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Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Attention: Ms. Kit Soo

**Transmittal  
Soil Vapor Sampling Report  
Sparkle Cleaners  
7000 Bancroft Avenue  
Oakland, California  
SLIC Case RO0002942  
GeoTracker Global ID: SLT19735483**

Dear Ms. Soo:

Submitted herewith for your review is the *Soil Vapor Sampling Report, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, California* dated October 31, 2016, prepared by PES Environmental, Inc.

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.

Yours very truly,

**Palm Peninsula, LLC and 7200 Bancroft, LLC**



Jacob Levy  
Member of 7200 Bancroft, LLC

cc: Gary Thomas – PES Environmental, Inc.



A Report Prepared For:

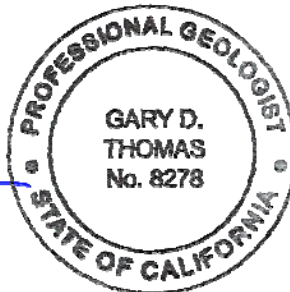
Palm Peninsula, LLC and 7200 Bancroft, LLC  
c/o Levy Affiliated Holdings  
201 Wilshire Boulevard  
Santa Monica, California 90401

**Soil Vapor Sampling Report  
Sparkle Cleaners  
7000 Bancroft Avenue  
Oakland, California  
SLIC Case: RO0002942  
GeoTracker Global ID: SLT19735483**

**October 31, 2016**

By:

Gary Thomas, P.G.  
Associate Geologist



William W. Mast, P.G.  
Principal Engineer



**1488.001.01.003**

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## 1.0 INTRODUCTION

This report has been prepared by PES Environmental, Inc. (PES) to document the results of installation and sampling of soil vapor probes at the Sparkle Cleaners facility located at 7000 Bancroft Avenue in the Eastmont Town Center, Oakland, California (site or subject property). The site location and configuration are presented on Plates 1 and 2. Sparkle Cleaners is an operating retail dry-cleaning facility located at the center. Until approximately December 2008, tetrachloroethene (PCE) was used as the dry-cleaning solvent. At that time the PCE-based equipment was decommissioned, removed from the property, and replaced with new clothes cleaning equipment that utilizes “wet-cleaning” technology with a soy-based cleaner (i.e., no hazardous chemicals are used or stored on the site).

The investigation was conducted in accordance with *Work Plan for Soil Vapor Sampling* dated December 15, 2015 (Work Plan) prepared by PES (PES, 2015). A copy of the Work Plan is provided as Appendix A to this report. The Work Plan was approved by Alameda County Environmental Health Services (ACEH) staff in correspondence dated January 5, 2016 (ACEH, 2016). As discussed in the Work Plan, ACEH had requested the investigation in a letter dated August 26, 2015 (ACEH, 2015) and that the soil vapor sampling be conducted “within the source area and downgradient from the source area to confirm that the residual contamination at the site does not pose a risk of vapor intrusion”.

Background information for the site, including a summary of prior investigation and remediation, is presented in the Work Plan (Appendix A).

This report is organized as follows:

- Section 2 discusses the planning activities prior to performing the field work, and presents the methods and procedures utilized during soil vapor probe installation and sampling;
- Section 3 presents soil vapor probe sampling results; and
- Section 4 presents a discussion of the sampling results and recommendations with respect to the findings of this investigation.

## 2.0 SOIL VAPOR PROBE INSTALLATION AND SAMPLING ACTIVITIES

In accordance with the Work Plan, the investigation activities included installing and sampling eight permanent soil vapor probes (i.e., locations PSV-1 through PSV-8). The probe locations are shown on Plate 2.

## **2.1 Field Planning Activities**

A permit for the installation of the soil vapor probes was obtained from the Alameda County Public Works Agency (ACPWA) prior to conducting the investigation. A copy of the permit is included in Appendix B. PES contacted Underground Service Alert more than 48 hours before beginning the sampling activities, and C. Cruz Sub-Surface Locators, Inc. (C. Cruz) of Milpitas, California, an underground utility locating subcontractor, marked underground utilities and screened each proposed work area for subsurface obstructions.

The existing site-specific Health and Safety Plan, which complies with applicable federal and California Occupational Safety and Health Administration (OSHA) guidelines, was used during the implementation of this work.

