 - 127	3	25
1,2-Dibromoethane (EDB)	150	155		ug/m3		101	68 - 131	1	25
1,2-Dichlorobenzene	120	127		ug/m3		106	73 - 143	3	25
1,3-Dichlorobenzene	120	130		ug/m3		108	77 - 136	3	25
1,4-Dichlorobenzene	120	133		ug/m3		111	73 - 143	3	25
Dichlorodifluoromethane	99	89.0		ug/m3		90	69 - 129	4	25
1,1-Dichloroethane	81	64.2		ug/m3		79	65 - 125	7	25
1,2-Dichloroethane	81	73.4		ug/m3		91	71 - 131	6	25
1,1-Dichloroethene	79	60.5		ug/m3		76	53 - 128	6	25
cis-1,2-Dichloroethene	79	73.2		ug/m3		92	68 - 128	3	25
trans-1,2-Dichloroethene	79	64.2		ug/m3		81	70 - 130	7	25
1,2-Dichloropropane	92	88.6		ug/m3		96	74 - 128	5	25
cis-1,3-Dichloropropene	91	88.9		ug/m3		98	78 - 132	6	25
trans-1,3-Dichloropropene	91	74.0		ug/m3		82	56 - 136	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	151		ug/m3		108	64 - 124	0	25
Ethylbenzene	87	82.2		ug/m3		95	76 - 136	1	25
4-Ethyltoluene	98	85.0		ug/m3		86	62 - 136	2	25
Hexachlorobutadiene	210	253		ug/m3		118	42 - 150	3	25
2-Hexanone	82	69.7		ug/m3		85	70 - 128	3	25
Methylene Chloride	69	49.4		ug/m3		71	65 - 125	8	25
4-Methyl-2-pentanone (MIBK)	82	66.0		ug/m3		81	73 - 133	8	25
Styrene	85	94.4		ug/m3		111	76 - 144	3	25
1,1,2,2-Tetrachloroethane	140	119		ug/m3		86	75 - 135	0	25
Tetrachloroethene	140	143		ug/m3		105	56 - 138	3	25
Toluene	75	72.3		ug/m3		96	71 - 132	3	25
1,2,4-Trichlorobenzene	150	198		ug/m3		133	59 - 150	5	25
1,1,1-Trichloroethane	110	98.8		ug/m3		91	65 - 124	4	25
1,1,2-Trichloroethane	110	106		ug/m3		97	71 - 131	1	25
Trichloroethene	110	120		ug/m3		112	64 - 127	0	25
1,4-Dioxane	72	71.1		ug/m3		99	55 - 141	4	25

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 320-126903/4**  
**Matrix: Air**  
**Analysis Batch: 126903**

**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
Trichlorofluoromethane	110	108		ug/m3		96	68 - 128	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	133		ug/m3		87	50 - 132	1	25
1,2,4-Trimethylbenzene	98	104		ug/m3		105	61 - 145	1	25
1,3,5-Trimethylbenzene	98	97.6		ug/m3		99	65 - 136	4	25
Vinyl acetate	70	59.8		ug/m3		85	77 - 134	9	25
Vinyl chloride	51	49.2		ug/m3		96	69 - 129	0	25
m,p-Xylene	170	169		ug/m3		97	75 - 138	1	25
o-Xylene	87	85.4		ug/m3		98	77 - 132	1	25
Naphthalene	100	133		ug/m3		127	58 - 150	5	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	89		70 - 130
Toluene-d8 (Surr)	97		70 - 130

## Method: D1946 - Fixed Gases in Air (GC)

**Lab Sample ID: MB 320-126867/10**  
**Matrix: Air**  
**Analysis Batch: 126867**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		0.50	% v/v			09/13/16 10:49	1
Methane (TCD)	ND		0.50	% v/v			09/13/16 10:49	1
Oxygen	ND		0.20	% v/v			09/13/16 10:49	1

**Lab Sample ID: MB 320-126867/11**  
**Matrix: Air**  
**Analysis Batch: 126867**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		0.10	% v/v			09/13/16 10:37	1

**Lab Sample ID: LCS 320-126867/2**  
**Matrix: Air**  
**Analysis Batch: 126867**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon Dioxide (TCD)	26.7	28.3		% v/v		106	80 - 120
Methane (TCD)	21.8	22.9		% v/v		105	80 - 120

**Lab Sample ID: LCS 320-126867/5**  
**Matrix: Air**  
**Analysis Batch: 126867**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Helium	16.0	15.2		% v/v		95	80 - 120
Oxygen	17.1	14.6		% v/v		85	80 - 120

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Lab Sample ID: LCSD 320-126867/3**  
**Matrix: Air**  
**Analysis Batch: 126867**

**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
Carbon Dioxide (TCD)	26.7	28.2		% v/v		106	80 - 120	0	20
Methane (TCD)	21.8	22.8		% v/v		104	80 - 120	1	20

**Lab Sample ID: LCSD 320-126867/6**  
**Matrix: Air**  
**Analysis Batch: 126867**

**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	16.0	15.2		% v/v		95	80 - 120	0	20
Oxygen	17.1	14.7		% v/v		86	80 - 120	0	20

**Lab Sample ID: MB 320-127082/5**  
**Matrix: Air**  
**Analysis Batch: 127082**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	ND		0.00010	% v/v			09/14/16 11:55	1

**Lab Sample ID: LCS 320-127082/14**  
**Matrix: Air**  
**Analysis Batch: 127082**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (FID)	0.0250	0.0207		% v/v		83	80 - 120

**Lab Sample ID: LCSD 320-127082/3**  
**Matrix: Air**  
**Analysis Batch: 127082**

**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
Methane (FID)	0.0250	0.0205		% v/v		82	80 - 120	1	20

# QC Association Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Air - GC/MS VOA

### Analysis Batch: 126903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21562-1	SV62-5	Total/NA	Air	TO-15	
320-21562-2	SV62-10	Total/NA	Air	TO-15	
320-21562-3	SV63-5	Total/NA	Air	TO-15	
320-21562-4	SV63-10	Total/NA	Air	TO-15	
320-21562-5	SV64-5	Total/NA	Air	TO-15	
320-21562-6	SV64-10	Total/NA	Air	TO-15	
320-21562-7	SV65-5	Total/NA	Air	TO-15	
320-21562-8	SV65-10	Total/NA	Air	TO-15	
320-21562-9	SV66-5	Total/NA	Air	TO-15	
320-21562-10	SV66-10	Total/NA	Air	TO-15	
MB 320-126903/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-126903/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-126903/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

## Air - GC VOA

### Analysis Batch: 126867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21562-1	SV62-5	Total/NA	Air	D1946	
320-21562-2	SV62-10	Total/NA	Air	D1946	
320-21562-3	SV63-5	Total/NA	Air	D1946	
320-21562-4	SV63-10	Total/NA	Air	D1946	
320-21562-5	SV64-5	Total/NA	Air	D1946	
320-21562-6	SV64-10	Total/NA	Air	D1946	
320-21562-7	SV65-5	Total/NA	Air	D1946	
320-21562-8	SV65-10	Total/NA	Air	D1946	
320-21562-9	SV66-5	Total/NA	Air	D1946	
320-21562-10	SV66-10	Total/NA	Air	D1946	
MB 320-126867/10	Method Blank	Total/NA	Air	D1946	
MB 320-126867/11	Method Blank	Total/NA	Air	D1946	
LCS 320-126867/2	Lab Control Sample	Total/NA	Air	D1946	
LCS 320-126867/5	Lab Control Sample	Total/NA	Air	D1946	
LCSD 320-126867/3	Lab Control Sample Dup	Total/NA	Air	D1946	
LCSD 320-126867/6	Lab Control Sample Dup	Total/NA	Air	D1946	

### Analysis Batch: 127082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21562-1	SV62-5	Total/NA	Air	D1946	
320-21562-2	SV62-10	Total/NA	Air	D1946	
320-21562-3	SV63-5	Total/NA	Air	D1946	
320-21562-5	SV64-5	Total/NA	Air	D1946	
320-21562-6	SV64-10	Total/NA	Air	D1946	
320-21562-7	SV65-5	Total/NA	Air	D1946	
320-21562-8	SV65-10	Total/NA	Air	D1946	
320-21562-9	SV66-5	Total/NA	Air	D1946	
320-21562-10	SV66-10	Total/NA	Air	D1946	
MB 320-127082/5	Method Blank	Total/NA	Air	D1946	
LCS 320-127082/14	Lab Control Sample	Total/NA	Air	D1946	
LCSD 320-127082/3	Lab Control Sample Dup	Total/NA	Air	D1946	

TestAmerica Sacramento

# Lab Chronicle

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV62-5**

**Date Collected: 09/07/16 12:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-1**

**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		9.22	125 mL	250 mL	126903	09/13/16 18:06	AP1	TAL SAC
Total/NA	Analysis	D1946		138.3	50 mL	50 mL	127082	09/14/16 15:37	S1T	TAL SAC
Total/NA	Analysis	D1946		4.61	50 mL	50 mL	126867	09/13/16 11:41	S1T	TAL SAC

**Client Sample ID: SV62-10**

**Date Collected: 09/07/16 12:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-2**

**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		101	25 mL	250 mL	126903	09/13/16 18:58	AP1	TAL SAC
Total/NA	Analysis	D1946		201.9	50 mL	50 mL	127082	09/14/16 16:02	S1T	TAL SAC
Total/NA	Analysis	D1946		10.09	50 mL	50 mL	126867	09/13/16 11:57	S1T	TAL SAC

**Client Sample ID: SV63-5**

**Date Collected: 09/07/16 13:15**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-3**

**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		2.22	750 mL	250 mL	126903	09/13/16 20:25	AP1	TAL SAC
Total/NA	Analysis	D1946		12.56	50 mL	50 mL	127082	09/14/16 16:41	S1T	TAL SAC
Total/NA	Analysis	D1946		6.67	50 mL	50 mL	126867	09/13/16 12:08	S1T	TAL SAC

**Client Sample ID: SV63-10**

**Date Collected: 09/07/16 13:15**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-4**

**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		62.3	25 mL	250 mL	126903	09/13/16 21:17	AP1	TAL SAC
Total/NA	Analysis	D1946		6.23	50 mL	50 mL	126867	09/13/16 15:14	S1T	TAL SAC

**Client Sample ID: SV64-5**

**Date Collected: 09/07/16 13:55**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-5**

**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		1.39	750 mL	250 mL	126903	09/13/16 22:44	AP1	TAL SAC
Total/NA	Analysis	D1946		8.57	50 mL	50 mL	127082	09/14/16 16:55	S1T	TAL SAC
Total/NA	Analysis	D1946		4.17	50 mL	50 mL	126867	09/13/16 15:23	S1T	TAL SAC

TestAmerica Sacramento

# Lab Chronicle

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

**Client Sample ID: SV64-10**

**Date Collected: 09/07/16 13:55**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-6**

**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		4.5	750 mL	250 mL	126903	09/13/16 23:45	AP1	TAL SAC
Total/NA	Analysis	D1946		20.65	50 mL	50 mL	127082	09/14/16 17:22	S1T	TAL SAC
Total/NA	Analysis	D1946		13.51	50 mL	50 mL	126867	09/13/16 15:30	S1T	TAL SAC

**Client Sample ID: SV65-5**

**Date Collected: 09/07/16 14:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-7**

**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		2.47	750 mL	250 mL	126903	09/14/16 00:47	AP1	TAL SAC
Total/NA	Analysis	D1946		11.81	50 mL	50 mL	127082	09/14/16 17:36	S1T	TAL SAC
Total/NA	Analysis	D1946		7.42	50 mL	50 mL	126867	09/13/16 15:42	S1T	TAL SAC

**Client Sample ID: SV65-10**

**Date Collected: 09/07/16 14:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-8**

**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		2.36	750 mL	250 mL	126903	09/14/16 01:48	AP1	TAL SAC
Total/NA	Analysis	D1946		10.39	50 mL	50 mL	127082	09/14/16 17:55	S1T	TAL SAC
Total/NA	Analysis	D1946		7.08	50 mL	50 mL	126867	09/13/16 15:50	S1T	TAL SAC

**Client Sample ID: SV66-5**

**Date Collected: 09/07/16 15:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-9**

**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		2.04	750 mL	250 mL	126903	09/14/16 03:15	AP1	TAL SAC
Total/NA	Analysis	D1946		10.7	50 mL	50 mL	127082	09/14/16 18:08	S1T	TAL SAC
Total/NA	Analysis	D1946		6.11	50 mL	50 mL	126867	09/13/16 16:00	S1T	TAL SAC

**Client Sample ID: SV66-10**

**Date Collected: 09/07/16 15:30**

**Date Received: 09/08/16 08:13**

**Lab Sample ID: 320-21562-10**

**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		9.05	250 mL	250 mL	126903	09/14/16 04:10	AP1	TAL SAC
Total/NA	Analysis	D1946		18.09	50 mL	50 mL	127082	09/14/16 16:20	S1T	TAL SAC
Total/NA	Analysis	D1946		9.05	50 mL	50 mL	126867	09/13/16 16:12	S1T	TAL SAC

**Laboratory References:**

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

TestAmerica Sacramento

# Certification Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

## Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4040	01-29-17

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17



# Method Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

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: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21562-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-21562-1	SV62-5	Air	09/07/16 12:30	09/08/16 08:13
320-21562-2	SV62-10	Air	09/07/16 12:30	09/08/16 08:13
320-21562-3	SV63-5	Air	09/07/16 13:15	09/08/16 08:13
320-21562-4	SV63-10	Air	09/07/16 13:15	09/08/16 08:13
320-21562-5	SV64-5	Air	09/07/16 13:55	09/08/16 08:13
320-21562-6	SV64-10	Air	09/07/16 13:55	09/08/16 08:13
320-21562-7	SV65-5	Air	09/07/16 14:30	09/08/16 08:13
320-21562-8	SV65-10	Air	09/07/16 14:30	09/08/16 08:13
320-21562-9	SV66-5	Air	09/07/16 15:30	09/08/16 08:13
320-21562-10	SV66-10	Air	09/07/16 15:30	09/08/16 08:13





**PES Environmental, Inc.**  
Engineering & Environmental Services

LABORATORY: TestAmerica  
 JOB NUMBER: 1448.001.01.036  
 NAME / LOCATION: Shellmound Street  
 PROJECT MANAGER: Chris Baldassari

**CHAIN OF CUSTODY RE**

SAMPLERS: Greg George

RECORDER: Greg George

DATE		TIME	SAMPLE NUMBER / DESIGNATION
YR	MO		
16	09	07	1230 SV62-5
			1230 SV62-10
			1315 SV63-5
			1315 SV63-10
			1355 SV64-5
			1355 SV64-10
			1430 SV65-5
			1430 SV65-10
			1530 SV66-5
			1530 SV66-10

MATRIX			# of Containers & Preservatives						DEPTH IN FEET	
Vapor	Water	Soil	Sediment	Unpres.	En Core	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl		1-1 Surfactant
X								X	X	5
X								X	X	10
X								X	X	5
X								X	X	10
X								X	X	5
X								X	X	10
X								X	X	5
X								X	X	10

MNA Parameters (see notes)	VOCs TO-15	MTBK TO-15	Naphthalene TO-15	Heilmann D1946	Medchems D1946	Carbon Dioxide D1946	Oxygen D1946
EPA 5035/8010	X	X	X	X	X	X	X
EPA 5035/8021	X	X	X	X	X	X	X
EPA 5035/8260B	X	X	X	X	X	X	X
TPHg by 5035/8015M	X	X	X	X	X	X	X
TPhd by 8015M	X	X	X	X	X	X	X
TPHmo by 8015M	X	X	X	X	X	X	X
EPA 8270C	X	X	X	X	X	X	X

320-21562 Chain of Custody



avenue, Suite 100  
 California 94947  
 AX (415) 899-1601

STED

**CHAIN OF CUSTODY RECORD**

Turn Around Time: 5 DAY

RELINQUISHED BY: (Signature)	DATE	TIME
<u>[Signature]</u>	<u>9/18/15</u>	<u>0813</u>
RECEIVED BY: (Signature)	DATE	TIME
<u>[Signature]</u>	<u>9/18/15</u>	<u>813</u>
RECEIVED BY: (Signature)	DATE	TIME
RECEIVED BY: (Signature)	DATE	TIME
RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

Page 1 of 1

JOB # **320-21562**  
 Sample # **1**

Client/Project:		VFR ID:	
Canister Serial #:	10918	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	4.95	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	22.82	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.61			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			4.61		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = <b>4.61</b> X	9/13/2016	MS7		=	FINAL DF	<b>9.22020202</b>
	Load DF = <b>2</b> X					
	LVf (mLs) <b>250</b>					
	LVi (mLs) <b>125</b>					
Canister DF = <b>4.61</b> X	9/14/2016	ATGC1		=	FINAL DF	<b>138.3030303</b>
	Load DF = <b>1</b> X					
	LVf (mLs) <b>1</b>					
	LVi (mLs) <b>1</b>					
Canister DF = <b>4.61</b> X				=	FINAL DF	<b>#DIV/0!</b>
	Load DF = <b>#DIV/0!</b> X					
	LVf (mLs)					
	LVi (mLs)					



JOB # **320-21562**  
 Sample # **2**

Client/Project:		VFR ID:	
Canister Serial #:	10497	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	3.45	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	23.18	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	6.72			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/13/16	14.75	22.16	6.72	ST	10.09
			10.09		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = <b>10.09</b>	9/13/2016	MS7		<b>X</b>	Load DF = <b>10</b> LVf (mLs) <b>250</b> LVi (mLs) <b>25</b>	<b>X</b> Bag DF = <b>1</b> BVf (mLs) <b>250</b> BVi (mLs) <b>25</b>
						FINAL DF = <b>100.9420388</b>
Canister DF = <b>10.09</b>	9/14/2016	ATGC1		<b>X</b>	Load DF = <b>1</b> LVf (mLs) <b>1</b> LVi (mLs) <b>1</b>	<b>X</b> Bag DF = <b>20</b> BVf (mLs) <b>20</b> BVi (mLs) <b>1</b>
						FINAL DF = <b>201.8840776</b>
Canister DF = <b>10.09</b>				<b>X</b>	Load DF = <b>#DIV/0!</b> LVf (mLs) <b></b> LVi (mLs) <b></b>	<b>X</b> Bag DF = <b>1</b> BVf (mLs) <b></b> BVi (mLs) <b></b>
						FINAL DF = <b>#DIV/0!</b>



JOB # **320-21562**  
 Sample # **3**

Client/Project:		VFR ID:	
Canister Serial #:	10338	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8			JMT
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	3.43	09/08/16		LHS for Ky
FINAL PRESSURE (PSIA)	22.88	09/08/16		LHS for Ky
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He			<input type="checkbox"/>	SCRN DIL. VS 250mLs:
Initial Canister Dilution Factor =	6.67			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/14/16	10.73	20.20	6.67	ST	12.56
			12.56		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
Canister DF = <b>6.67</b>	<b>X</b>	Load DF = <b>0.3333333</b>	<b>X</b>	Date	Instr.	File #
				9/13/2016	MS7	
				FINAL DF		
				Bag DF = <b>1</b>	=	<b>2.223517979</b>
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		
Canister DF = <b>6.67</b>	<b>X</b>	Load DF = <b>#DIV/0!</b>	<b>X</b>	Date	Instr.	File #
				FINAL DF		
				Bag DF = <b>1</b>	=	<b>#DIV/0!</b>
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		
Canister DF = <b>6.67</b>	<b>X</b>	Load DF = <b>#DIV/0!</b>	<b>X</b>	Date	Instr.	File #
				FINAL DF		
				Bag DF = <b>1</b>	=	<b>#DIV/0!</b>
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		



JOB # 320-21562
Sample # 4

Table with 4 columns: Client/Project, Canister Serial #, Cleaning Job, Client ID, Site Location, VFR ID, Duration, Flow, Initials.