## **2.2 Soil Vapor Probe Installation Procedures, and Sampling Methods and Analysis**

On September 23, 2016, soil vapor probes PSV-1 through PSV-8 were installed at the locations shown on Plate 2. The probes were installed in 3-inch outside diameter boreholes advanced by Cascade Drilling LLC (Cascade) of Richmond, California. Cascade possesses a valid C-57 California water well contractor's license. The installation and sampling of the soil vapor probes followed the procedures outlined in the *Advisory – Active Soil Gas Investigations* (ASGI) (Department of Toxic Substances Control [DTSC], 2015)<sup>1</sup>. A California-registered geologist supervised the probe construction activities.

The soil vapor probe boreholes were hand augered to a depth of approximately 5.5 feet below ground surface (bgs). After the target depth was reached, 1/4-inch outside diameter Teflon<sup>®</sup> tubing equipped with a stainless-steel filter cartridge was extended to a depth of approximately 6 inches above the bottom of the borehole and a 1-foot thick sand pack was placed around the filter cartridge. One-foot of dry granular bentonite was placed above the sand pack, followed by a neat cement grout (with one to five percent bentonite) seal to the surface. The probes were labeled and fitted with a compression valve. A 4-inch diameter steel, flush-mounted enclosure was installed at the surface to protect each probe.

Because the soil vapor probes were installed using the hand auger method, the probes were allowed to equilibrate for a minimum of 48 hours, as recommended in the ASGI, prior to conducting the leak-test testing, purging, and sampling procedures discussed below. To comply with the equilibration recommendation in the ASGI, the probes were sampled on September 26, 2016.

Prior to purging and the collection of 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

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<sup>1</sup> DTSC, 2015. *Advisory - Active Soil Gas Investigations*. Jointly developed by the California Environmental Protection Agency Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) and RWQCB - San Francisco Region (SFRWQCB). July.

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 a period of at least one minute) prior to purging and the collection of soil vapor samples. If observable vacuum loss was noted, then the sample train was re-assembled and the shut-in test was repeated. This process was repeated as necessary until a successful shut-in test had been performed.

A default of three sample apparatus volumes was purged prior to collection of each 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 annular space. The stagnant air was purged with a six-liter Summa canister. A 1-liter Summa canister that was batch-certified clean by a California-certified analytical laboratory was utilized to collect the soil vapor samples and shroud samples discussed below.

Following completion of the shut-in leak test and purging, sample train leak testing was performed using 1,1-difluoroethane (1,1-DFA) as a propellant tracer in combination with a shroud box. The tracer shroud box consisted of a polycarbonate box equipped with a sampling port. The bottom of the shroud box was positioned over the probe with the sample collection tubing passing through the bottom. Once in position, the sample train was connected to the Summa canister and a second Summa canister was set up to sample air within the shroud box; the shroud box was placed over the entire sample train. The shroud box was equipped with an access port to allow charging of the box with the propellant tracer 1,1-DFA. Prior to opening the Summa canisters, the shroud box was charged by spraying 1,1-DFA propellant into the shroud box. The shroud box was allowed to remain in place for the duration of sampling. A field duplicate sample was collected at location PSV-7.

After sampling, the Summa canisters were transported to K-Prime Inc. (K-Prime), a state-certified laboratory located in Santa Rosa, California, under chain-of-custody protocol. The soil vapor samples and duplicate sample were analyzed for: (1) volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (U.S. EPA) Method TO-15; and (2) 1,1-DFA by U.S. EPA Method TO-3. The shroud samples were analyzed for 1,1-DFA by U.S. EPA Method TO-3.

To reduce the potential for cross-contamination between probe locations, downhole hand auguring equipment was thoroughly cleaned prior to initiating work and between probe locations. Soil cuttings and waste water generated during probe installation and sampling activities were contained in 55-gallon drums, until proper off-site management in accordance with applicable State and Federal laws was arranged.

### **3.0 SOIL VAPOR SAMPLING RESULTS**

Analytical results for the soil vapor samples are summarized on Table 1 and shown graphically on Plate 3. The laboratory analytical reports and chain-of-custody forms are presented in Appendix B. The soil vapor results discussed below are compared to commercial/industrial

land use Environmental Screening Levels (ESLs) developed by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB, 2016)<sup>2</sup>.

### **3.1 Soil Vapor Analytical Results**

As shown on Table 1 and Plate 3, five VOCs (i.e., PCE, trichloroethene [TCE], benzene, toluene, and chloroform) were detected in the soil vapor samples. Only PCE was detected at a concentration exceeding its commercial/industrial ESL. PCE was detected in all 9 samples (including the duplicate sample) at concentrations ranging from 162 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ; location PSV-5) to 85,300  $\mu\text{g}/\text{m}^3$  (location PSV-1). The concentrations in 6 of 9 samples are above the commercial/industrial soil vapor ESL of 2,100  $\mu\text{g}/\text{m}^3$  for PCE. The concentrations of PCE in the samples collected at locations PSV-3 (at 1,390  $\mu\text{g}/\text{m}^3$ ), PSV-5 (at 162  $\mu\text{g}/\text{m}^3$ ), and PSV-8 (at 384  $\mu\text{g}/\text{m}^3$ ) are below the ESL for PCE.

### **3.2 Quality Assurance/Quality Control Assessment for Soil Vapor**

Data quality for the soil vapor samples was assessed by implementing appropriate quality assurance/quality control procedures and through review of analytical data and laboratory quality control 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;
- Results for the field duplicate sample from location PSV-7 generally agreed with respect to quantity (within acceptable precision limits) and to detection of target compounds. The relative percent difference (RPD) for the PCE concentrations was 0.9 percent. The duplicate result indicates acceptable quality of the data set; and
- As indicated on Table 1, the leak check compound (1,1-DFA) was detected at a concentration of 26.3 parts per million by volume (ppmV) in the primary sample collected at location PSV-7. Based on the concentration of 1,1-DFA in the shroud sample at this location (135,000 ppmV [see laboratory report in Appendix B]), the percent ambient air leak was 0.02 percent, which is below the 5 percent maximum acceptable amount per ASGI (DTSC, 2015).

Based on the results discussed above, the data from K-Prime are considered to be representative and of good quality. Details regarding the laboratory quality control procedures are provided in the analytical laboratory reports (Appendix B).

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<sup>2</sup> RWQCB, 2016. *February 2016, Rev. 3, Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs)*. Table SG-1 Sub-Slab/Soil Gas Vapor Intrusion: Human Health Risk Levels, Commercial/Industrial Land Use.



#### 4.0 DISCUSSION OF SAMPLING RESULTS AND RECOMMENDATIONS

As indicated on Plate 3, PCE was detected at concentrations exceeding the soil vapor ESL of 2,100  $\mu\text{g}/\text{m}^3$  in the samples collected from probes PSV-1 and PSV-2 in the hallway behind the cleaners and in probes PSV-6 and PSV-7 in the southeastern portion of the cleaners.

Remediation of soil with PCE levels exceeding remedial goals was completed in 2007 in the vicinity of the former DCU near PSV-1 and PSV-2. The PCE detections at these locations are an indication of a residual vapor cloud in the vicinity of the remedial excavation.

Similarly, soil vapor probes PSV-6 and PSV-7, are located near a prior DCU that utilized PCE as the dry-cleaning solvent. As noted above, the DCU at this second location was replaced with the current soy-based DCU in 2008. The 2006 investigations and 2007 remediation did not identify the need for soil remediation in this portion of the tenant space. A vapor cloud also appears to be present near this former DCU location.

Based on the findings of this investigation, it is anticipated that additional assessment will need to be conducted to evaluate the extent of PCE-affected soil vapor. PES will contact ACEH staff to discuss the next steps.

#### 5.0 REFERENCES

Alameda County Environmental Health Services (ACEH), 2015. Subject: SLIC Case RO0002942 and GeoTracker Global ID SLT19735483, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, CA 94605. January 5.

ACEH, 2016. Subject: Work Plan Approval for SLIC Case RO0002942 and GeoTracker Global ID SLT19735483, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, CA 94605. January 5.

California Regional Water Quality Control Board Based, San Francisco Region (RWQCB), 2016. *February 2016, Rev. 3, Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs)*.

DTSC, 2015. *Advisory - Active Soil Gas Investigations*. Jointly developed by the California Environmental Protection Agency Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) and RWQCB - San Francisco Region (SFRWQCB). July.