FIELD table with 5 columns: READING, TIME, PRESS., DATE, INITIALS. Rows include INITIAL FIELD VACUUM and FINAL FIELD READING.

LABORATORY table with 5 columns: READING, PRESS., DATE, INITIALS. Rows include INITIAL VACUUM CHECK, INITIAL PRESSURE, FINAL PRESSURE, Pressurization Gas, and Initial Canister Dilution Factor.

CANISTER REPRESSURIZATION table with 6 columns: Date, Pi (PSIA), Pf (PSIA), Initial DF, Initials, NEW DF.

Analytical Dilution Factors

Table showing analytical dilution factors with columns for Date, Instr., File #, and calculations for Canister DF, Load DF, Bag DF, and FINAL DF.



JOB # **320-21562**  
 Sample # **5**

Client/Project:	VFR ID:	
Canister Serial #: 10736	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	5.51	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	22.97	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.17			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/14/16	9.96	20.48	4.17	ST	8.57
			8.57		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 4.17	9/13/2016	MS7		X	FINAL DF	
Load DF = 0.3333333				X	1.389594676	
LVf (mLs) 250						
LVi (mLs) 750						
Bag DF = 1				=		
BVf (mLs)						
BVi (mLs)						
Canister DF = 4.17				X	FINAL DF	
Load DF = #DIV/0!				X	#DIV/0!	
LVf (mLs)						
LVi (mLs)						
Bag DF = 1				=		
BVf (mLs)						
BVi (mLs)						
Canister DF = 4.17				X	FINAL DF	
Load DF = #DIV/0!				X	#DIV/0!	
LVf (mLs)						
LVi (mLs)						
Bag DF = 1				=		
BVf (mLs)						
BVi (mLs)						





JOB # **320-21562**  
 Sample # **6**

Client/Project:	VFR ID:		
Canister Serial #: 10756	Duration:	<input type="checkbox"/> Hrs	<input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min	
Client ID:	Initials:		
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	2.76	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	22.72	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	8.23			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/13/16	14.64	24.02	8.23	LHS	13.51
09/14/16	13.18	20.15	13.51	ST	20.65
			20.65		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 13.51	9/13/2016	MS7				
				FINAL DF		
X				=	4.502045881	
Load DF = 0.3333333				Bag DF = 1		
LVf (mLs) 250				BVf (mLs)		
LVi (mLs) 750				Bvi (mLs)		
Canister DF = 13.51						
X				FINAL DF		
Load DF = #DIV/0!				=	#DIV/0!	
LVf (mLs)				Bag DF = 1		
LVi (mLs)				BVf (mLs)		
Canister DF = 13.51						
X				FINAL DF		
Load DF = #DIV/0!				=	#DIV/0!	
LVf (mLs)				Bag DF = 1		
LVi (mLs)				BVf (mLs)		



JOB # **320-21562**  
 Sample # **7**

Client/Project:		VFR ID:	
Canister Serial #:	09634	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	4.76	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	23.23	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.88			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/13/16	15.66	23.81	4.88	LHS	7.42
09/14/16	13.06	20.78	7.42	ST	11.81
			11.81		#DIV/0!

Analytical Dilution Factors							
	Date	Instr.	File #				
Canister DF = <b>7.42</b> X	9/13/2016	MS7		=	FINAL DF	<b>2.473367444</b>	
					Load DF = <b>0.3333333</b> X		
					LVf (mLs) <b>250</b>	Bag DF = <b>1</b>	
					LVi (mLs) <b>750</b>	BVf (mLs)	
Canister DF = <b>7.42</b> X				=	FINAL DF	<b>#DIV/0!</b>	
					Load DF = <b>#DIV/0!</b> X		
					LVf (mLs)	Bag DF = <b>1</b>	
					LVi (mLs)	BVf (mLs)	
Canister DF = <b>7.42</b> X				=	FINAL DF	<b>#DIV/0!</b>	
					Load DF = <b>#DIV/0!</b> X		
					LVf (mLs)	Bag DF = <b>1</b>	
					LVi (mLs)	BVf (mLs)	



JOB # **320-21562**  
 Sample # **8**

Client/Project:		VFR ID:	
Canister Serial #:	09578	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	5.33	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	23.01	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.32			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/13/16	14.73	24.15	4.32	LHS	7.08
09/14/16	13.30	19.52	7.08	ST	10.39
			10.39		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = <b>7.08</b>	<b>X</b>	Load DF = <b>0.3333333</b>	<b>X</b>	Bag DF = <b>1</b>	=	FINAL DF <b>2.359296607</b>
		LVf (mLs) <b>250</b>		BVf (mLs)		
		LVi (mLs) <b>750</b>		BVi (mLs)		
Canister DF = <b>7.08</b>	<b>X</b>	Load DF = <b>#DIV/0!</b>	<b>X</b>	Bag DF = <b>1</b>	=	FINAL DF <b>#DIV/0!</b>
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		
Canister DF = <b>7.08</b>	<b>X</b>	Load DF = <b>#DIV/0!</b>	<b>X</b>	Bag DF = <b>1</b>	=	FINAL DF <b>#DIV/0!</b>
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		



JOB # 320-21562  
 Sample # 9

Client/Project:		VFR ID:	
Canister Serial #:	09585	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	3.81	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	23.29	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	6.11			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/14/16	10.84	18.98	6.11	ST	10.70
			10.70		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors								
	Date	Instr.	File #					
Canister DF = <span style="border: 1px solid black; padding: 2px;">6.11</span> X	9/13/2016	MS7		=	FINAL DF	<span style="border: 1px solid black; padding: 2px;">2.037620297</span>		
					Load DF = <span style="border: 1px solid black; padding: 2px;">0.3333333</span> X			
					LVf (mLs) <span style="border: 1px solid black; padding: 2px;">250</span>	Bag DF = <span style="border: 1px solid black; padding: 2px;">1</span>		
					LVi (mLs) <span style="border: 1px solid black; padding: 2px;">750</span>	BVf (mLs) <span style="border: 1px solid black; padding: 2px;"></span>		
Canister DF = <span style="border: 1px solid black; padding: 2px;">6.11</span> X				=	FINAL DF	<span style="border: 1px solid black; padding: 2px;">#DIV/0!</span>		
					Load DF = <span style="border: 1px solid black; padding: 2px;">#DIV/0!</span> X			
					LVf (mLs) <span style="border: 1px solid black; padding: 2px;"></span>	Bag DF = <span style="border: 1px solid black; padding: 2px;">1</span>		
					LVi (mLs) <span style="border: 1px solid black; padding: 2px;"></span>	BVf (mLs) <span style="border: 1px solid black; padding: 2px;"></span>		
Canister DF = <span style="border: 1px solid black; padding: 2px;">6.11</span> X				=	FINAL DF	<span style="border: 1px solid black; padding: 2px;">#DIV/0!</span>		
					Load DF = <span style="border: 1px solid black; padding: 2px;">#DIV/0!</span> X			
					LVf (mLs) <span style="border: 1px solid black; padding: 2px;"></span>	Bag DF = <span style="border: 1px solid black; padding: 2px;">1</span>		
					LVi (mLs) <span style="border: 1px solid black; padding: 2px;"></span>	BVf (mLs) <span style="border: 1px solid black; padding: 2px;"></span>		



JOB # **320-21562**  
 Sample # **10**

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Client/Project:		VFR ID:	
Canister Serial #:	09748	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	3.86	09/08/16	LHS for Ky	
FINAL PRESSURE (PSIA)	22.86	09/08/16	LHS for Ky	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	5.92			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/13/16	14.24	21.75	5.92	ST	9.05
			9.05		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors									
	Date	Instr.	File #						
Canister DF = <b>9.05</b>	9/13/2016	MS7		X	Load DF = <b>1</b>	X	Bag DF = <b>1</b>	=	FINAL DF <b>9.045616959</b>
					LVf (mLs) <b>250</b>		BVf (mLs)		
					LVi (mLs) <b>250</b>		BVi (mLs)		
Canister DF = <b>9.05</b>	9/14/2016	ATG1		X	Load DF = <b>1</b>	X	Bag DF = <b>2</b>	=	FINAL DF <b>18.09123392</b>
					LVf (mLs) <b>1</b>		BVf (mLs) <b>2</b>		
					LVi (mLs) <b>1</b>		BVi (mLs) <b>1</b>		
Canister DF = <b>9.05</b>				X	Load DF = <b>#DIV/0!</b>	X	Bag DF = <b>1</b>	=	FINAL DF <b>#DIV/0!</b>
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		BVi (mLs)		

# Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21562-1

**Login Number: 21562**  
**List Number: 1**  
**Creator: Nelson, Kym D**

**List Source: TestAmerica Sacramento**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Certification Type TU15, SCLM  
 Date Cleaned/Batch ID 08/30/16 320-21376  
 Date of QC 9/1/16  
 Data File Number MS9083120.D

**CANISTER ID NUMBERS**

<u>34001715 *</u>	<u>10522</u>	
<u>10756</u>	<u>09814</u>	
<u>11286</u>	<u>09585</u>	
<u>10736</u>	<u>10605</u>	
<u>09578</u>	<u>09748</u>	
<u>10838</u>	<u>10338</u>	
<u>09634</u>	<u>10497</u>	
<u>10837</u>	<u>10918</u>	

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.**

[Signature]  
1<sup>st</sup> level Reviewed By:

9/2/16  
Date:

[Signature]  
2nd level Reviewed By:

9/6/16  
Date:

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

Lab Name: TestAmerica Sacramento Job No.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
 Analysis Method: TO-15 Date Collected: 08/30/2016 00:00  
 Sample wt/vol: 500 (mL) Date Analyzed: 09/01/2016 06:42  
 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.: 125222 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.21	J	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	ND		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	0.11
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.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
 Analysis Method: TO-15 Date Collected: 08/30/2016 00:00  
 Sample wt/vol: 500 (mL) Date Analyzed: 09/01/2016 06:42  
 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.: 125222 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	0.050
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	ND		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	0.079
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.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
 Analysis Method: TO-15 Date Collected: 08/30/2016 00:00  
 Sample wt/vol: 500 (mL) Date Analyzed: 09/01/2016 06:42  
 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.: 125222 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)	94		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento  
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\MS9083120.D  
 Lims ID: 320-21376-A-1  
 Client ID: 34001715  
 Sample Type: Client  
 Inject. Date: 01-Sep-2016 06:42:30 ALS Bottle#: 3 Worklist Smp#: 20  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 320-21376-A-1  
 Misc. Info.: 500  
 Operator ID: SV Instrument ID: ATMS9  
 Method: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\TO15\_ATMS9N.m  
 Limit Group: MSA - TO15 - ICAL  
 Last Update: 01-Sep-2016 11:06:30 Calib Date: 17-Aug-2016 21:33:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS9\20160817-33559.b\MS9081711.D  
 Column 1 : RTX Volatiles ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK008

First Level Reviewer: yangk Date: 01-Sep-2016 10:21:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	12.418	12.436	-0.018	97	35546	4.00	
* 2 1,4-Difluorobenzene	114	14.523	14.535	-0.012	96	153106	4.00	
* 3 Chlorobenzene-d5 (IS)	117	20.442	20.448	-0.006	89	133667	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.592	13.610	-0.018	99	55413	4.13	
\$ 5 Toluene-d8 (Surr)	100	17.686	17.698	-0.012	98	99246	3.86	
\$ 6 4-Bromofluorobenzene (Surr	174	22.364	22.364	0.000	90	80073	3.75	
31 Acetone	43	7.703	7.642	0.061	89	3202	0.2145	

Reagents:

VASUISIM\_00328 Amount Added: 50.00 Units: mL Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\MS9083120.D

Injection Date: 01-Sep-2016 06:42:30

Instrument ID: ATMS9

Operator ID: SV

Lims ID: 320-21376-A-1

Lab Sample ID: 320-21376-1

Worklist Smp#: 20

Client ID: 34001715

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

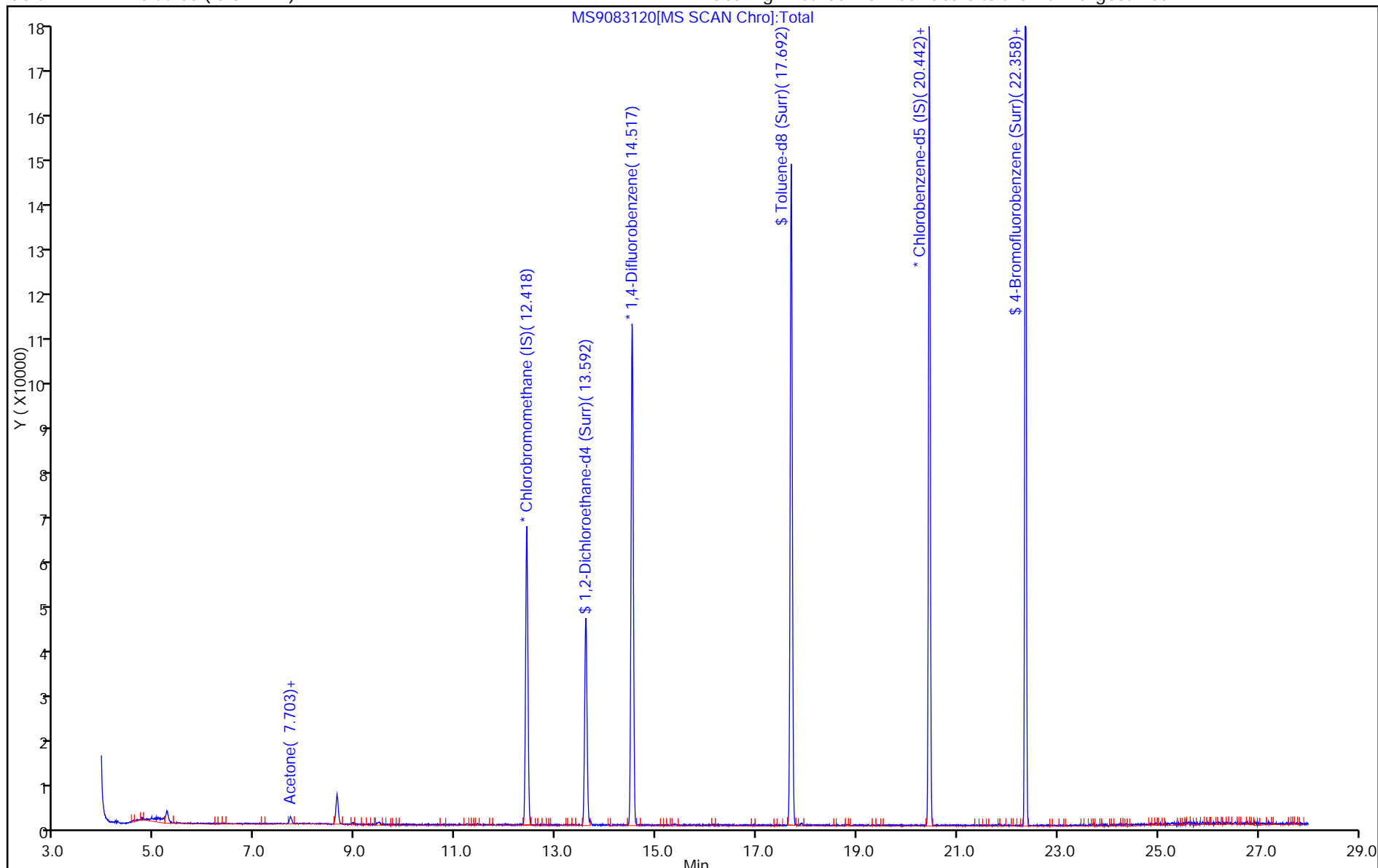
ALS Bottle#: 3

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\20160831-34080.b\MS9083120.D