PES Environmental, Inc. (PES), 2015. *Work Plan for Soil Vapor Sampling, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, California*. December 15.

**TABLES**

**Table 1**  
**Summary of Soil Vapor Analytical Results**  
**7000 Bancroft Avenue**  
**Oakland, California**

Sample Location	Sample Number	Date Sampled	Sample Depth (feet bgs)	PCE ( $\mu\text{g}/\text{m}^3$ )	TCE ( $\mu\text{g}/\text{m}^3$ )	cis-1,2-DCE ( $\mu\text{g}/\text{m}^3$ )	Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	Benzene ( $\mu\text{g}/\text{m}^3$ )	Toluene ( $\mu\text{g}/\text{m}^3$ )	Ethylbenzene ( $\mu\text{g}/\text{m}^3$ )	m,p-Xylene ( $\mu\text{g}/\text{m}^3$ )	o-Xylene ( $\mu\text{g}/\text{m}^3$ )	Chloroform ( $\mu\text{g}/\text{m}^3$ )	1,1-DFA (Leak Check Compound) (ppmV)
PSV-1	PSV-1	09/26/16	5.0	<b>85,300</b>	< 537	< 397	< 256	< 319	< 377	< 434	< 868	< 434	< 488	< 10.0
PSV-2	PSV-2	09/26/16	5.0	<b>11,200</b>	< 107	< 79.3	< 51.1	< 63.9	< 75.4	< 86.8	< 174	< 86.8	< 97.7	< 10.0
PSV-3	PSV-3	09/26/16	5.0	<b>1,390</b>	<b>13.4</b>	< 7.93	< 5.11	< 6.39	<b>10.0</b>	< 8.68	< 17.4	< 8.68	< 9.77	< 10.0
PSV-4	PSV-4	09/26/16	5.0	<b>2,140</b>	< 10.7	< 7.93	< 5.11	<b>7.22</b>	<b>26.5</b>	< 8.68	< 17.4	< 8.68	< 9.77	< 10.0
PSV-5	PSV-5	09/26/16	5.0	<b>162</b>	< 5.37	< 3.97	< 2.56	< 3.19	< 3.77	< 4.34	< 8.68	< 4.34	< 4.88	< 10.0
PSV-6	PSV-6	09/26/16	5.0	<b>6,590</b>	<b>683</b>	< 19.8	< 12.8	< 16.0	<b>24.0</b>	< 21.7	< 43.4	< 21.7	< 24.4	< 10.0
PSV-7	PSV-7	09/26/16	5.0	<b>5,540</b>	< 26.9	< 19.8	< 12.8	< 16.0	< 18.8	< 21.7	< 43.4	< 21.7	< 24.4	<b>26.3</b>
PSV-7	PSV-7 DUP	09/26/16	5.0	<b>5,490</b>	< 26.9	< 19.8	< 12.8	< 16.0	< 18.8	< 21.7	< 43.4	< 21.7	<b>25.6</b>	< 10.0
PSV-8	PSV-8	09/26/16	5.0	<b>384</b>	< 5.37	< 3.97	< 2.56	< 3.19	< 3.77	< 4.34	< 8.68	< 4.34	< 4.88	< 10.0
<b>Commercial/Industrial Soil Vapor ESL</b> <sup>(Note 1)</sup>				2,100	3,000	35,000	160	420	1,300,000	4,900	440,000	440,000	530	N/A

Detections are shown in **bold**.

Results equal to or exceeding the commercial/industrial soil vapor ESL are shaded.

**Abbreviations:**

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

bgs = below ground surface.

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

PCE = Tetrachloroethene.

TCE = Trichloroethene.

< 5.11 = not detected at or above the specified laboratory reporting limit.

1,1-DFA = 1,1-difluoroethane (leak check compound).

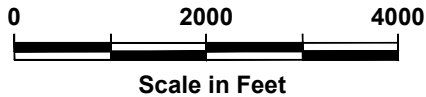
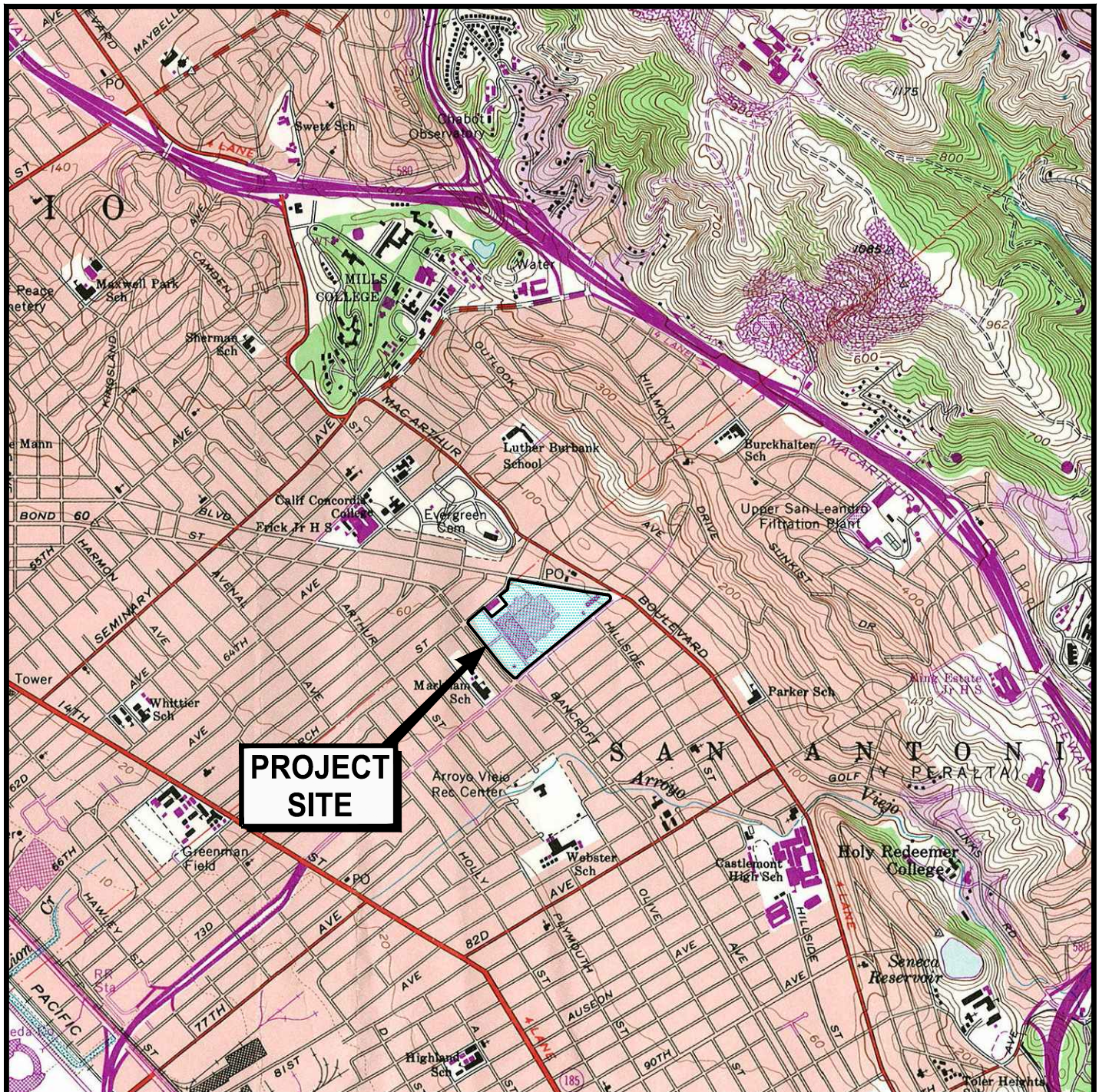
N/A = Not applicable.

**Notes:**

1. ESL = February 2016 (Rev. 3) Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Environmental Screening Levels (ESLs), Table SG-1 Sub-Slab/Soil Gas Vapor Intrusion: Human Health Risk Levels, Commercial/Industrial Land Use.

## **ILLUSTRATIONS**





U.S.G.S. Topo Map - Oakland East, California, 7.5-minute quadrangle. Map version 1959; current as of 1980.