Injection Date: 01-Sep-2016 06:42:30

Instrument ID: ATMS9

Lims ID: 320-21376-A-1

Lab Sample ID: 320-21376-1

Client ID: 34001715

Operator ID: SV

ALS Bottle#: 3 Worklist Smp#: 20

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

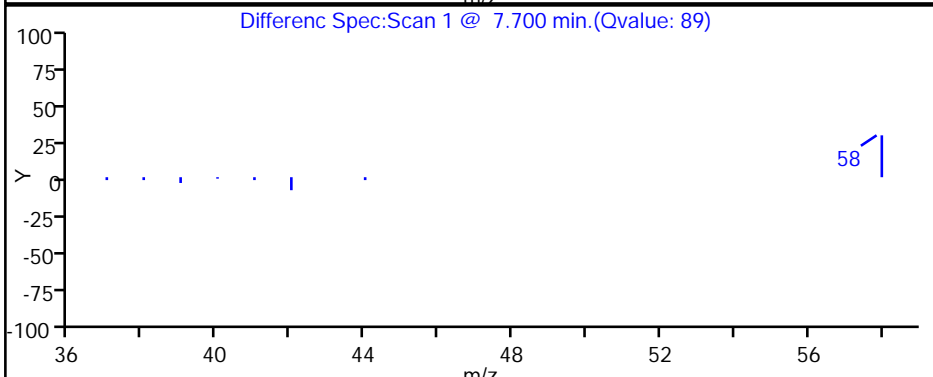
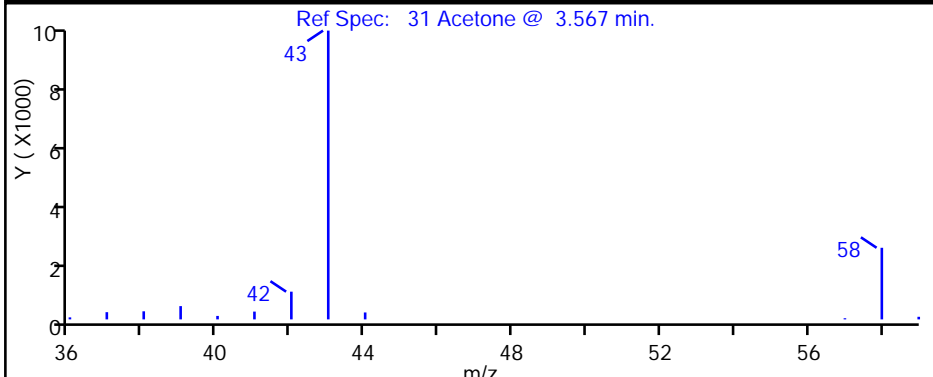
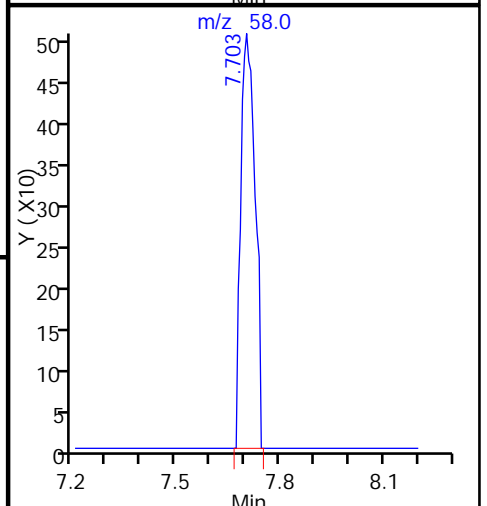
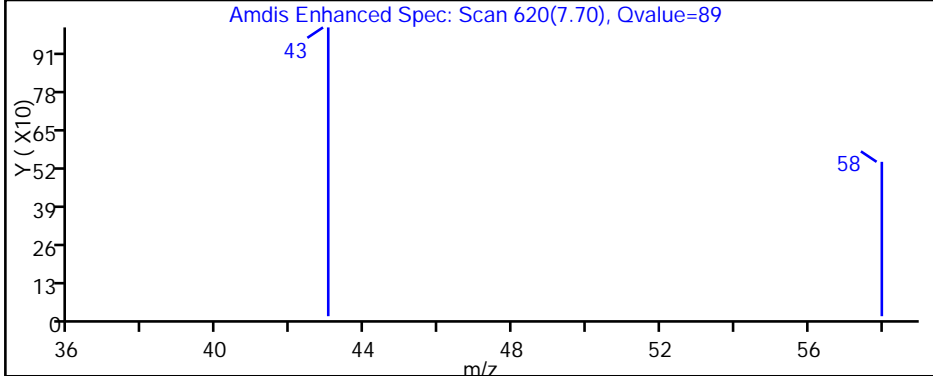
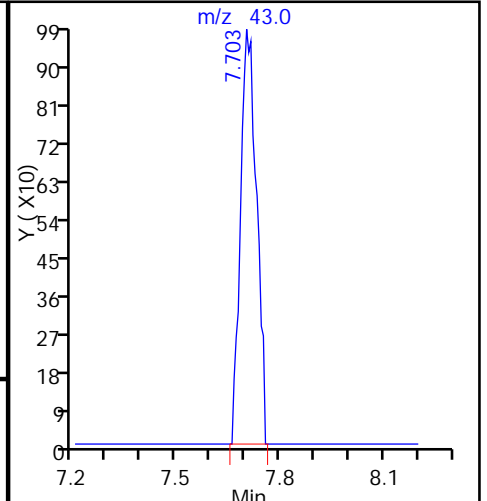
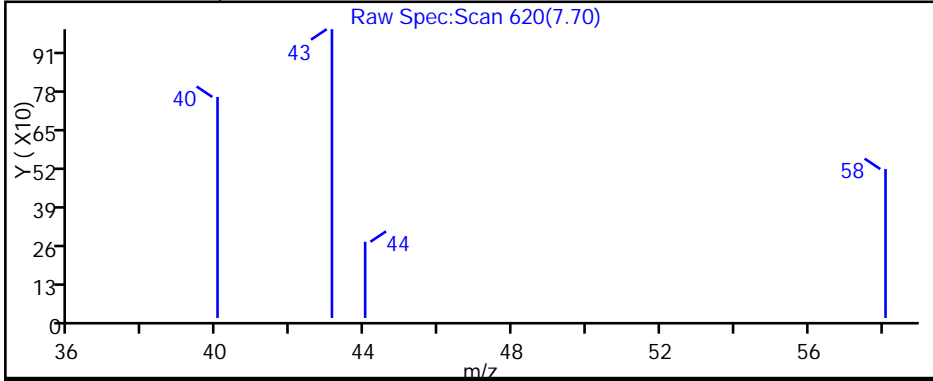
Method: TO15\_ATMS9N

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles ( 0.32 mm)

Detector: MS SCAN

31 Acetone, CAS: 67-64-1



# 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: 320-21688-1

Client Project/Site: 6701 Shellmound St, Emeryville Soil

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

Attn: Mr. Kyle Flory

*Beth Riley*

---

Authorized for release by:  
9/20/2016 8:12:35 AM

Beth Riley, Project Manager II  
(714)258-8610  
[beth.riley@testamericainc.com](mailto:beth.riley@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
*	LCS or LCSD is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)



# Case Narrative

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

---

**Job ID: 320-21688-1**

---

**Laboratory: TestAmerica Sacramento**

---

**Narrative**

**Job Narrative  
320-21688-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/13/2016 11:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

**GC/MS VOA**

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 720-209445 recovered outside control limits for the following analytes: 2-Butanone (MEK) and 2-Hexanone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for the following samples were outside control limits: SV67-5 (320-21688-1) and SV67-10 (320-21688-2). The samples were re-analyzed with concurring results, and the second sets of data have been reported.

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

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# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

## Client Sample ID: SV67-5

## Lab Sample ID: 320-21688-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	230		52		ug/Kg	1		8260B	Total/NA
Naphthalene	40	*	10		ug/Kg	1		8260B	Total/NA

## Client Sample ID: SV67-10

## Lab Sample ID: 320-21688-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	60		37		ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

**Client Sample ID: SV67-5**

**Date Collected: 09/12/16 13:25**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21688-1**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1,1-Trichloroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1,2,2-Tetrachloroethane	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1,2-Trichloroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1-Dichloroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1-Dichloroethene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,1-Dichloropropene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2,3-Trichlorobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2,3-Trichloropropane	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2,4-Trichlorobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2,4-Trimethylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2-Dibromo-3-Chloropropane	ND	*	10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2-Dichlorobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2-Dichloroethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,2-Dichloropropane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,3,5-Trimethylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,3-Dichlorobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,3-Dichloropropane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
1,4-Dichlorobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
2,2-Dichloropropane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
2-Butanone (MEK)	ND	*	52		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
2-Chlorotoluene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
2-Hexanone	ND	*	52		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
4-Chlorotoluene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
4-Isopropyltoluene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
4-Methyl-2-pentanone (MIBK)	ND		52		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
<b>Acetone</b>	<b>230</b>		52		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Benzene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Bromobenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Bromoform	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Bromomethane	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Carbon disulfide	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Carbon tetrachloride	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chlorobenzene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chlorobromomethane	ND		21		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chlorodibromomethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chloroethane	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chloroform	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Chloromethane	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
cis-1,2-Dichloroethene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
cis-1,3-Dichloropropene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Dibromomethane	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Dichlorobromomethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Ethylbenzene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Ethylene Dibromide	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Hexachlorobutadiene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Isopropylbenzene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

**Client Sample ID: SV67-5**

**Date Collected: 09/12/16 13:25**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21688-1**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Methylene Chloride	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
<b>Naphthalene</b>	<b>40</b>	<b>*</b>	10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
n-Butylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
N-Propylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
sec-Butylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Styrene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
tert-Butylbenzene	ND	*	5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Tetrachloroethene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Toluene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
trans-1,2-Dichloroethene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
trans-1,3-Dichloropropene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Trichloroethene	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Trichlorofluoromethane	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Vinyl acetate	ND		21		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Vinyl chloride	ND		5.2		ug/Kg		09/14/16 12:09	09/16/16 21:29	1
Xylenes, Total	ND		10		ug/Kg		09/14/16 12:09	09/16/16 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		60 - 140	09/14/16 12:09	09/16/16 21:29	1
4-Bromofluorobenzene	82		45 - 131	09/14/16 12:09	09/16/16 21:29	1
Toluene-d8 (Surr)	99		58 - 140	09/14/16 12:09	09/16/16 21:29	1

**Client Sample ID: SV67-10**

**Date Collected: 09/12/16 13:30**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21688-2**

**Matrix: Solid**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1,1-Trichloroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1,1,2-Tetrachloroethane	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1,2-Trichloroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1-Dichloroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1-Dichloroethene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,1-Dichloropropene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2,3-Trichlorobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2,3-Trichloropropane	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2,4-Trichlorobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2,4-Trimethylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2-Dibromo-3-Chloropropane	ND	*	7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2-Dichlorobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2-Dichloroethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,2-Dichloropropane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,3,5-Trimethylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,3-Dichlorobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,3-Dichloropropane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
1,4-Dichlorobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
2,2-Dichloropropane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21688-2**

**Date Collected: 09/12/16 13:30**

**Matrix: Solid**

**Date Received: 09/13/16 11:45**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND	*	37		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
2-Chlorotoluene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
2-Hexanone	ND	*	37		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
4-Chlorotoluene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
4-Isopropyltoluene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
4-Methyl-2-pentanone (MIBK)	ND		37		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
<b>Acetone</b>	<b>60</b>		37		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Benzene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Bromobenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Bromoform	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Bromomethane	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Carbon disulfide	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Carbon tetrachloride	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chlorobenzene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chlorobromomethane	ND		15		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chlorodibromomethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chloroethane	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chloroform	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Chloromethane	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
cis-1,2-Dichloroethene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
cis-1,3-Dichloropropene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Dibromomethane	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Dichlorobromomethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Dichlorodifluoromethane	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Ethylbenzene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Ethylene Dibromide	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Hexachlorobutadiene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Isopropylbenzene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Methyl tert-butyl ether	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Methylene Chloride	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Naphthalene	ND	*	7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
n-Butylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
N-Propylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
sec-Butylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Styrene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
tert-Butylbenzene	ND	*	3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Tetrachloroethene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Toluene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
trans-1,2-Dichloroethene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
trans-1,3-Dichloropropene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Trichloroethene	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Trichlorofluoromethane	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Vinyl acetate	ND		15		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Vinyl chloride	ND		3.7		ug/Kg		09/14/16 12:09	09/16/16 21:59	1
Xylenes, Total	ND		7.3		ug/Kg		09/14/16 12:09	09/16/16 21:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		60 - 140	09/14/16 12:09	09/16/16 21:59	1
4-Bromofluorobenzene	80		45 - 131	09/14/16 12:09	09/16/16 21:59	1
Toluene-d8 (Surr)	98		58 - 140	09/14/16 12:09	09/16/16 21:59	1

TestAmerica Sacramento

# Surrogate Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (60-140)	BFB (45-131)	TOL (58-140)
320-21688-1	SV67-5	111	82	99
320-21688-2	SV67-10	109	80	98
LCS 720-209445/5	Lab Control Sample	105	98	108
LCSD 720-209445/6	Lab Control Sample Dup	104	99	107
MB 720-209445/4	Method Blank	103	94	104

#### Surrogate Legend

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

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

**Lab Sample ID: MB 720-209445/4**  
**Matrix: Solid**  
**Analysis Batch: 209445**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1-Dichloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1-Dichloroethene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,1-Dichloropropene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			09/16/16 19:03	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2-Dichloroethane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,2-Dichloropropane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
1,3-Dichloropropane	ND		5.0		ug/Kg			09/16/16 19:03	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
2,2-Dichloropropane	ND		5.0		ug/Kg			09/16/16 19:03	1
2-Butanone (MEK)	ND		50		ug/Kg			09/16/16 19:03	1
2-Chlorotoluene	ND		5.0		ug/Kg			09/16/16 19:03	1
2-Hexanone	ND		50		ug/Kg			09/16/16 19:03	1
4-Chlorotoluene	ND		5.0		ug/Kg			09/16/16 19:03	1
4-Isopropyltoluene	ND		5.0		ug/Kg			09/16/16 19:03	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			09/16/16 19:03	1
Acetone	ND		50		ug/Kg			09/16/16 19:03	1
Benzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Bromobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Bromoform	ND		5.0		ug/Kg			09/16/16 19:03	1
Bromomethane	ND		10		ug/Kg			09/16/16 19:03	1
Carbon disulfide	ND		5.0		ug/Kg			09/16/16 19:03	1
Carbon tetrachloride	ND		5.0		ug/Kg			09/16/16 19:03	1
Chlorobenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Chlorobromomethane	ND		20		ug/Kg			09/16/16 19:03	1
Chlorodibromomethane	ND		5.0		ug/Kg			09/16/16 19:03	1
Chloroethane	ND		10		ug/Kg			09/16/16 19:03	1
Chloroform	ND		5.0		ug/Kg			09/16/16 19:03	1
Chloromethane	ND		10		ug/Kg			09/16/16 19:03	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			09/16/16 19:03	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			09/16/16 19:03	1
Dibromomethane	ND		10		ug/Kg			09/16/16 19:03	1
Dichlorobromomethane	ND		5.0		ug/Kg			09/16/16 19:03	1
Dichlorodifluoromethane	ND		10		ug/Kg			09/16/16 19:03	1
Ethylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Ethylene Dibromide	ND		5.0		ug/Kg			09/16/16 19:03	1
Hexachlorobutadiene	ND		5.0		ug/Kg			09/16/16 19:03	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

**Lab Sample ID: MB 720-209445/4**  
**Matrix: Solid**  
**Analysis Batch: 209445**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Methyl tert-butyl ether	ND		5.0		ug/Kg			09/16/16 19:03	1
Methylene Chloride	ND		10		ug/Kg			09/16/16 19:03	1
Naphthalene	ND		10		ug/Kg			09/16/16 19:03	1
n-Butylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
N-Propylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
sec-Butylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Styrene	ND		5.0		ug/Kg			09/16/16 19:03	1
tert-Butylbenzene	ND		5.0		ug/Kg			09/16/16 19:03	1
Tetrachloroethene	ND		5.0		ug/Kg			09/16/16 19:03	1
Toluene	ND		5.0		ug/Kg			09/16/16 19:03	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			09/16/16 19:03	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			09/16/16 19:03	1
Trichloroethene	ND		5.0		ug/Kg			09/16/16 19:03	1
Trichlorofluoromethane	ND		5.0		ug/Kg			09/16/16 19:03	1
Vinyl acetate	ND		20		ug/Kg			09/16/16 19:03	1
Vinyl chloride	ND		5.0		ug/Kg			09/16/16 19:03	1
Xylenes, Total	ND		10		ug/Kg			09/16/16 19:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		60 - 140		09/16/16 19:03	1
4-Bromofluorobenzene	94		45 - 131		09/16/16 19:03	1
Toluene-d8 (Surr)	104		58 - 140		09/16/16 19:03	1

**Lab Sample ID: LCS 720-209445/5**  
**Matrix: Solid**  
**Analysis Batch: 209445**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	52.8		ug/Kg		106	70 - 130
1,1,1-Trichloroethane	50.0	57.6		ug/Kg		115	70 - 130
1,1,1,2-Tetrachloroethane	50.0	52.7		ug/Kg		105	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	62.4		ug/Kg		125	60 - 140
1,1,2-Trichloroethane	50.0	57.2		ug/Kg		114	70 - 130
1,1-Dichloroethane	50.0	53.8		ug/Kg		108	70 - 130
1,1-Dichloroethene	50.0	57.5		ug/Kg		115	74 - 122
1,1-Dichloropropene	50.0	56.0		ug/Kg		112	70 - 130
1,2,3-Trichlorobenzene	50.0	58.1		ug/Kg		116	60 - 140
1,2,3-Trichloropropane	50.0	55.1		ug/Kg		110	70 - 146
1,2,4-Trichlorobenzene	50.0	57.6		ug/Kg		115	60 - 140
1,2,4-Trimethylbenzene	50.0	52.1		ug/Kg		104	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	62.4		ug/Kg		125	60 - 145
1,2-Dichlorobenzene	50.0	51.3		ug/Kg		103	70 - 130
1,2-Dichloroethane	50.0	54.6		ug/Kg		109	70 - 130
1,2-Dichloropropane	50.0	54.4		ug/Kg		109	73 - 127
1,3,5-Trimethylbenzene	50.0	52.2		ug/Kg		104	70 - 131
1,3-Dichlorobenzene	50.0	51.7		ug/Kg		103	70 - 131

TestAmerica Sacramento



# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

**Lab Sample ID: LCS 720-209445/5**  
**Matrix: Solid**  
**Analysis Batch: 209445**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	50.0	56.8		ug/Kg		114	70 - 140
1,4-Dichlorobenzene	50.0	51.0		ug/Kg		102	70 - 130
2,2-Dichloropropane	50.0	60.5		ug/Kg		121	70 - 162
2-Butanone (MEK)	250	340	*	ug/Kg		136	53 - 133
2-Chlorotoluene	50.0	50.2		ug/Kg		100	70 - 138
2-Hexanone	250	325		ug/Kg		130	44 - 133
4-Chlorotoluene	50.0	50.7		ug/Kg		101	70 - 136
4-Isopropyltoluene	50.0	52.1		ug/Kg		104	70 - 133
4-Methyl-2-pentanone (MIBK)	250	323		ug/Kg		129	60 - 160
Acetone	250	304		ug/Kg		122	30 - 162
Benzene	50.0	55.9		ug/Kg		112	70 - 130
Bromobenzene	50.0	52.6		ug/Kg		105	70 - 130
Bromoform	50.0	59.5		ug/Kg		119	59 - 158
Bromomethane	50.0	55.7		ug/Kg		111	59 - 132
Carbon disulfide	50.0	63.0		ug/Kg		126	60 - 140
Carbon tetrachloride	50.0	59.1		ug/Kg		118	70 - 142
Chlorobenzene	50.0	52.2		ug/Kg		104	70 - 130
Chlorobromomethane	50.0	59.0		ug/Kg		118	70 - 130
Chlorodibromomethane	50.0	61.8		ug/Kg		124	70 - 146
Chloroethane	50.0	56.2		ug/Kg		112	65 - 130
Chloroform	50.0	55.4		ug/Kg		111	77 - 127
Chloromethane	50.0	50.4		ug/Kg		101	55 - 140
cis-1,2-Dichloroethene	50.0	53.8		ug/Kg		108	70 - 138
cis-1,3-Dichloropropene	50.0	59.4		ug/Kg		119	68 - 147
Dibromomethane	50.0	58.0		ug/Kg		116	70 - 139
Dichlorobromomethane	50.0	57.7		ug/Kg		115	70 - 140
Dichlorodifluoromethane	50.0	55.5		ug/Kg		111	37 - 158
Ethylbenzene	50.0	51.7		ug/Kg		103	80 - 137
Ethylene Dibromide	50.0	64.0		ug/Kg		128	70 - 140
Hexachlorobutadiene	50.0	59.3		ug/Kg		119	70 - 132
Isopropylbenzene	50.0	55.7		ug/Kg		111	70 - 130
Methyl tert-butyl ether	50.0	59.9		ug/Kg		120	70 - 144
Methylene Chloride	50.0	59.2		ug/Kg		118	70 - 134
m-Xylene & p-Xylene	50.0	52.2		ug/Kg		104	70 - 146
Naphthalene	50.0	60.1		ug/Kg		120	60 - 147
n-Butylbenzene	50.0	51.2		ug/Kg		102	70 - 142
N-Propylbenzene	50.0	53.1		ug/Kg		106	70 - 130
o-Xylene	50.0	51.4		ug/Kg		103	70 - 140
sec-Butylbenzene	50.0	53.6		ug/Kg		107	70 - 136
Styrene	50.0	54.8		ug/Kg		110	70 - 130
tert-Butylbenzene	50.0	53.5		ug/Kg		107	70 - 130
Tetrachloroethene	50.0	60.1		ug/Kg		120	70 - 132
Toluene	50.0	50.8		ug/Kg		102	75 - 120
trans-1,2-Dichloroethene	50.0	57.6		ug/Kg		115	67 - 130
trans-1,3-Dichloropropene	50.0	60.2		ug/Kg		120	70 - 155
Trichloroethene	50.0	58.2		ug/Kg		116	70 - 133
Trichlorofluoromethane	50.0	62.8		ug/Kg		126	60 - 140
Vinyl acetate	50.0	62.7		ug/Kg		125	38 - 176