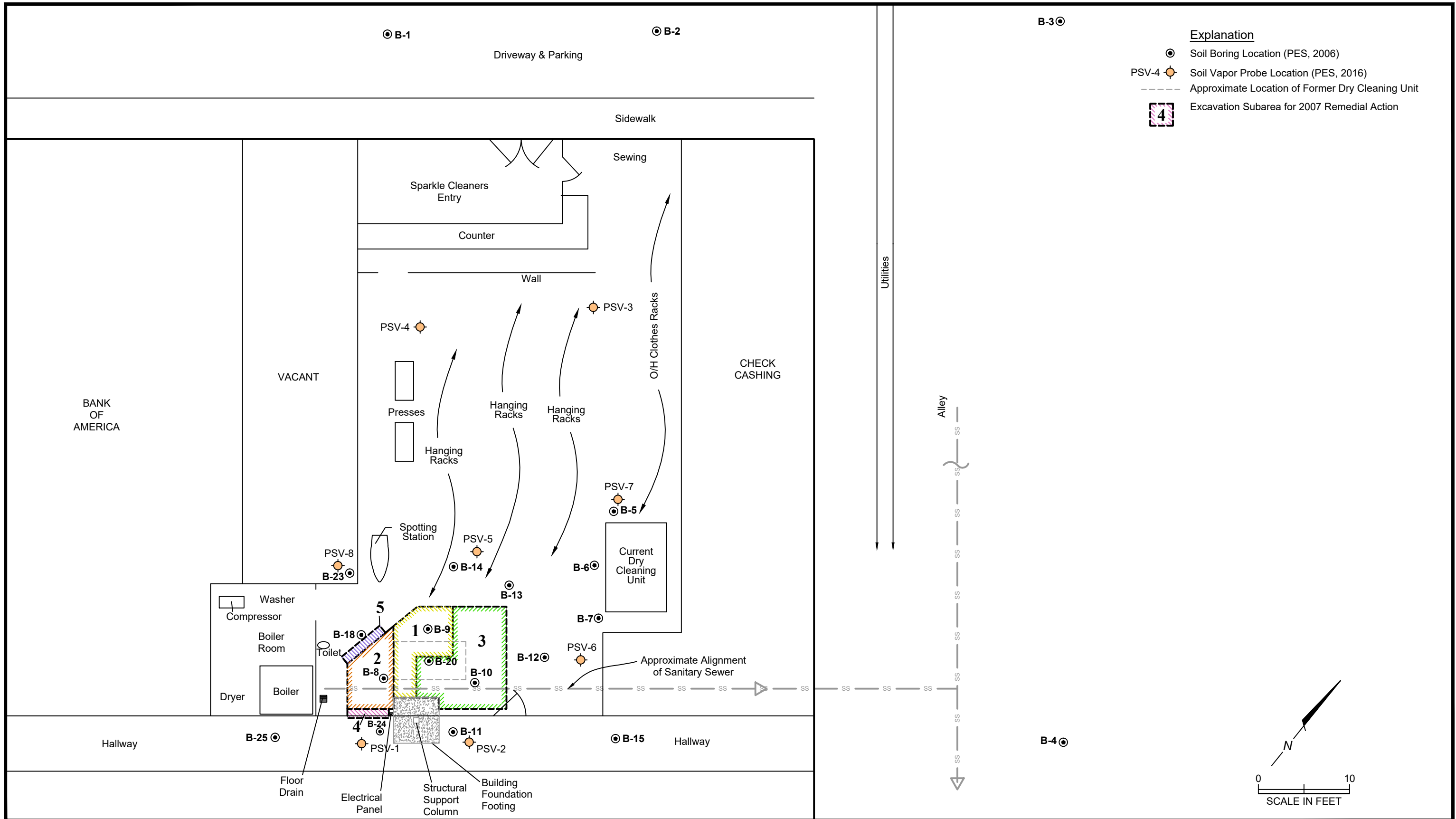
**PES Environmental, Inc.**  
 Engineering & Environmental Services