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

**Lab Sample ID: LCS 720-209445/5**

**Matrix: Solid**

**Analysis Batch: 209445**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	50.0	55.0		ug/Kg		110	58 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		60 - 140
4-Bromofluorobenzene	98		45 - 131
Toluene-d8 (Surr)	108		58 - 140

**Lab Sample ID: LCSD 720-209445/6**

**Matrix: Solid**

**Analysis Batch: 209445**

**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
1,1,1,2-Tetrachloroethane	50.0	53.1		ug/Kg		106	70 - 130	1	20
1,1,1-Trichloroethane	50.0	57.4		ug/Kg		115	70 - 130	0	20
1,1,1,2,2-Tetrachloroethane	50.0	53.0		ug/Kg		106	70 - 146	1	20
1,1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	62.9		ug/Kg		126	60 - 140	1	20
1,1,2-Trichloroethane	50.0	58.5		ug/Kg		117	70 - 130	2	20
1,1-Dichloroethane	50.0	53.7		ug/Kg		107	70 - 130	0	20
1,1-Dichloroethene	50.0	57.3		ug/Kg		115	74 - 122	0	20
1,1-Dichloropropene	50.0	55.6		ug/Kg		111	70 - 130	1	20
1,2,3-Trichlorobenzene	50.0	60.8		ug/Kg		122	60 - 140	5	20
1,2,3-Trichloropropane	50.0	56.4		ug/Kg		113	70 - 146	2	20
1,2,4-Trichlorobenzene	50.0	60.2		ug/Kg		120	60 - 140	4	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/Kg		104	70 - 130	0	20
1,2-Dibromo-3-Chloropropane	50.0	63.2		ug/Kg		126	60 - 145	1	20
1,2-Dichlorobenzene	50.0	52.0		ug/Kg		104	70 - 130	1	20
1,2-Dichloroethane	50.0	54.8		ug/Kg		110	70 - 130	0	20
1,2-Dichloropropane	50.0	55.5		ug/Kg		111	73 - 127	2	20
1,3,5-Trimethylbenzene	50.0	51.6		ug/Kg		103	70 - 131	1	20
1,3-Dichlorobenzene	50.0	51.5		ug/Kg		103	70 - 131	0	20
1,3-Dichloropropane	50.0	58.1		ug/Kg		116	70 - 140	2	20
1,4-Dichlorobenzene	50.0	51.1		ug/Kg		102	70 - 130	0	20
2,2-Dichloropropane	50.0	59.6		ug/Kg		119	70 - 162	2	20
2-Butanone (MEK)	250	364	*	ug/Kg		146	53 - 133	7	20
2-Chlorotoluene	50.0	49.1		ug/Kg		98	70 - 138	2	20
2-Hexanone	250	340	*	ug/Kg		136	44 - 133	5	20
4-Chlorotoluene	50.0	50.4		ug/Kg		101	70 - 136	1	20
4-Isopropyltoluene	50.0	51.9		ug/Kg		104	70 - 133	0	20
4-Methyl-2-pentanone (MIBK)	250	337		ug/Kg		135	60 - 160	4	20
Acetone	250	369		ug/Kg		147	30 - 162	19	30
Benzene	50.0	55.6		ug/Kg		111	70 - 130	1	20
Bromobenzene	50.0	51.8		ug/Kg		104	70 - 130	1	20
Bromoform	50.0	60.4		ug/Kg		121	59 - 158	2	20
Bromomethane	50.0	56.5		ug/Kg		113	59 - 132	1	20
Carbon disulfide	50.0	62.4		ug/Kg		125	60 - 140	1	20
Carbon tetrachloride	50.0	58.1		ug/Kg		116	70 - 142	2	20
Chlorobenzene	50.0	52.1		ug/Kg		104	70 - 130	0	20

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

**Lab Sample ID: LCSD 720-209445/6**  
**Matrix: Solid**  
**Analysis Batch: 209445**

**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
Chlorobromomethane	50.0	59.8		ug/Kg		120	70 - 130	1	20
Chlorodibromomethane	50.0	62.4		ug/Kg		125	70 - 146	1	20
Chloroethane	50.0	55.7		ug/Kg		111	65 - 130	1	20
Chloroform	50.0	55.1		ug/Kg		110	77 - 127	0	20
Chloromethane	50.0	50.7		ug/Kg		101	55 - 140	1	20
cis-1,2-Dichloroethene	50.0	53.7		ug/Kg		107	70 - 138	0	20
cis-1,3-Dichloropropene	50.0	59.9		ug/Kg		120	68 - 147	1	20
Dibromomethane	50.0	58.3		ug/Kg		117	70 - 139	0	20
Dichlorobromomethane	50.0	58.6		ug/Kg		117	70 - 140	1	20
Dichlorodifluoromethane	50.0	55.4		ug/Kg		111	37 - 158	0	20
Ethylbenzene	50.0	51.5		ug/Kg		103	80 - 137	0	20
Ethylene Dibromide	50.0	64.8		ug/Kg		130	70 - 140	1	20
Hexachlorobutadiene	50.0	60.8		ug/Kg		122	70 - 132	3	20
Isopropylbenzene	50.0	55.4		ug/Kg		111	70 - 130	1	20
Methyl tert-butyl ether	50.0	62.1		ug/Kg		124	70 - 144	4	20
Methylene Chloride	50.0	59.3		ug/Kg		119	70 - 134	0	20
m-Xylene & p-Xylene	50.0	51.9		ug/Kg		104	70 - 146	1	20
Naphthalene	50.0	63.1		ug/Kg		126	60 - 147	5	20
n-Butylbenzene	50.0	51.5		ug/Kg		103	70 - 142	1	20
N-Propylbenzene	50.0	52.4		ug/Kg		105	70 - 130	1	20
o-Xylene	50.0	51.5		ug/Kg		103	70 - 140	0	20
sec-Butylbenzene	50.0	52.7		ug/Kg		105	70 - 136	2	20
Styrene	50.0	55.1		ug/Kg		110	70 - 130	0	20
tert-Butylbenzene	50.0	52.3		ug/Kg		105	70 - 130	2	20
Tetrachloroethene	50.0	59.8		ug/Kg		120	70 - 132	0	20
Toluene	50.0	50.4		ug/Kg		101	75 - 120	1	20
trans-1,2-Dichloroethene	50.0	57.4		ug/Kg		115	67 - 130	0	20
trans-1,3-Dichloropropene	50.0	60.9		ug/Kg		122	70 - 155	1	20
Trichloroethene	50.0	57.5		ug/Kg		115	70 - 133	1	20
Trichlorofluoromethane	50.0	62.8		ug/Kg		126	60 - 140	0	20
Vinyl acetate	50.0	65.4		ug/Kg		131	38 - 176	4	20
Vinyl chloride	50.0	54.9		ug/Kg		110	58 - 125	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	104		60 - 140
4-Bromofluorobenzene	99		45 - 131
Toluene-d8 (Surr)	107		58 - 140

# QC Association Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

## GC/MS VOA

### Prep Batch: 209253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21688-1	SV67-5	Total/NA	Solid	5035	
320-21688-2	SV67-10	Total/NA	Solid	5035	

### Analysis Batch: 209445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21688-1	SV67-5	Total/NA	Solid	8260B	209253
320-21688-2	SV67-10	Total/NA	Solid	8260B	209253
MB 720-209445/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-209445/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-209445/6	Lab Control Sample Dup	Total/NA	Solid	8260B	

# Lab Chronicle

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

**Client Sample ID: SV67-5**

**Date Collected: 09/12/16 13:25**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21688-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.816 g	10 mL	209253	09/14/16 12:09	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209445	09/16/16 21:29	LPL	TAL PLS

**Client Sample ID: SV67-10**

**Date Collected: 09/12/16 13:30**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21688-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.827 g	10 mL	209253	09/14/16 12:09	JRM	TAL PLS
Total/NA	Analysis	8260B		1	10 mL	10 mL	209445	09/16/16 21:59	LPL	TAL PLS

## Laboratory References:

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

# Certification Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

## Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4040	01-29-17

## Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-18

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# Method Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

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

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**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: 6701 Shellmound St, Emeryville Soil

TestAmerica Job ID: 320-21688-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-21688-1	SV67-5	Solid	09/12/16 13:25	09/13/16 11:45
320-21688-2	SV67-10	Solid	09/12/16 13:30	09/13/16 11:45

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**PES Environmental, Inc.**  
Engineering & Environmental Services

# CHAIN OF CUSTODY RECORD

1682 Novato Boulevard, Suite 100  
Novato, California 94947  
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Test America  
JOB NUMBER: 1448.001.01.036  
NAME / LOCATION: Shellmound Street  
PROJECT MANAGER: Chris Baldassari

SAMPLERS: Greg George  
RECORDER: Greg George

YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION
16	09	12	1325	SV67-5
16	09	12	1330	SV67-10

MATRIX	# of Containers & Preservatives						DEPTH IN FEET											
	Vapor	Water	Soil	Sedim't	Unpres.	En Core		H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	UPBd	Mech						
X																		
X																		

ANALYSIS REQUESTED	DATE	TIME
EPA 5035/8010		
EPA 5035/8021		
EPA 5035/8260B		
TPHg by 5035/8015M		
TPHd by 8015M		
TPHmo by 8015M		
EPA 8270C		
MNA Parameters (see notes)		
VOCs 8260B		
RTEC 8260B		
MEK 8260B		
MIBK 8260B		
Kuphtolins 8260B		



320-21688 Chain of Custody

NOTES

Turn Around Time: 5TA7

Page 1 of 1

RELINQUISHED BY: (Signature)	DATE	TIME
<u>W. P. Long</u>	<u>9/13/16</u>	<u>145</u>
RECEIVED BY: (Signature)	DATE	TIME
<u>W. P. Long</u>	<u>9/13/16</u>	<u>145</u>
RECEIVED BY: (Signature)	DATE	TIME
RECEIVED BY: (Signature)	DATE	TIME
RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:		



880 Riverside Parkway  
West Sacramento, CA 95605  
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record



Client Information (Sub Contract Lab)

Company: TestAmerica Laboratories, Inc.  
Address: 1220 Quarry Lane,  
City: Pleasanton  
State, Zip: CA, 94566  
Phone: 925-484-1919(Tel) 925-600-3002(Fax)  
Email: 6701 Shellmound St, Emeryville Soil

Lab P.M.: Riley, Beth  
E-Mail: betn.riley@testamericainc.com

Carrier Tracking No(s):

COCC No: 320-21688-1  
Page: 1 of 1

Job #: 320-21688-1  
Page 1 of 1

Due Date Requested: 9/19/2016  
TAT Requested (days):

Analysis Requested

Preservation Codes:

Special Instructions/Note:

Project Name: 6701 Shellmound St, Emeryville Soil  
Site: SSOV#

Project #: 32007196  
WOC #:  
PO #:

Field Filtered Sample (Yes or No)  
Perform MS/MSD (Yes or No)

8280B\_LL/6030B\_SolidNAC (MOD) VOCs, Standard List

- A - HCL
- B - NaOH
- C - Zn Acetate
- D - Nitric Acid
- E - NaHSO4
- F - NaOH
- G - Amchlor
- H - Ascorbic Acid
- I - Ice
- J - DI Water
- K - EDTA
- L - EDA
- M - Hexane
- N - None
- O - AsnAO2
- P - Na2CO3
- Q - Na2SO3
- R - Na2S2O3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4.5
- Z - other (specify)

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=organic, BT=issue, AA=)	Preservation Code
SV67-5 (320-21688-1)	9/12/16	13:25 Pacific		Solid	
SV67-10 (320-21688-2)	9/12/16	13:30 Pacific		Solid	

Total Number of containers

3

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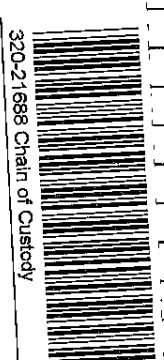
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Possible Hazard Identification

Deliverable Requested: I, II, III, IV, Other (specify)  
Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Empty Kit Relinquished by:

Date/Time: 9-15-16 1630

Company: STANCO

Received by: Steve Weber

Date/Time: 9/14/16 10:30

Company: STANCO

Relinquished by: [Signature]

Date/Time: 9-15-16 1630

Company: STANCO

Received by: Steve Weber

Date/Time: 9/14/16 10:30

Company: STANCO

Custody Seals Intact: A Yes A No

Custody Seal No.:

Date/Time:

Company:

Received by:

Cooler Temperature(s) °C and Other Remarks:

Date/Time:

Company:

## Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21688-1

**Login Number: 21688**

**List Source: TestAmerica Sacramento**

**List Number: 1**

**Creator: Hytrek, Cheryl**

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.	True	
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	

# Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21688-1

**Login Number: 21688**

**List Number: 2**

**Creator: Mullen, Joan**

**List Source: TestAmerica Pleasanton**

**List Creation: 09/14/16 11:52 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (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 Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

TestAmerica Job ID: 320-21714-1  
Client Project/Site: 6701 Shellmound St, Emeryville Air

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

Attn: Mr. Kyle Flory



Authorized for release by:  
9/23/2016 3:18:40 PM  
Aurora Contreras, Project Management Assistant I  
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Designee for  
Beth Riley, Project Manager II  
(714)258-8610  
[beth.riley@testamericainc.com](mailto:beth.riley@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Qualifiers

### Air - GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
E	Result exceeded calibration range.

## 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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

# Case Narrative

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

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**Job ID: 320-21714-1**

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**Laboratory: TestAmerica Sacramento**

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**Narrative**

**Job Narrative  
320-21714-1**

**Receipt**

The samples were received on 9/13/2016 11:45 AM; the samples 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**

Method(s) D1946: The canister for samples 320-21714-A-1 was received at -19.95  $\mu\text{g}$  and sample 320-21714-A-2 was received at -20.54  $\mu\text{g}$  which are insufficient sample volumes and may require pressurization greater than the SOP stipulates. Per client, analyses was processed.

Method(s) TO-15: Surrogate recovery for the following sample was outside control limits: SV67-5 (320-21714-1). High concentration of target analytes are present, sample is analyzed at a dilution.

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

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# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	44		25		ppb v/v	4.98		TO-15	Total/NA
Benzene	1000	E	2.0		ppb v/v	4.98		TO-15	Total/NA
2-Butanone (MEK)	5.0		4.0		ppb v/v	4.98		TO-15	Total/NA
1,1-Dichloroethane	3.7		1.5		ppb v/v	4.98		TO-15	Total/NA
1,2-Dichloroethane	4.5		4.0		ppb v/v	4.98		TO-15	Total/NA
Ethylbenzene	400	E	2.0		ppb v/v	4.98		TO-15	Total/NA
4-Ethyltoluene	37		2.0		ppb v/v	4.98		TO-15	Total/NA
Toluene	1000	E	2.0		ppb v/v	4.98		TO-15	Total/NA
Trichloroethene	9.3		2.0		ppb v/v	4.98		TO-15	Total/NA
1,2,4-Trimethylbenzene	63		4.0		ppb v/v	4.98		TO-15	Total/NA
1,3,5-Trimethylbenzene	35		2.0		ppb v/v	4.98		TO-15	Total/NA
m,p-Xylene	730	E	4.0		ppb v/v	4.98		TO-15	Total/NA
o-Xylene	160		2.0		ppb v/v	4.98		TO-15	Total/NA
Benzene - DL	1200		12		ppb v/v	30.8		TO-15	Total/NA
Ethylbenzene - DL	450		12		ppb v/v	30.8		TO-15	Total/NA
4-Ethyltoluene - DL	39		12		ppb v/v	30.8		TO-15	Total/NA
Toluene - DL	1300		12		ppb v/v	30.8		TO-15	Total/NA
1,2,4-Trimethylbenzene - DL	66		25		ppb v/v	30.8		TO-15	Total/NA
1,3,5-Trimethylbenzene - DL	36		12		ppb v/v	30.8		TO-15	Total/NA
m,p-Xylene - DL	890		25		ppb v/v	30.8		TO-15	Total/NA
o-Xylene - DL	170		12		ppb v/v	30.8		TO-15	Total/NA
Oxygen	20		0.81		% v/v	4.06		D1946	Total/NA
Methane (FID)	0.00091		0.00041		% v/v	4.06		D1946	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	100		59		ug/m3	4.98		TO-15	Total/NA
Benzene	3200	E	6.4		ug/m3	4.98		TO-15	Total/NA
2-Butanone (MEK)	15		12		ug/m3	4.98		TO-15	Total/NA
1,1-Dichloroethane	15		6.0		ug/m3	4.98		TO-15	Total/NA
1,2-Dichloroethane	18		16		ug/m3	4.98		TO-15	Total/NA
Ethylbenzene	1700	E	8.6		ug/m3	4.98		TO-15	Total/NA
4-Ethyltoluene	180		9.8		ug/m3	4.98		TO-15	Total/NA
Toluene	3900	E	7.5		ug/m3	4.98		TO-15	Total/NA
Trichloroethene	50		11		ug/m3	4.98		TO-15	Total/NA
1,2,4-Trimethylbenzene	310		20		ug/m3	4.98		TO-15	Total/NA
1,3,5-Trimethylbenzene	170		9.8		ug/m3	4.98		TO-15	Total/NA
m,p-Xylene	3200	E	17		ug/m3	4.98		TO-15	Total/NA
o-Xylene	690		8.6		ug/m3	4.98		TO-15	Total/NA
Benzene - DL	3900		39		ug/m3	30.8		TO-15	Total/NA
Ethylbenzene - DL	1900		53		ug/m3	30.8		TO-15	Total/NA
4-Ethyltoluene - DL	190		61		ug/m3	30.8		TO-15	Total/NA
Toluene - DL	4700		46		ug/m3	30.8		TO-15	Total/NA
1,2,4-Trimethylbenzene - DL	320		120		ug/m3	30.8		TO-15	Total/NA
1,3,5-Trimethylbenzene - DL	180		61		ug/m3	30.8		TO-15	Total/NA
m,p-Xylene - DL	3900		110		ug/m3	30.8		TO-15	Total/NA
o-Xylene - DL	760		53		ug/m3	30.8		TO-15	Total/NA

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21714-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		2.0		ppb v/v	4.97		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Detection Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-10 (Continued)**

**Lab Sample ID: 320-21714-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Helium	0.71		0.42		% v/v	4.24		D1946	Total/NA
Oxygen	20		0.85		% v/v	4.24		D1946	Total/NA
Methane (FID)	0.043		0.00042		% v/v	4.24		D1946	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.5		6.4		ug/m3	4.97		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

**Date Collected: 09/12/16 15:25**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>44</b>		25		ppb v/v			09/21/16 05:14	4.98
<b>Benzene</b>	<b>1000</b>	<b>E</b>	2.0		ppb v/v			09/21/16 05:14	4.98
Benzyl chloride	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Bromodichloromethane	ND		1.5		ppb v/v			09/21/16 05:14	4.98
Bromoform	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Bromomethane	ND		4.0		ppb v/v			09/21/16 05:14	4.98
<b>2-Butanone (MEK)</b>	<b>5.0</b>		4.0		ppb v/v			09/21/16 05:14	4.98
Carbon disulfide	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Carbon tetrachloride	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Chlorobenzene	ND		1.5		ppb v/v			09/21/16 05:14	4.98
Dibromochloromethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Chloroethane	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Chloroform	ND		1.5		ppb v/v			09/21/16 05:14	4.98
Chloromethane	ND		4.0		ppb v/v			09/21/16 05:14	4.98
1,2-Dibromoethane (EDB)	ND		4.0		ppb v/v			09/21/16 05:14	4.98
1,2-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,3-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,4-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Dichlorodifluoromethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>1,1-Dichloroethane</b>	<b>3.7</b>		1.5		ppb v/v			09/21/16 05:14	4.98
<b>1,2-Dichloroethane</b>	<b>4.5</b>		4.0		ppb v/v			09/21/16 05:14	4.98
1,1-Dichloroethene	ND		4.0		ppb v/v			09/21/16 05:14	4.98
cis-1,2-Dichloroethene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
trans-1,2-Dichloroethene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,2-Dichloropropane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
cis-1,3-Dichloropropene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
trans-1,3-Dichloropropene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>Ethylbenzene</b>	<b>400</b>	<b>E</b>	2.0		ppb v/v			09/21/16 05:14	4.98
<b>4-Ethyltoluene</b>	<b>37</b>		2.0		ppb v/v			09/21/16 05:14	4.98
Hexachlorobutadiene	ND		10		ppb v/v			09/21/16 05:14	4.98
2-Hexanone	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Methylene Chloride	ND		2.0		ppb v/v			09/21/16 05:14	4.98
4-Methyl-2-pentanone (MIBK)	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Styrene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,1,2,2-Tetrachloroethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
Tetrachloroethene	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>Toluene</b>	<b>1000</b>	<b>E</b>	2.0		ppb v/v			09/21/16 05:14	4.98
1,2,4-Trichlorobenzene	ND		10		ppb v/v			09/21/16 05:14	4.98
1,1,1-Trichloroethane	ND		1.5		ppb v/v			09/21/16 05:14	4.98
1,1,2-Trichloroethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>Trichloroethene</b>	<b>9.3</b>		2.0		ppb v/v			09/21/16 05:14	4.98
1,4-Dioxane	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Trichlorofluoromethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>1,2,4-Trimethylbenzene</b>	<b>63</b>		4.0		ppb v/v			09/21/16 05:14	4.98
<b>1,3,5-Trimethylbenzene</b>	<b>35</b>		2.0		ppb v/v			09/21/16 05:14	4.98
Vinyl acetate	ND		4.0		ppb v/v			09/21/16 05:14	4.98

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

**Date Collected: 09/12/16 15:25**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		2.0		ppb v/v			09/21/16 05:14	4.98
<b>m,p-Xylene</b>	<b>730</b>	<b>E</b>	4.0		ppb v/v			09/21/16 05:14	4.98
<b>o-Xylene</b>	<b>160</b>		2.0		ppb v/v			09/21/16 05:14	4.98
Naphthalene	ND		4.0		ppb v/v			09/21/16 05:14	4.98
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>100</b>		59		ug/m3			09/21/16 05:14	4.98
<b>Benzene</b>	<b>3200</b>	<b>E</b>	6.4		ug/m3			09/21/16 05:14	4.98
Benzyl chloride	ND		21		ug/m3			09/21/16 05:14	4.98
Bromodichloromethane	ND		10		ug/m3			09/21/16 05:14	4.98
Bromoform	ND		21		ug/m3			09/21/16 05:14	4.98
Bromomethane	ND		15		ug/m3			09/21/16 05:14	4.98
<b>2-Butanone (MEK)</b>	<b>15</b>		12		ug/m3			09/21/16 05:14	4.98
Carbon disulfide	ND		12		ug/m3			09/21/16 05:14	4.98
Carbon tetrachloride	ND		25		ug/m3			09/21/16 05:14	4.98
Chlorobenzene	ND		6.9		ug/m3			09/21/16 05:14	4.98
Dibromochloromethane	ND		17		ug/m3			09/21/16 05:14	4.98
Chloroethane	ND		11		ug/m3			09/21/16 05:14	4.98
Chloroform	ND		7.3		ug/m3			09/21/16 05:14	4.98
Chloromethane	ND		8.2		ug/m3			09/21/16 05:14	4.98
1,2-Dibromoethane (EDB)	ND		31		ug/m3			09/21/16 05:14	4.98
1,2-Dichlorobenzene	ND		12		ug/m3			09/21/16 05:14	4.98
1,3-Dichlorobenzene	ND		12		ug/m3			09/21/16 05:14	4.98
1,4-Dichlorobenzene	ND		12		ug/m3			09/21/16 05:14	4.98
Dichlorodifluoromethane	ND		9.9		ug/m3			09/21/16 05:14	4.98
<b>1,1-Dichloroethane</b>	<b>15</b>		6.0		ug/m3			09/21/16 05:14	4.98
<b>1,2-Dichloroethane</b>	<b>18</b>		16		ug/m3			09/21/16 05:14	4.98
1,1-Dichloroethene	ND		16		ug/m3			09/21/16 05:14	4.98
cis-1,2-Dichloroethene	ND		7.9		ug/m3			09/21/16 05:14	4.98
trans-1,2-Dichloroethene	ND		7.9		ug/m3			09/21/16 05:14	4.98
1,2-Dichloropropane	ND		9.2		ug/m3			09/21/16 05:14	4.98
cis-1,3-Dichloropropene	ND		9.0		ug/m3			09/21/16 05:14	4.98
trans-1,3-Dichloropropene	ND		9.0		ug/m3			09/21/16 05:14	4.98
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		14		ug/m3			09/21/16 05:14	4.98
<b>Ethylbenzene</b>	<b>1700</b>	<b>E</b>	8.6		ug/m3			09/21/16 05:14	4.98
<b>4-Ethyltoluene</b>	<b>180</b>		9.8		ug/m3			09/21/16 05:14	4.98
Hexachlorobutadiene	ND		110		ug/m3			09/21/16 05:14	4.98
2-Hexanone	ND		8.2		ug/m3			09/21/16 05:14	4.98
Methylene Chloride	ND		6.9		ug/m3			09/21/16 05:14	4.98
4-Methyl-2-pentanone (MIBK)	ND		8.2		ug/m3			09/21/16 05:14	4.98
Styrene	ND		8.5		ug/m3			09/21/16 05:14	4.98
1,1,2,2-Tetrachloroethane	ND		14		ug/m3			09/21/16 05:14	4.98
Tetrachloroethene	ND		14		ug/m3			09/21/16 05:14	4.98
<b>Toluene</b>	<b>3900</b>	<b>E</b>	7.5		ug/m3			09/21/16 05:14	4.98
1,2,4-Trichlorobenzene	ND		74		ug/m3			09/21/16 05:14	4.98
1,1,1-Trichloroethane	ND		8.2		ug/m3			09/21/16 05:14	4.98
1,1,2-Trichloroethane	ND		11		ug/m3			09/21/16 05:14	4.98
<b>Trichloroethene</b>	<b>50</b>		11		ug/m3			09/21/16 05:14	4.98
1,4-Dioxane	ND		14		ug/m3			09/21/16 05:14	4.98

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

**Date Collected: 09/12/16 15:25**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		11		ug/m3			09/21/16 05:14	4.98
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		15		ug/m3			09/21/16 05:14	4.98
<b>1,2,4-Trimethylbenzene</b>	<b>310</b>		20		ug/m3			09/21/16 05:14	4.98
<b>1,3,5-Trimethylbenzene</b>	<b>170</b>		9.8		ug/m3			09/21/16 05:14	4.98
Vinyl acetate	ND		14		ug/m3			09/21/16 05:14	4.98
Vinyl chloride	ND		5.1		ug/m3			09/21/16 05:14	4.98
<b>m,p-Xylene</b>	<b>3200</b>	<b>E</b>	17		ug/m3			09/21/16 05:14	4.98
<b>o-Xylene</b>	<b>690</b>		8.6		ug/m3			09/21/16 05:14	4.98
Naphthalene	ND		21		ug/m3			09/21/16 05:14	4.98
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105		70 - 130					09/21/16 05:14	4.98
1,2-Dichloroethane-d4 (Surr)	212	X	70 - 130					09/21/16 05:14	4.98
Toluene-d8 (Surr)	96		70 - 130					09/21/16 05:14	4.98

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		150		ppb v/v			09/20/16 22:58	30.8
<b>Benzene</b>	<b>1200</b>		12		ppb v/v			09/20/16 22:58	30.8
Benzyl chloride	ND		25		ppb v/v			09/20/16 22:58	30.8
Bromodichloromethane	ND		9.2		ppb v/v			09/20/16 22:58	30.8
Bromoform	ND		12		ppb v/v			09/20/16 22:58	30.8
Bromomethane	ND		25		ppb v/v			09/20/16 22:58	30.8
2-Butanone (MEK)	ND		25		ppb v/v			09/20/16 22:58	30.8
Carbon disulfide	ND		25		ppb v/v			09/20/16 22:58	30.8
Carbon tetrachloride	ND		25		ppb v/v			09/20/16 22:58	30.8
Chlorobenzene	ND		9.2		ppb v/v			09/20/16 22:58	30.8
Dibromochloromethane	ND		12		ppb v/v			09/20/16 22:58	30.8
Chloroethane	ND		25		ppb v/v			09/20/16 22:58	30.8
Chloroform	ND		9.2		ppb v/v			09/20/16 22:58	30.8
Chloromethane	ND		25		ppb v/v			09/20/16 22:58	30.8
1,2-Dibromoethane (EDB)	ND		25		ppb v/v			09/20/16 22:58	30.8
1,2-Dichlorobenzene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,3-Dichlorobenzene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,4-Dichlorobenzene	ND		12		ppb v/v			09/20/16 22:58	30.8
Dichlorodifluoromethane	ND		12		ppb v/v			09/20/16 22:58	30.8
1,1-Dichloroethane	ND		9.2		ppb v/v			09/20/16 22:58	30.8
1,2-Dichloroethane	ND		25		ppb v/v			09/20/16 22:58	30.8
1,1-Dichloroethene	ND		25		ppb v/v			09/20/16 22:58	30.8
cis-1,2-Dichloroethene	ND		12		ppb v/v			09/20/16 22:58	30.8
trans-1,2-Dichloroethene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,2-Dichloropropane	ND		12		ppb v/v			09/20/16 22:58	30.8
cis-1,3-Dichloropropene	ND		12		ppb v/v			09/20/16 22:58	30.8
trans-1,3-Dichloropropene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		12		ppb v/v			09/20/16 22:58	30.8
<b>Ethylbenzene</b>	<b>450</b>		12		ppb v/v			09/20/16 22:58	30.8
<b>4-Ethyltoluene</b>	<b>39</b>		12		ppb v/v			09/20/16 22:58	30.8
Hexachlorobutadiene	ND		62		ppb v/v			09/20/16 22:58	30.8
2-Hexanone	ND		12		ppb v/v			09/20/16 22:58	30.8

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

**Date Collected: 09/12/16 15:25**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		12		ppb v/v			09/20/16 22:58	30.8
4-Methyl-2-pentanone (MIBK)	ND		12		ppb v/v			09/20/16 22:58	30.8
Styrene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,1,2,2-Tetrachloroethane	ND		12		ppb v/v			09/20/16 22:58	30.8
Tetrachloroethene	ND		12		ppb v/v			09/20/16 22:58	30.8
<b>Toluene</b>	<b>1300</b>		12		ppb v/v			09/20/16 22:58	30.8
1,2,4-Trichlorobenzene	ND		62		ppb v/v			09/20/16 22:58	30.8
1,1,1-Trichloroethane	ND		9.2		ppb v/v			09/20/16 22:58	30.8
1,1,2-Trichloroethane	ND		12		ppb v/v			09/20/16 22:58	30.8
Trichloroethene	ND		12		ppb v/v			09/20/16 22:58	30.8
1,4-Dioxane	ND		25		ppb v/v			09/20/16 22:58	30.8
Trichlorofluoromethane	ND		12		ppb v/v			09/20/16 22:58	30.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		12		ppb v/v			09/20/16 22:58	30.8
<b>1,2,4-Trimethylbenzene</b>	<b>66</b>		25		ppb v/v			09/20/16 22:58	30.8
<b>1,3,5-Trimethylbenzene</b>	<b>36</b>		12		ppb v/v			09/20/16 22:58	30.8
Vinyl acetate	ND		25		ppb v/v			09/20/16 22:58	30.8
Vinyl chloride	ND		12		ppb v/v			09/20/16 22:58	30.8
<b>m,p-Xylene</b>	<b>890</b>		25		ppb v/v			09/20/16 22:58	30.8
<b>o-Xylene</b>	<b>170</b>		12		ppb v/v			09/20/16 22:58	30.8
Naphthalene	ND		25		ppb v/v			09/20/16 22:58	30.8
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		370		ug/m3			09/20/16 22:58	30.8
<b>Benzene</b>	<b>3900</b>		39		ug/m3			09/20/16 22:58	30.8
Benzyl chloride	ND		130		ug/m3			09/20/16 22:58	30.8
Bromodichloromethane	ND		62		ug/m3			09/20/16 22:58	30.8
Bromoform	ND		130		ug/m3			09/20/16 22:58	30.8
Bromomethane	ND		96		ug/m3			09/20/16 22:58	30.8
2-Butanone (MEK)	ND		73		ug/m3			09/20/16 22:58	30.8
Carbon disulfide	ND		77		ug/m3			09/20/16 22:58	30.8
Carbon tetrachloride	ND		160		ug/m3			09/20/16 22:58	30.8
Chlorobenzene	ND		43		ug/m3			09/20/16 22:58	30.8
Dibromochloromethane	ND		100		ug/m3			09/20/16 22:58	30.8
Chloroethane	ND		65		ug/m3			09/20/16 22:58	30.8
Chloroform	ND		45		ug/m3			09/20/16 22:58	30.8
Chloromethane	ND		51		ug/m3			09/20/16 22:58	30.8
1,2-Dibromoethane (EDB)	ND		190		ug/m3			09/20/16 22:58	30.8
1,2-Dichlorobenzene	ND		74		ug/m3			09/20/16 22:58	30.8
1,3-Dichlorobenzene	ND		74		ug/m3			09/20/16 22:58	30.8
1,4-Dichlorobenzene	ND		74		ug/m3			09/20/16 22:58	30.8
Dichlorodifluoromethane	ND		61		ug/m3			09/20/16 22:58	30.8
1,1-Dichloroethane	ND		37		ug/m3			09/20/16 22:58	30.8
1,2-Dichloroethane	ND		100		ug/m3			09/20/16 22:58	30.8
1,1-Dichloroethene	ND		98		ug/m3			09/20/16 22:58	30.8
cis-1,2-Dichloroethene	ND		49		ug/m3			09/20/16 22:58	30.8
trans-1,2-Dichloroethene	ND		49		ug/m3			09/20/16 22:58	30.8
1,2-Dichloropropane	ND		57		ug/m3			09/20/16 22:58	30.8
cis-1,3-Dichloropropene	ND		56		ug/m3			09/20/16 22:58	30.8
trans-1,3-Dichloropropene	ND		56		ug/m3			09/20/16 22:58	30.8

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Lab Sample ID: 320-21714-1**

**Date Collected: 09/12/16 15:25**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		86		ug/m3			09/20/16 22:58	30.8
<b>Ethylbenzene</b>	<b>1900</b>		53		ug/m3			09/20/16 22:58	30.8
<b>4-Ethyltoluene</b>	<b>190</b>		61		ug/m3			09/20/16 22:58	30.8
Hexachlorobutadiene	ND		660		ug/m3			09/20/16 22:58	30.8
2-Hexanone	ND		50		ug/m3			09/20/16 22:58	30.8
Methylene Chloride	ND		43		ug/m3			09/20/16 22:58	30.8
4-Methyl-2-pentanone (MIBK)	ND		50		ug/m3			09/20/16 22:58	30.8
Styrene	ND		52		ug/m3			09/20/16 22:58	30.8
1,1,2,2-Tetrachloroethane	ND		85		ug/m3			09/20/16 22:58	30.8
Tetrachloroethene	ND		84		ug/m3			09/20/16 22:58	30.8
<b>Toluene</b>	<b>4700</b>		46		ug/m3			09/20/16 22:58	30.8
1,2,4-Trichlorobenzene	ND		460		ug/m3			09/20/16 22:58	30.8
1,1,1-Trichloroethane	ND		50		ug/m3			09/20/16 22:58	30.8
1,1,2-Trichloroethane	ND		67		ug/m3			09/20/16 22:58	30.8
Trichloroethene	ND		66		ug/m3			09/20/16 22:58	30.8
1,4-Dioxane	ND		89		ug/m3			09/20/16 22:58	30.8
Trichlorofluoromethane	ND		69		ug/m3			09/20/16 22:58	30.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		94		ug/m3			09/20/16 22:58	30.8
<b>1,2,4-Trimethylbenzene</b>	<b>320</b>		120		ug/m3			09/20/16 22:58	30.8
<b>1,3,5-Trimethylbenzene</b>	<b>180</b>		61		ug/m3			09/20/16 22:58	30.8
Vinyl acetate	ND		87		ug/m3			09/20/16 22:58	30.8
Vinyl chloride	ND		31		ug/m3			09/20/16 22:58	30.8
<b>m,p-Xylene</b>	<b>3900</b>		110		ug/m3			09/20/16 22:58	30.8
<b>o-Xylene</b>	<b>760</b>		53		ug/m3			09/20/16 22:58	30.8
Naphthalene	ND		130		ug/m3			09/20/16 22:58	30.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130		09/20/16 22:58	30.8
1,2-Dichloroethane-d4 (Surr)	117		70 - 130		09/20/16 22:58	30.8
Toluene-d8 (Surr)	99		70 - 130		09/20/16 22:58	30.8

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		2.0		% v/v			09/15/16 14:18	4.06
Helium	ND		0.41		% v/v			09/15/16 14:18	4.06
<b>Oxygen</b>	<b>20</b>		0.81		% v/v			09/15/16 14:18	4.06
<b>Methane (FID)</b>	<b>0.00091</b>		0.00041		% v/v			09/16/16 14:03	4.06

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21714-2**

**Date Collected: 09/12/16 15:30**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25		ppb v/v			09/21/16 06:05	4.97
<b>Benzene</b>	<b>2.0</b>		2.0		ppb v/v			09/21/16 06:05	4.97
Benzyl chloride	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Bromodichloromethane	ND		1.5		ppb v/v			09/21/16 06:05	4.97

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21714-2**

**Date Collected: 09/12/16 15:30**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Bromomethane	ND		4.0		ppb v/v			09/21/16 06:05	4.97
2-Butanone (MEK)	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Carbon disulfide	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Carbon tetrachloride	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Chlorobenzene	ND		1.5		ppb v/v			09/21/16 06:05	4.97
Dibromochloromethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Chloroethane	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Chloroform	ND		1.5		ppb v/v			09/21/16 06:05	4.97
Chloromethane	ND		4.0		ppb v/v			09/21/16 06:05	4.97
1,2-Dibromoethane (EDB)	ND		4.0		ppb v/v			09/21/16 06:05	4.97
1,2-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,3-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,4-Dichlorobenzene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Dichlorodifluoromethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,1-Dichloroethane	ND		1.5		ppb v/v			09/21/16 06:05	4.97
1,2-Dichloroethane	ND		4.0		ppb v/v			09/21/16 06:05	4.97
1,1-Dichloroethene	ND		4.0		ppb v/v			09/21/16 06:05	4.97
cis-1,2-Dichloroethene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
trans-1,2-Dichloroethene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,2-Dichloropropane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
cis-1,3-Dichloropropene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
trans-1,3-Dichloropropene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Ethylbenzene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
4-Ethyltoluene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Hexachlorobutadiene	ND		9.9		ppb v/v			09/21/16 06:05	4.97
2-Hexanone	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Methylene Chloride	ND		2.0		ppb v/v			09/21/16 06:05	4.97
4-Methyl-2-pentanone (MIBK)	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Styrene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,1,2,2-Tetrachloroethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Tetrachloroethene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Toluene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,2,4-Trichlorobenzene	ND		9.9		ppb v/v			09/21/16 06:05	4.97
1,1,1-Trichloroethane	ND		1.5		ppb v/v			09/21/16 06:05	4.97
1,1,2-Trichloroethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Trichloroethene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,4-Dioxane	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Trichlorofluoromethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0		ppb v/v			09/21/16 06:05	4.97
1,2,4-Trimethylbenzene	ND		4.0		ppb v/v			09/21/16 06:05	4.97
1,3,5-Trimethylbenzene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Vinyl acetate	ND		4.0		ppb v/v			09/21/16 06:05	4.97
Vinyl chloride	ND		2.0		ppb v/v			09/21/16 06:05	4.97
m,p-Xylene	ND		4.0		ppb v/v			09/21/16 06:05	4.97
o-Xylene	ND		2.0		ppb v/v			09/21/16 06:05	4.97
Naphthalene	ND		4.0		ppb v/v			09/21/16 06:05	4.97

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# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21714-2**

**Date Collected: 09/12/16 15:30**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		59		ug/m3			09/21/16 06:05	4.97
<b>Benzene</b>	<b>6.5</b>		6.4		ug/m3			09/21/16 06:05	4.97
Benzyl chloride	ND		21		ug/m3			09/21/16 06:05	4.97
Bromodichloromethane	ND		10		ug/m3			09/21/16 06:05	4.97
Bromoform	ND		21		ug/m3			09/21/16 06:05	4.97
Bromomethane	ND		15		ug/m3			09/21/16 06:05	4.97
2-Butanone (MEK)	ND		12		ug/m3			09/21/16 06:05	4.97
Carbon disulfide	ND		12		ug/m3			09/21/16 06:05	4.97
Carbon tetrachloride	ND		25		ug/m3			09/21/16 06:05	4.97
Chlorobenzene	ND		6.9		ug/m3			09/21/16 06:05	4.97
Dibromochloromethane	ND		17		ug/m3			09/21/16 06:05	4.97
Chloroethane	ND		10		ug/m3			09/21/16 06:05	4.97
Chloroform	ND		7.3		ug/m3			09/21/16 06:05	4.97
Chloromethane	ND		8.2		ug/m3			09/21/16 06:05	4.97
1,2-Dibromoethane (EDB)	ND		31		ug/m3			09/21/16 06:05	4.97
1,2-Dichlorobenzene	ND		12		ug/m3			09/21/16 06:05	4.97
1,3-Dichlorobenzene	ND		12		ug/m3			09/21/16 06:05	4.97
1,4-Dichlorobenzene	ND		12		ug/m3			09/21/16 06:05	4.97
Dichlorodifluoromethane	ND		9.8		ug/m3			09/21/16 06:05	4.97
1,1-Dichloroethane	ND		6.0		ug/m3			09/21/16 06:05	4.97
1,2-Dichloroethane	ND		16		ug/m3			09/21/16 06:05	4.97
1,1-Dichloroethene	ND		16		ug/m3			09/21/16 06:05	4.97
cis-1,2-Dichloroethene	ND		7.9		ug/m3			09/21/16 06:05	4.97
trans-1,2-Dichloroethene	ND		7.9		ug/m3			09/21/16 06:05	4.97
1,2-Dichloropropane	ND		9.2		ug/m3			09/21/16 06:05	4.97
cis-1,3-Dichloropropene	ND		9.0		ug/m3			09/21/16 06:05	4.97
trans-1,3-Dichloropropene	ND		9.0		ug/m3			09/21/16 06:05	4.97
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		14		ug/m3			09/21/16 06:05	4.97
Ethylbenzene	ND		8.6		ug/m3			09/21/16 06:05	4.97
4-Ethyltoluene	ND		9.8		ug/m3			09/21/16 06:05	4.97
Hexachlorobutadiene	ND		110		ug/m3			09/21/16 06:05	4.97
2-Hexanone	ND		8.1		ug/m3			09/21/16 06:05	4.97
Methylene Chloride	ND		6.9		ug/m3			09/21/16 06:05	4.97
4-Methyl-2-pentanone (MIBK)	ND		8.1		ug/m3			09/21/16 06:05	4.97
Styrene	ND		8.5		ug/m3			09/21/16 06:05	4.97
1,1,2,2-Tetrachloroethane	ND		14		ug/m3			09/21/16 06:05	4.97
Tetrachloroethene	ND		13		ug/m3			09/21/16 06:05	4.97
Toluene	ND		7.5		ug/m3			09/21/16 06:05	4.97
1,2,4-Trichlorobenzene	ND		74		ug/m3			09/21/16 06:05	4.97
1,1,1-Trichloroethane	ND		8.1		ug/m3			09/21/16 06:05	4.97
1,1,2-Trichloroethane	ND		11		ug/m3			09/21/16 06:05	4.97
Trichloroethene	ND		11		ug/m3			09/21/16 06:05	4.97
1,4-Dioxane	ND		14		ug/m3			09/21/16 06:05	4.97
Trichlorofluoromethane	ND		11		ug/m3			09/21/16 06:05	4.97
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		15		ug/m3			09/21/16 06:05	4.97
1,2,4-Trimethylbenzene	ND		20		ug/m3			09/21/16 06:05	4.97
1,3,5-Trimethylbenzene	ND		9.8		ug/m3			09/21/16 06:05	4.97
Vinyl acetate	ND		14		ug/m3			09/21/16 06:05	4.97
Vinyl chloride	ND		5.1		ug/m3			09/21/16 06:05	4.97

TestAmerica Sacramento

# Client Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-10**

**Lab Sample ID: 320-21714-2**

**Date Collected: 09/12/16 15:30**

**Matrix: Air**

**Date Received: 09/13/16 11:45**

**Sample Container: Summa Canister 1L**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		17		ug/m3			09/21/16 06:05	4.97
o-Xylene	ND		8.6		ug/m3			09/21/16 06:05	4.97
Naphthalene	ND		21		ug/m3			09/21/16 06:05	4.97

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130		09/21/16 06:05	4.97
1,2-Dichloroethane-d4 (Surr)	92		70 - 130		09/21/16 06:05	4.97
Toluene-d8 (Surr)	99		70 - 130		09/21/16 06:05	4.97

**Method: D1946 - Fixed Gases in Air (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		2.1		% v/v			09/15/16 14:27	4.24
Helium	0.71		0.42		% v/v			09/15/16 14:27	4.24
Oxygen	20		0.85		% v/v			09/15/16 14:27	4.24
Methane (FID)	0.043		0.00042		% v/v			09/16/16 14:17	4.24

# Surrogate Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

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

Matrix: Air

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)	12DCE (70-130)	TOL (70-130)
320-21714-1 - DL	SV67-5	100	117	99
320-21714-1	SV67-5	105	212 X	96
320-21714-2	SV67-10	100	92	99
LCS 320-128092/3	Lab Control Sample	103	99	101
LCSD 320-128092/4	Lab Control Sample Dup	103	98	101
MB 320-128092/6	Method Blank	96	98	99

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

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

**Lab Sample ID: MB 320-128092/6**  
**Matrix: Air**  
**Analysis Batch: 128092**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0		ppb v/v			09/20/16 15:28	1
Benzene	ND		0.40		ppb v/v			09/20/16 15:28	1
Benzyl chloride	ND		0.80		ppb v/v			09/20/16 15:28	1
Bromodichloromethane	ND		0.30		ppb v/v			09/20/16 15:28	1
Bromoform	ND		0.40		ppb v/v			09/20/16 15:28	1
Bromomethane	ND		0.80		ppb v/v			09/20/16 15:28	1
2-Butanone (MEK)	ND		0.80		ppb v/v			09/20/16 15:28	1
Carbon disulfide	ND		0.80		ppb v/v			09/20/16 15:28	1
Carbon tetrachloride	ND		0.80		ppb v/v			09/20/16 15:28	1
Chlorobenzene	ND		0.30		ppb v/v			09/20/16 15:28	1
Dibromochloromethane	ND		0.40		ppb v/v			09/20/16 15:28	1
Chloroethane	ND		0.80		ppb v/v			09/20/16 15:28	1
Chloroform	ND		0.30		ppb v/v			09/20/16 15:28	1
Chloromethane	ND		0.80		ppb v/v			09/20/16 15:28	1
1,2-Dibromoethane (EDB)	ND		0.80		ppb v/v			09/20/16 15:28	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			09/20/16 15:28	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			09/20/16 15:28	1
1,1-Dichloroethane	ND		0.30		ppb v/v			09/20/16 15:28	1
1,2-Dichloroethane	ND		0.80		ppb v/v			09/20/16 15:28	1
1,1-Dichloroethene	ND		0.80		ppb v/v			09/20/16 15:28	1
cis-1,2-Dichloroethene	ND		0.40		ppb v/v			09/20/16 15:28	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,2-Dichloropropane	ND		0.40		ppb v/v			09/20/16 15:28	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			09/20/16 15:28	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40		ppb v/v			09/20/16 15:28	1
Ethylbenzene	ND		0.40		ppb v/v			09/20/16 15:28	1
4-Ethyltoluene	ND		0.40		ppb v/v			09/20/16 15:28	1
Hexachlorobutadiene	ND		2.0		ppb v/v			09/20/16 15:28	1
2-Hexanone	ND		0.40		ppb v/v			09/20/16 15:28	1
Methylene Chloride	ND		0.40		ppb v/v			09/20/16 15:28	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			09/20/16 15:28	1
Styrene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			09/20/16 15:28	1
Tetrachloroethene	ND		0.40		ppb v/v			09/20/16 15:28	1
Toluene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,2,4-Trichlorobenzene	ND		2.0		ppb v/v			09/20/16 15:28	1
1,1,1-Trichloroethane	ND		0.30		ppb v/v			09/20/16 15:28	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			09/20/16 15:28	1
Trichloroethene	ND		0.40		ppb v/v			09/20/16 15:28	1
1,4-Dioxane	ND		0.80		ppb v/v			09/20/16 15:28	1
Trichlorofluoromethane	ND		0.40		ppb v/v			09/20/16 15:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40		ppb v/v			09/20/16 15:28	1
1,2,4-Trimethylbenzene	ND		0.80		ppb v/v			09/20/16 15:28	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			09/20/16 15:28	1
Vinyl acetate	ND		0.80		ppb v/v			09/20/16 15:28	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 320-128092/6**  
**Matrix: Air**  
**Analysis Batch: 128092**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Vinyl chloride	ND		0.40		ppb v/v			09/20/16 15:28	1
m,p-Xylene	ND		0.80		ppb v/v			09/20/16 15:28	1
o-Xylene	ND		0.40		ppb v/v			09/20/16 15:28	1
Naphthalene	ND		0.80		ppb v/v			09/20/16 15:28	1
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		12		ug/m3			09/20/16 15:28	1
Benzene	ND		1.3		ug/m3			09/20/16 15:28	1
Benzyl chloride	ND		4.1		ug/m3			09/20/16 15:28	1
Bromodichloromethane	ND		2.0		ug/m3			09/20/16 15:28	1
Bromoform	ND		4.1		ug/m3			09/20/16 15:28	1
Bromomethane	ND		3.1		ug/m3			09/20/16 15:28	1
2-Butanone (MEK)	ND		2.4		ug/m3			09/20/16 15:28	1
Carbon disulfide	ND		2.5		ug/m3			09/20/16 15:28	1
Carbon tetrachloride	ND		5.0		ug/m3			09/20/16 15:28	1
Chlorobenzene	ND		1.4		ug/m3			09/20/16 15:28	1
Dibromochloromethane	ND		3.4		ug/m3			09/20/16 15:28	1
Chloroethane	ND		2.1		ug/m3			09/20/16 15:28	1
Chloroform	ND		1.5		ug/m3			09/20/16 15:28	1
Chloromethane	ND		1.7		ug/m3			09/20/16 15:28	1
1,2-Dibromoethane (EDB)	ND		6.1		ug/m3			09/20/16 15:28	1
1,2-Dichlorobenzene	ND		2.4		ug/m3			09/20/16 15:28	1
1,3-Dichlorobenzene	ND		2.4		ug/m3			09/20/16 15:28	1
1,4-Dichlorobenzene	ND		2.4		ug/m3			09/20/16 15:28	1
Dichlorodifluoromethane	ND		2.0		ug/m3			09/20/16 15:28	1
1,1-Dichloroethane	ND		1.2		ug/m3			09/20/16 15:28	1
1,2-Dichloroethane	ND		3.2		ug/m3			09/20/16 15:28	1
1,1-Dichloroethene	ND		3.2		ug/m3			09/20/16 15:28	1
cis-1,2-Dichloroethene	ND		1.6		ug/m3			09/20/16 15:28	1
trans-1,2-Dichloroethene	ND		1.6		ug/m3			09/20/16 15:28	1
1,2-Dichloropropane	ND		1.8		ug/m3			09/20/16 15:28	1
cis-1,3-Dichloropropene	ND		1.8		ug/m3			09/20/16 15:28	1
trans-1,3-Dichloropropene	ND		1.8		ug/m3			09/20/16 15:28	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8		ug/m3			09/20/16 15:28	1
Ethylbenzene	ND		1.7		ug/m3			09/20/16 15:28	1
4-Ethyltoluene	ND		2.0		ug/m3			09/20/16 15:28	1
Hexachlorobutadiene	ND		21		ug/m3			09/20/16 15:28	1
2-Hexanone	ND		1.6		ug/m3			09/20/16 15:28	1
Methylene Chloride	ND		1.4		ug/m3			09/20/16 15:28	1
4-Methyl-2-pentanone (MIBK)	ND		1.6		ug/m3			09/20/16 15:28	1
Styrene	ND		1.7		ug/m3			09/20/16 15:28	1
1,1,2,2-Tetrachloroethane	ND		2.7		ug/m3			09/20/16 15:28	1
Tetrachloroethene	ND		2.7		ug/m3			09/20/16 15:28	1
Toluene	ND		1.5		ug/m3			09/20/16 15:28	1
1,2,4-Trichlorobenzene	ND		15		ug/m3			09/20/16 15:28	1
1,1,1-Trichloroethane	ND		1.6		ug/m3			09/20/16 15:28	1
1,1,2-Trichloroethane	ND		2.2		ug/m3			09/20/16 15:28	1
Trichloroethene	ND		2.1		ug/m3			09/20/16 15:28	1

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 320-128092/6**  
**Matrix: Air**  
**Analysis Batch: 128092**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		2.9		ug/m3			09/20/16 15:28	1
Trichlorofluoromethane	ND		2.2		ug/m3			09/20/16 15:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1		ug/m3			09/20/16 15:28	1
1,2,4-Trimethylbenzene	ND		3.9		ug/m3			09/20/16 15:28	1
1,3,5-Trimethylbenzene	ND		2.0		ug/m3			09/20/16 15:28	1
Vinyl acetate	ND		2.8		ug/m3			09/20/16 15:28	1
Vinyl chloride	ND		1.0		ug/m3			09/20/16 15:28	1
m,p-Xylene	ND		3.5		ug/m3			09/20/16 15:28	1
o-Xylene	ND		1.7		ug/m3			09/20/16 15:28	1
Naphthalene	ND		4.2		ug/m3			09/20/16 15:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130					09/20/16 15:28	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					09/20/16 15:28	1
Toluene-d8 (Surr)	99		70 - 130					09/20/16 15:28	1

**Lab Sample ID: LCS 320-128092/3**  
**Matrix: Air**  
**Analysis Batch: 128092**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.2		ppb v/v		91	71 - 131
Benzene	20.0	18.5		ppb v/v		93	68 - 128
Benzyl chloride	20.0	15.3		ppb v/v		76	58 - 120
Bromodichloromethane	20.0	18.4		ppb v/v		92	65 - 130
Bromoform	20.0	18.1		ppb v/v		91	64 - 144
Bromomethane	20.0	20.0		ppb v/v		100	70 - 131
2-Butanone (MEK)	20.0	18.1		ppb v/v		91	71 - 131
Carbon disulfide	20.0	17.9		ppb v/v		90	63 - 123
Carbon tetrachloride	20.0	15.8		ppb v/v		79	67 - 127
Chlorobenzene	20.0	19.5		ppb v/v		97	70 - 132
Dibromochloromethane	20.0	18.2		ppb v/v		91	68 - 128
Chloroethane	20.0	19.8		ppb v/v		99	70 - 131
Chloroform	20.0	18.7		ppb v/v		94	69 - 129
Chloromethane	20.0	18.9		ppb v/v		94	67 - 127
1,2-Dibromoethane (EDB)	20.0	19.5		ppb v/v		98	68 - 131
1,2-Dichlorobenzene	20.0	20.1		ppb v/v		100	73 - 143
1,3-Dichlorobenzene	20.0	20.4		ppb v/v		102	77 - 136
1,4-Dichlorobenzene	20.0	20.6		ppb v/v		103	73 - 143
Dichlorodifluoromethane	20.0	19.3		ppb v/v		97	69 - 129
1,1-Dichloroethane	20.0	18.3		ppb v/v		91	65 - 125
1,2-Dichloroethane	20.0	18.6		ppb v/v		93	71 - 131
1,1-Dichloroethene	20.0	16.8		ppb v/v		84	53 - 128
cis-1,2-Dichloroethene	20.0	18.8		ppb v/v		94	68 - 128
trans-1,2-Dichloroethene	20.0	18.5		ppb v/v		92	70 - 130
1,2-Dichloropropane	20.0	19.7		ppb v/v		98	74 - 128
cis-1,3-Dichloropropene	20.0	20.8		ppb v/v		104	78 - 132
trans-1,3-Dichloropropene	20.0	17.2		ppb v/v		86	56 - 136

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-128092/3

Matrix: Air

Analysis Batch: 128092

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	18.9		ppb v/v		95	64 - 124
Ethylbenzene	20.0	19.2		ppb v/v		96	76 - 136
4-Ethyltoluene	20.0	18.6		ppb v/v		93	62 - 136
Hexachlorobutadiene	20.0	16.9		ppb v/v		85	42 - 150
2-Hexanone	20.0	18.8		ppb v/v		94	70 - 128
Methylene Chloride	20.0	17.1		ppb v/v		86	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	18.1		ppb v/v		90	73 - 133
Styrene	20.0	20.6		ppb v/v		103	76 - 144
1,1,2,2-Tetrachloroethane	20.0	19.1		ppb v/v		96	75 - 135
Tetrachloroethene	20.0	19.1		ppb v/v		95	56 - 138
Toluene	20.0	19.2		ppb v/v		96	71 - 132
1,2,4-Trichlorobenzene	20.0	21.2		ppb v/v		106	59 - 150
1,1,1-Trichloroethane	20.0	18.9		ppb v/v		94	65 - 124
1,1,2-Trichloroethane	20.0	19.8		ppb v/v		99	71 - 131
Trichloroethene	20.0	19.1		ppb v/v		96	64 - 127
1,4-Dioxane	20.0	19.1		ppb v/v		96	55 - 141
Trichlorofluoromethane	20.0	19.4		ppb v/v		97	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.1		ppb v/v		85	50 - 132
1,2,4-Trimethylbenzene	20.0	18.2		ppb v/v		91	61 - 145
1,3,5-Trimethylbenzene	20.0	19.0		ppb v/v		95	65 - 136
Vinyl acetate	20.0	19.6		ppb v/v		98	77 - 134
Vinyl chloride	20.0	19.1		ppb v/v		96	69 - 129
m,p-Xylene	40.0	39.6		ppb v/v		99	75 - 138
o-Xylene	20.0	20.0		ppb v/v		100	77 - 132
Naphthalene	20.0	20.8		ppb v/v		104	58 - 150
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	43.1		ug/m3		91	71 - 131
Benzene	64	59.1		ug/m3		93	68 - 128
Benzyl chloride	100	79.2		ug/m3		76	58 - 120
Bromodichloromethane	130	123		ug/m3		92	65 - 130
Bromoform	210	187		ug/m3		91	64 - 144
Bromomethane	78	77.5		ug/m3		100	70 - 131
2-Butanone (MEK)	59	53.5		ug/m3		91	71 - 131
Carbon disulfide	62	55.9		ug/m3		90	63 - 123
Carbon tetrachloride	130	99.2		ug/m3		79	67 - 127
Chlorobenzene	92	89.7		ug/m3		97	70 - 132
Dibromochloromethane	170	155		ug/m3		91	68 - 128
Chloroethane	53	52.3		ug/m3		99	70 - 131
Chloroform	98	91.4		ug/m3		94	69 - 129
Chloromethane	41	39.0		ug/m3		94	67 - 127
1,2-Dibromoethane (EDB)	150	150		ug/m3		98	68 - 131
1,2-Dichlorobenzene	120	121		ug/m3		100	73 - 143
1,3-Dichlorobenzene	120	122		ug/m3		102	77 - 136
1,4-Dichlorobenzene	120	124		ug/m3		103	73 - 143
Dichlorodifluoromethane	99	95.5		ug/m3		97	69 - 129
1,1-Dichloroethane	81	74.1		ug/m3		91	65 - 125

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# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 320-128092/3**  
**Matrix: Air**  
**Analysis Batch: 128092**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	81	75.2		ug/m3		93	71 - 131
1,1-Dichloroethene	79	66.7		ug/m3		84	53 - 128
cis-1,2-Dichloroethene	79	74.7		ug/m3		94	68 - 128
trans-1,2-Dichloroethene	79	73.2		ug/m3		92	70 - 130
1,2-Dichloropropane	92	90.9		ug/m3		98	74 - 128
cis-1,3-Dichloropropene	91	94.4		ug/m3		104	78 - 132
trans-1,3-Dichloropropene	91	78.0		ug/m3		86	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	132		ug/m3		95	64 - 124
Ethylbenzene	87	83.4		ug/m3		96	76 - 136
4-Ethyltoluene	98	91.7		ug/m3		93	62 - 136
Hexachlorobutadiene	210	181		ug/m3		85	42 - 150
2-Hexanone	82	77.0		ug/m3		94	70 - 128
Methylene Chloride	69	59.5		ug/m3		86	65 - 125
4-Methyl-2-pentanone (MIBK)	82	74.1		ug/m3		90	73 - 133
Styrene	85	87.6		ug/m3		103	76 - 144
1,1,2,2-Tetrachloroethane	140	131		ug/m3		96	75 - 135
Tetrachloroethene	140	129		ug/m3		95	56 - 138
Toluene	75	72.4		ug/m3		96	71 - 132
1,2,4-Trichlorobenzene	150	157		ug/m3		106	59 - 150
1,1,1-Trichloroethane	110	103		ug/m3		94	65 - 124
1,1,2-Trichloroethane	110	108		ug/m3		99	71 - 131
Trichloroethene	110	103		ug/m3		96	64 - 127
1,4-Dioxane	72	68.8		ug/m3		96	55 - 141
Trichlorofluoromethane	110	109		ug/m3		97	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	131		ug/m3		85	50 - 132
1,2,4-Trimethylbenzene	98	89.4		ug/m3		91	61 - 145
1,3,5-Trimethylbenzene	98	93.4		ug/m3		95	65 - 136
Vinyl acetate	70	68.9		ug/m3		98	77 - 134
Vinyl chloride	51	48.8		ug/m3		96	69 - 129
m,p-Xylene	170	172		ug/m3		99	75 - 138
o-Xylene	87	87.0		ug/m3		100	77 - 132
Naphthalene	100	109		ug/m3		104	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 320-128092/4**  
**Matrix: Air**  
**Analysis Batch: 128092**

**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
Acetone	20.0	18.1		ppb v/v		90	71 - 131	1	25
Benzene	20.0	18.6		ppb v/v		93	68 - 128	1	25
Benzyl chloride	20.0	15.3		ppb v/v		77	58 - 120	0	25

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# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-128092/4

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 128092

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	20.0	18.5		ppb v/v		93	65 - 130	1	25
Bromoform	20.0	18.2		ppb v/v		91	64 - 144	0	25
Bromomethane	20.0	19.9		ppb v/v		100	70 - 131	0	25
2-Butanone (MEK)	20.0	18.0		ppb v/v		90	71 - 131	1	25
Carbon disulfide	20.0	17.9		ppb v/v		89	63 - 123	0	25
Carbon tetrachloride	20.0	15.9		ppb v/v		79	67 - 127	1	25
Chlorobenzene	20.0	19.5		ppb v/v		98	70 - 132	0	25
Dibromochloromethane	20.0	18.3		ppb v/v		91	68 - 128	0	25
Chloroethane	20.0	19.7		ppb v/v		99	70 - 131	1	25
Chloroform	20.0	18.6		ppb v/v		93	69 - 129	1	25
Chloromethane	20.0	18.2		ppb v/v		91	67 - 127	4	25
1,2-Dibromoethane (EDB)	20.0	19.5		ppb v/v		98	68 - 131	0	25
1,2-Dichlorobenzene	20.0	20.2		ppb v/v		101	73 - 143	0	25
1,3-Dichlorobenzene	20.0	20.5		ppb v/v		103	77 - 136	1	25
1,4-Dichlorobenzene	20.0	20.8		ppb v/v		104	73 - 143	1	25
Dichlorodifluoromethane	20.0	19.1		ppb v/v		95	69 - 129	1	25
1,1-Dichloroethane	20.0	18.2		ppb v/v		91	65 - 125	0	25
1,2-Dichloroethane	20.0	18.7		ppb v/v		94	71 - 131	1	25
1,1-Dichloroethene	20.0	16.7		ppb v/v		83	53 - 128	1	25
cis-1,2-Dichloroethene	20.0	18.8		ppb v/v		94	68 - 128	0	25
trans-1,2-Dichloroethene	20.0	18.4		ppb v/v		92	70 - 130	0	25
1,2-Dichloropropane	20.0	19.8		ppb v/v		99	74 - 128	1	25
cis-1,3-Dichloropropene	20.0	21.0		ppb v/v		105	78 - 132	1	25
trans-1,3-Dichloropropene	20.0	17.2		ppb v/v		86	56 - 136	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	19.3		ppb v/v		96	64 - 124	2	25
Ethylbenzene	20.0	19.3		ppb v/v		97	76 - 136	1	25
4-Ethyltoluene	20.0	18.1		ppb v/v		90	62 - 136	3	25
Hexachlorobutadiene	20.0	17.0		ppb v/v		85	42 - 150	1	25
2-Hexanone	20.0	18.8		ppb v/v		94	70 - 128	0	25
Methylene Chloride	20.0	17.0		ppb v/v		85	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	20.0	18.2		ppb v/v		91	73 - 133	1	25
Styrene	20.0	20.7		ppb v/v		104	76 - 144	1	25
1,1,2,2-Tetrachloroethane	20.0	19.2		ppb v/v		96	75 - 135	0	25
Tetrachloroethene	20.0	19.1		ppb v/v		96	56 - 138	0	25
Toluene	20.0	19.4		ppb v/v		97	71 - 132	1	25
1,2,4-Trichlorobenzene	20.0	21.6		ppb v/v		108	59 - 150	2	25
1,1,1-Trichloroethane	20.0	18.8		ppb v/v		94	65 - 124	0	25
1,1,2-Trichloroethane	20.0	19.8		ppb v/v		99	71 - 131	0	25
Trichloroethene	20.0	19.2		ppb v/v		96	64 - 127	0	25
1,4-Dioxane	20.0	19.2		ppb v/v		96	55 - 141	0	25
Trichlorofluoromethane	20.0	19.2		ppb v/v		96	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.0		ppb v/v		85	50 - 132	0	25
1,2,4-Trimethylbenzene	20.0	17.9		ppb v/v		89	61 - 145	2	25
1,3,5-Trimethylbenzene	20.0	19.7		ppb v/v		98	65 - 136	4	25
Vinyl acetate	20.0	19.5		ppb v/v		98	77 - 134	0	25
Vinyl chloride	20.0	18.7		ppb v/v		94	69 - 129	2	25
m,p-Xylene	40.0	39.7		ppb v/v		99	75 - 138	0	25

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-128092/4

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 128092

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	20.0	20.0		ppb v/v		100	77 - 132	0	25
Naphthalene	20.0	21.1		ppb v/v		105	58 - 150	1	25
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	42.9		ug/m3		90	71 - 131	1	25
Benzene	64	59.6		ug/m3		93	68 - 128	1	25
Benzyl chloride	100	79.4		ug/m3		77	58 - 120	0	25
Bromodichloromethane	130	124		ug/m3		93	65 - 130	1	25
Bromoform	210	188		ug/m3		91	64 - 144	0	25
Bromomethane	78	77.5		ug/m3		100	70 - 131	0	25
2-Butanone (MEK)	59	53.0		ug/m3		90	71 - 131	1	25
Carbon disulfide	62	55.7		ug/m3		89	63 - 123	0	25
Carbon tetrachloride	130	99.9		ug/m3		79	67 - 127	1	25
Chlorobenzene	92	89.8		ug/m3		98	70 - 132	0	25
Dibromochloromethane	170	156		ug/m3		91	68 - 128	0	25
Chloroethane	53	52.0		ug/m3		99	70 - 131	1	25
Chloroform	98	90.9		ug/m3		93	69 - 129	1	25
Chloromethane	41	37.5		ug/m3		91	67 - 127	4	25
1,2-Dibromoethane (EDB)	150	150		ug/m3		98	68 - 131	0	25
1,2-Dichlorobenzene	120	121		ug/m3		101	73 - 143	0	25
1,3-Dichlorobenzene	120	123		ug/m3		103	77 - 136	1	25
1,4-Dichlorobenzene	120	125		ug/m3		104	73 - 143	1	25
Dichlorodifluoromethane	99	94.4		ug/m3		95	69 - 129	1	25
1,1-Dichloroethane	81	73.9		ug/m3		91	65 - 125	0	25
1,2-Dichloroethane	81	75.8		ug/m3		94	71 - 131	1	25
1,1-Dichloroethene	79	66.1		ug/m3		83	53 - 128	1	25
cis-1,2-Dichloroethene	79	74.7		ug/m3		94	68 - 128	0	25
trans-1,2-Dichloroethene	79	73.0		ug/m3		92	70 - 130	0	25
1,2-Dichloropropane	92	91.5		ug/m3		99	74 - 128	1	25
cis-1,3-Dichloropropene	91	95.4		ug/m3		105	78 - 132	1	25
trans-1,3-Dichloropropene	91	78.3		ug/m3		86	56 - 136	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	135		ug/m3		96	64 - 124	2	25
Ethylbenzene	87	84.0		ug/m3		97	76 - 136	1	25
4-Ethyltoluene	98	88.8		ug/m3		90	62 - 136	3	25
Hexachlorobutadiene	210	182		ug/m3		85	42 - 150	1	25
2-Hexanone	82	77.2		ug/m3		94	70 - 128	0	25
Methylene Chloride	69	59.1		ug/m3		85	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	82	74.6		ug/m3		91	73 - 133	1	25
Styrene	85	88.2		ug/m3		104	76 - 144	1	25
1,1,2,2-Tetrachloroethane	140	132		ug/m3		96	75 - 135	0	25
Tetrachloroethene	140	130		ug/m3		96	56 - 138	0	25
Toluene	75	72.9		ug/m3		97	71 - 132	1	25
1,2,4-Trichlorobenzene	150	161		ug/m3		108	59 - 150	2	25
1,1,1-Trichloroethane	110	102		ug/m3		94	65 - 124	0	25
1,1,2-Trichloroethane	110	108		ug/m3		99	71 - 131	0	25
Trichloroethene	110	103		ug/m3		96	64 - 127	0	25
1,4-Dioxane	72	69.0		ug/m3		96	55 - 141	0	25

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 320-128092/4**  
**Matrix: Air**  
**Analysis Batch: 128092**

**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
Trichlorofluoromethane	110	108		ug/m3		96	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	130		ug/m3		85	50 - 132	0	25
1,2,4-Trimethylbenzene	98	87.9		ug/m3		89	61 - 145	2	25
1,3,5-Trimethylbenzene	98	96.8		ug/m3		98	65 - 136	4	25
Vinyl acetate	70	68.8		ug/m3		98	77 - 134	0	25
Vinyl chloride	51	47.9		ug/m3		94	69 - 129	2	25
m,p-Xylene	170	172		ug/m3		99	75 - 138	0	25
o-Xylene	87	86.9		ug/m3		100	77 - 132	0	25
Naphthalene	100	110		ug/m3		105	58 - 150	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
Toluene-d8 (Surr)	101		70 - 130

## Method: D1946 - Fixed Gases in Air (GC)

**Lab Sample ID: MB 320-127284/10**  
**Matrix: Air**  
**Analysis Batch: 127284**

**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			09/15/16 11:42	1

**Lab Sample ID: MB 320-127284/11**  
**Matrix: Air**  
**Analysis Batch: 127284**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide (TCD)	ND		0.50		% v/v			09/15/16 11:23	1
Methane (TCD)	ND		0.50		% v/v			09/15/16 11:23	1
Oxygen	ND		0.20		% v/v			09/15/16 11:23	1

**Lab Sample ID: LCS 320-127284/2**  
**Matrix: Air**  
**Analysis Batch: 127284**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon Dioxide (TCD)	26.7	28.8		% v/v		108	80 - 120
Methane (TCD)	21.8	23.7		% v/v		109	80 - 120

**Lab Sample ID: LCS 320-127284/5**  
**Matrix: Air**  
**Analysis Batch: 127284**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Helium	16.0	15.7		% v/v		98	80 - 120
Oxygen	17.1	15.1		% v/v		88	80 - 120

TestAmerica Sacramento

# QC Sample Results

Client: PES Environmental, Inc.  
 Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Lab Sample ID: LCSD 320-127284/3**  
**Matrix: Air**  
**Analysis Batch: 127284**

**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
Carbon Dioxide (TCD)	26.7	28.8		% v/v		108	80 - 120	0	20
Methane (TCD)	21.8	23.7		% v/v		109	80 - 120	0	20

**Lab Sample ID: LCSD 320-127284/6**  
**Matrix: Air**  
**Analysis Batch: 127284**

**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	16.0	15.7		% v/v		98	80 - 120	0	20
Oxygen	17.1	15.1		% v/v		88	80 - 120	0	20

**Lab Sample ID: MB 320-127518/7**  
**Matrix: Air**  
**Analysis Batch: 127518**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	ND		0.00010		% v/v			09/16/16 13:05	1

**Lab Sample ID: LCS 320-127518/5**  
**Matrix: Air**  
**Analysis Batch: 127518**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (FID)	0.0250	0.0209		% v/v		83	80 - 120		

**Lab Sample ID: LCSD 320-127518/17**  
**Matrix: Air**  
**Analysis Batch: 127518**

**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
Methane (FID)	0.0250	0.0202		% v/v		81	80 - 120	3	20

# QC Association Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Air - GC/MS VOA

### Analysis Batch: 128092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21714-1 - DL	SV67-5	Total/NA	Air	TO-15	
320-21714-1	SV67-5	Total/NA	Air	TO-15	
320-21714-2	SV67-10	Total/NA	Air	TO-15	
MB 320-128092/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-128092/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-128092/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

## Air - GC VOA

### Analysis Batch: 127284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21714-1	SV67-5	Total/NA	Air	D1946	
320-21714-2	SV67-10	Total/NA	Air	D1946	
MB 320-127284/10	Method Blank	Total/NA	Air	D1946	
MB 320-127284/11	Method Blank	Total/NA	Air	D1946	
LCS 320-127284/2	Lab Control Sample	Total/NA	Air	D1946	
LCS 320-127284/5	Lab Control Sample	Total/NA	Air	D1946	
LCSD 320-127284/3	Lab Control Sample Dup	Total/NA	Air	D1946	
LCSD 320-127284/6	Lab Control Sample Dup	Total/NA	Air	D1946	

### Analysis Batch: 127518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21714-1	SV67-5	Total/NA	Air	D1946	
320-21714-2	SV67-10	Total/NA	Air	D1946	
MB 320-127518/7	Method Blank	Total/NA	Air	D1946	
LCS 320-127518/5	Lab Control Sample	Total/NA	Air	D1946	
LCSD 320-127518/17	Lab Control Sample Dup	Total/NA	Air	D1946	

# Lab Chronicle

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

**Client Sample ID: SV67-5**

**Date Collected: 09/12/16 15:25**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21714-1**

**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	DL	30.8	33 mL	250 mL	128092	09/20/16 22:58	AP1	TAL SAC
Total/NA	Analysis	TO-15		4.98	204 mL	250 mL	128092	09/21/16 05:14	AP1	TAL SAC
Total/NA	Analysis	D1946		4.06	50 mL	50 mL	127518	09/16/16 14:03	S1T	TAL SAC
Total/NA	Analysis	D1946		4.06	50 mL	50 mL	127284	09/15/16 14:18	S1T	TAL SAC

**Client Sample ID: SV67-10**

**Date Collected: 09/12/16 15:30**

**Date Received: 09/13/16 11:45**

**Lab Sample ID: 320-21714-2**

**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		4.97	213 mL	250 mL	128092	09/21/16 06:05	AP1	TAL SAC
Total/NA	Analysis	D1946		4.24	50 mL	50 mL	127518	09/16/16 14:17	S1T	TAL SAC
Total/NA	Analysis	D1946		4.24	50 mL	50 mL	127284	09/15/16 14:27	S1T	TAL SAC

**Laboratory References:**

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

# Certification Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

## Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4040	01-29-17

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 16
- 17

# Method Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

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

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# Sample Summary

Client: PES Environmental, Inc.  
Project/Site: 6701 Shellmound St, Emeryville Air

TestAmerica Job ID: 320-21714-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-21714-1	SV67-5	Air	09/12/16 15:25	09/13/16 11:45
320-21714-2	SV67-10	Air	09/12/16 15:30	09/13/16 11:45

- 1
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- 12
- 13
- 14
- 15
- 16
- 17



**PES Environmental, Inc.**  
Engineering & Environmental Services

# CHAIN OF CUSTODY RECORD

1682 Novato Boulevard, Suite 100  
Novato, California 94947  
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Test America  
JOB NUMBER: 144B.001.01.036  
NAME / LOCATION: Shellmound Street  
PROJECT MANAGER: Chris Baldassari

SAMPLERS: Greg George  
RECORDER: Greg George

ANALYSIS REQUESTED	
EPA 5035/8010	<input checked="" type="checkbox"/>
EPA 5035/8021	<input checked="" type="checkbox"/>
EPA 5035/8260B	<input checked="" type="checkbox"/>
TPHg by 5035/8015M	<input checked="" type="checkbox"/>
TPHd by 8015M	<input checked="" type="checkbox"/>
TPHmo by 8015M	<input checked="" type="checkbox"/>
EPA 8270C	<input checked="" type="checkbox"/>
MNA Parameters (see notes)	<input checked="" type="checkbox"/>
VOCs TO-15	<input checked="" type="checkbox"/>
MEK TO-15	<input checked="" type="checkbox"/>
MIBK TO-15	<input checked="" type="checkbox"/>
Naphthalene TO-15	<input checked="" type="checkbox"/>
Helixen D1946	<input checked="" type="checkbox"/>
Mellon D1946	<input checked="" type="checkbox"/>
Carbon Dioxide D1946	<input checked="" type="checkbox"/>
Oxygen D1946	<input checked="" type="checkbox"/>



320-21714 Chain of Custody

MATRIX	# of Containers & Preservatives						DEPTH IN FEET
	Unpres.	En Core	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	1-LS	
Vapor	<input checked="" type="checkbox"/>						
Water							
Soil							
Sedim't							

YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION
16	09	12	1525	SV67-5
16	09	12	1530	SV67-10

NOTES		CHAIN OF CUSTODY RECORD	
Turn Around Time:	5 TAI	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
		<u>W. J. ...</u>	<u>W. J. ...</u>
		RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
		RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
		RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
		RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
		DISPATCHED BY: (Signature)	RECEIVED FOR LAB BY:
		METHOD OF SHIPMENT:	

Page 1 of 1



JOB # **320-21714**  
 Sample # **1**

Client/Project:		VFR ID:	
Canister Serial #:	10838	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	4.90	09/15/16	SV	
FINAL PRESSURE (PSIA)	19.90	09/15/16	SV	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.06			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			4.06		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors							
	Date	Instr.	File #				
Canister DF = <b>4.06</b> X	9/20/2016	ATMS9		=	FINAL DF	<b>30.7668522</b>	
					Load DF = <b>7.5757576</b> X		
					LVf (mLs) <b>250</b>	Bag DF = <b>1</b>	
					LVi (mLs) <b>33</b>	BVf (mLs)	
Canister DF = <b>4.06</b> X	9/20/2016	ATMS9		=	FINAL DF	<b>4.976990796</b>	
					Load DF = <b>1.2254902</b> X		
					LVf (mLs) <b>250</b>	Bag DF = <b>1</b>	
					LVi (mLs) <b>204</b>	BVf (mLs)	
Canister DF = <b>4.06</b> X				=	FINAL DF	<b>#DIV/0!</b>	
					Load DF = <b>#DIV/0!</b> X		
					LVf (mLs)	Bag DF = <b>1</b>	
					LVi (mLs)	BVf (mLs)	



JOB # **320-21714**  
 Sample # **2**

Client/Project:		VFR ID:	
Canister Serial #:	10605	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	4.61	09/15/16	SV	
FINAL PRESSURE (PSIA)	19.54	09/15/16	SV	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	4.24			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			4.24		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors							
	Date	Instr.	File #				
Canister DF = <b>4.24</b> X	9/20/2016	ATMS9		=	FINAL DF	<b>37.84474744</b>	
					Load DF = <b>8.9285714</b> X		
					LVf (mLs) <b>250</b>	Bag DF = <b>1</b>	
					LVi (mLs) <b>28</b>	BVf (mLs)	
Canister DF = <b>4.24</b> X	9/20/2016	ATMS9		=	FINAL DF	<b>4.974896378</b>	
					Load DF = <b>1.1737089</b> X		
					LVf (mLs) <b>250</b>	Bag DF = <b>1</b>	
					LVi (mLs) <b>213</b>	BVf (mLs)	
Canister DF = <b>4.24</b> X				=	FINAL DF	<b>#DIV/0!</b>	
					Load DF = <b>#DIV/0!</b> X		
					LVf (mLs)	Bag DF = <b>1</b>	
					LVi (mLs)	BVf (mLs)	



# Login Sample Receipt Checklist

Client: PES Environmental, Inc.

Job Number: 320-21714-1

**Login Number: 21714**  
**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	





Certification Type TU15, SCLM  
 Date Cleaned/Batch ID 08/30/16 320-21376  
 Date of QC 9/1/16  
 Data File Number MS9083120.D

**CANISTER ID NUMBERS**

<u>34001715 *</u>	<u>10522</u>	
<u>10756</u>	<u>09814</u>	
<u>11286</u>	<u>09585</u>	
<u>10736</u>	<u>10605</u>	
<u>09578</u>	<u>09748</u>	
<u>10838</u>	<u>10338</u>	
<u>09634</u>	<u>10497</u>	
<u>10837</u>	<u>10918</u>	

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.**

[Signature]  
1<sup>st</sup> level Reviewed By: \_\_\_\_\_ Date: 9/2/16

[Signature]  
2<sup>nd</sup> level Reviewed By: \_\_\_\_\_ Date: 9/6/16



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

Lab Name: TestAmerica Sacramento Job No.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
 Analysis Method: TO-15 Date Collected: 08/30/2016 00:00  
 Sample wt/vol: 500 (mL) Date Analyzed: 09/01/2016 06:42  
 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.: 125222 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.21	J	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	ND		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	0.11
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.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
 Analysis Method: TO-15 Date Collected: 08/30/2016 00:00  
 Sample wt/vol: 500 (mL) Date Analyzed: 09/01/2016 06:42  
 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.: 125222 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	0.050
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	ND		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	0.079
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.: 320-21376-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: 34001715 Lab Sample ID: 320-21376-1  
 Matrix: Air Lab File ID: MS9083120.D  
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 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.: 125222 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)	94		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento  
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\MS9083120.D  
 Lims ID: 320-21376-A-1  
 Client ID: 34001715  
 Sample Type: Client  
 Inject. Date: 01-Sep-2016 06:42:30 ALS Bottle#: 3 Worklist Smp#: 20  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 320-21376-A-1  
 Misc. Info.: 500  
 Operator ID: SV Instrument ID: ATMS9  
 Method: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\TO15\_ATMS9N.m  
 Limit Group: MSA - TO15 - ICAL  
 Last Update: 01-Sep-2016 11:06:30 Calib Date: 17-Aug-2016 21:33:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS9\20160817-33559.b\MS9081711.D  
 Column 1 : RTX Volatiles ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK008

First Level Reviewer: yangk

Date: 01-Sep-2016 10:21:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	12.418	12.436	-0.018	97	35546	4.00	
* 2 1,4-Difluorobenzene	114	14.523	14.535	-0.012	96	153106	4.00	
* 3 Chlorobenzene-d5 (IS)	117	20.442	20.448	-0.006	89	133667	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.592	13.610	-0.018	99	55413	4.13	
\$ 5 Toluene-d8 (Surr)	100	17.686	17.698	-0.012	98	99246	3.86	
\$ 6 4-Bromofluorobenzene (Surr	174	22.364	22.364	0.000	90	80073	3.75	
31 Acetone	43	7.703	7.642	0.061	89	3202	0.2145	

**Reagents:**

VASUISIM\_00328 Amount Added: 50.00 Units: mL Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS9\20160831-34080.b\MS9083120.D

Injection Date: 01-Sep-2016 06:42:30

Instrument ID: ATMS9

Operator ID: SV

Lims ID: 320-21376-A-1

Lab Sample ID: 320-21376-1

Worklist Smp#: 20

Client ID: 34001715

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

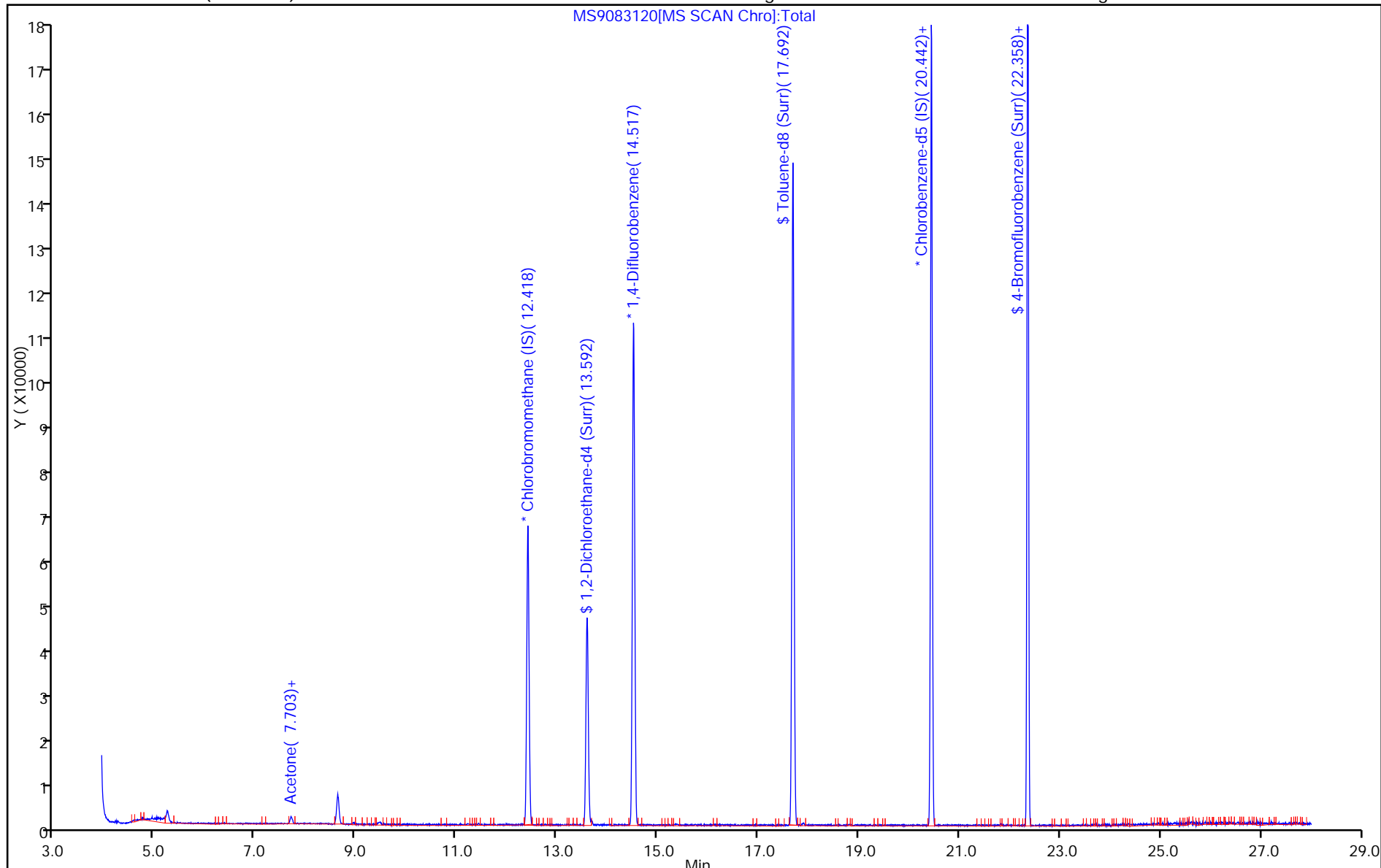
ALS Bottle#: 3

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\20160831-34080.b\MS9083120.D

Injection Date: 01-Sep-2016 06:42:30

Instrument ID: ATMS9

Lims ID: 320-21376-A-1

Lab Sample ID: 320-21376-1

Client ID: 34001715

Operator ID: SV

ALS Bottle#: 3 Worklist Smp#: 20

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

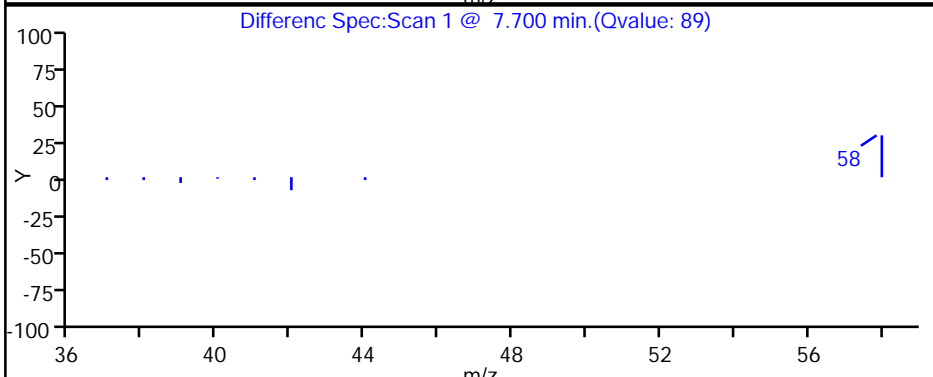
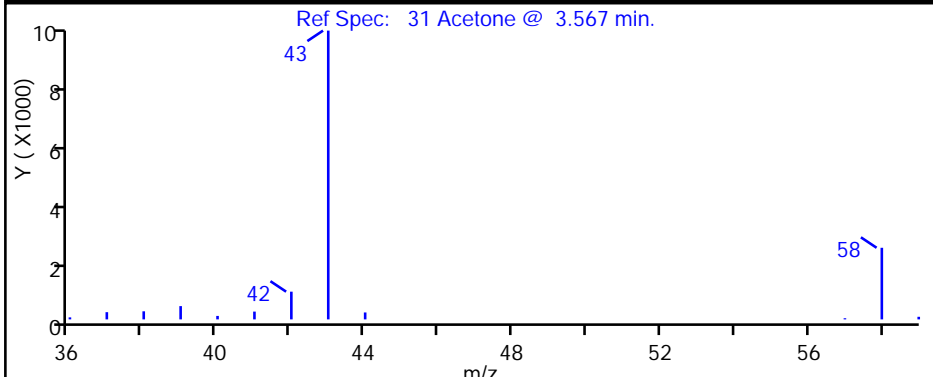
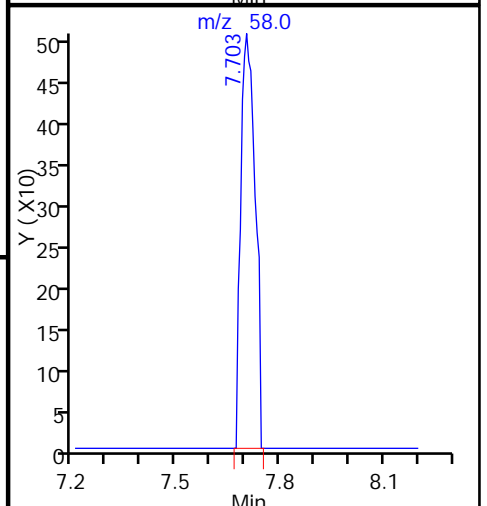
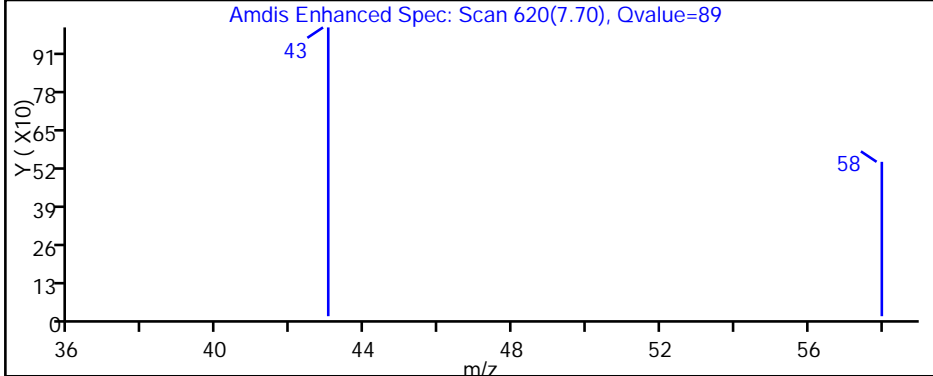
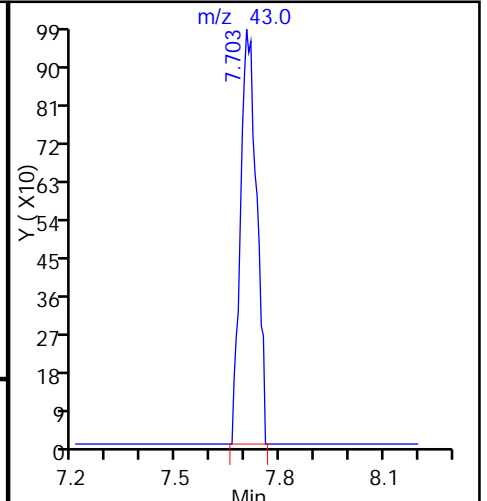
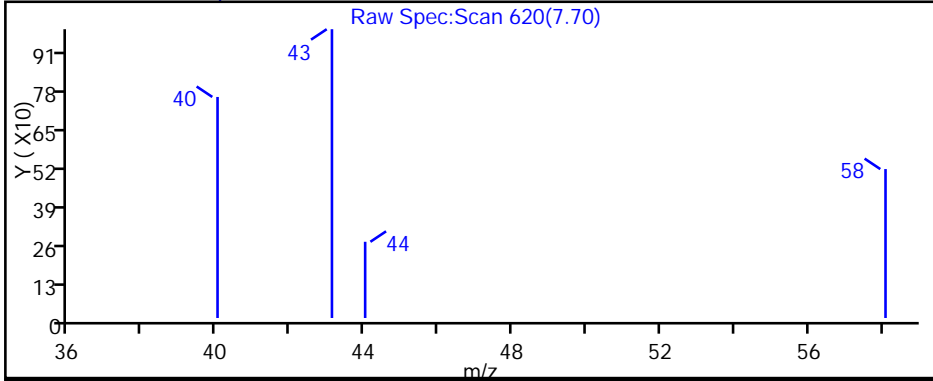
Method: TO15\_ATMS9N

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles ( 0.32 mm)

Detector: MS SCAN

31 Acetone, CAS: 67-64-1



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**NORTHERN EXTANT ONSITE BUILDING INVESTIGATION REPORT  
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EMERYVILLE, CALIFORNIA  
FUEL LEAK CASE NO. RO0000548  
GEOTRACKER GLOBAL ID T0600100894**

**OCTOBER 5, 2016**

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