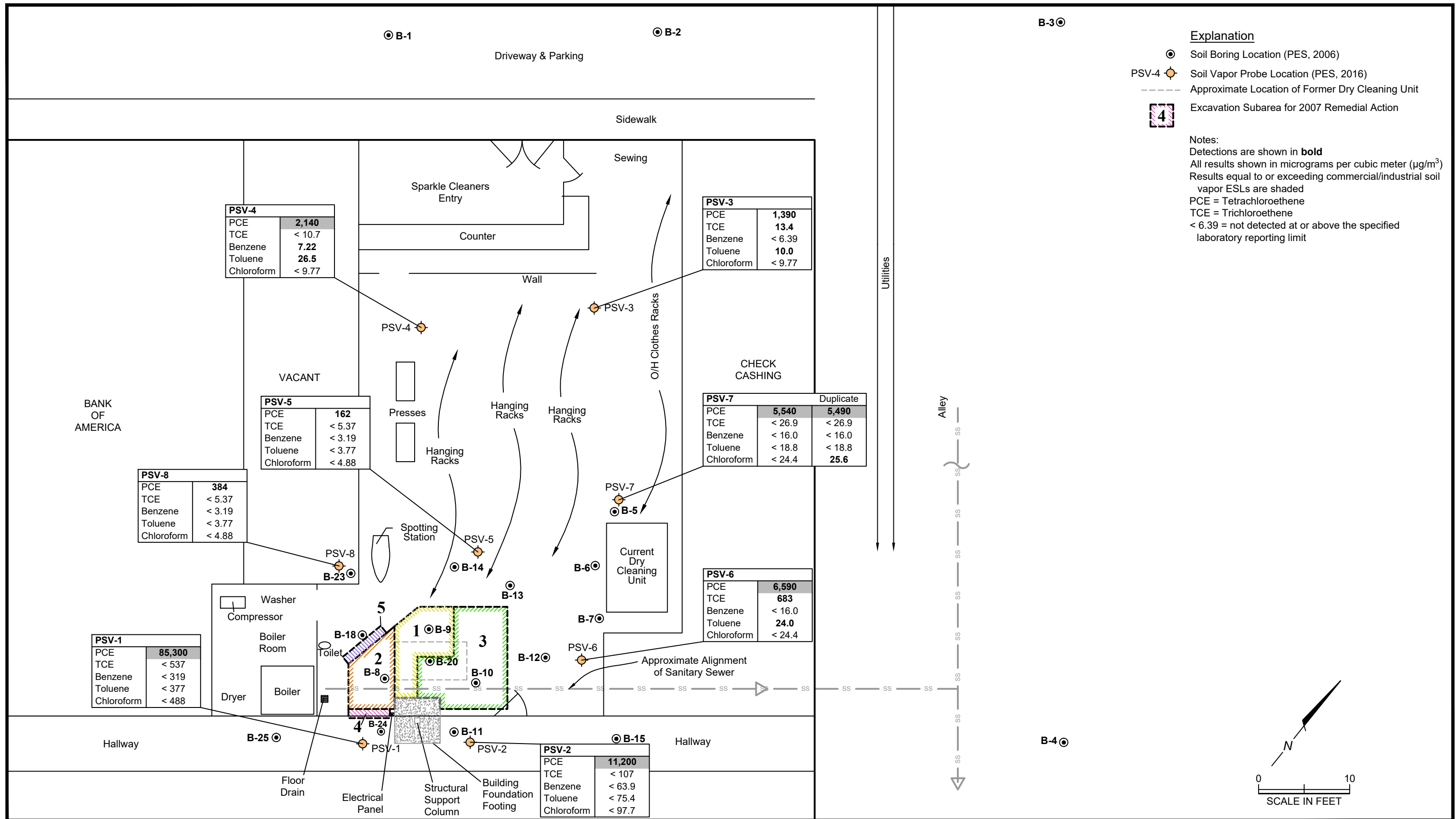
**Site Location Map**  
 Soil Vapor Sampling Report  
 Sparkle Cleaners  
 Eastmont Town Center  
 Oakland, California

PLATE

**1**







**Summary of Soil Vapor Analytical Results**  
 Soil Vapor Sampling Report  
 Sparkle Cleaners  
 Eastmont Town Center  
 Oakland, California

**APPENDIX A**

**WORK PLAN FOR SOIL VAPOR SAMPLING**



# 7200 Bancroft Avenue, LLC

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201 WILSHIRE BOULEVARD  
SANTA MONICA, CA 90401  
TEL: (310) 883-7900  
FAX: (310) 883-7910

December 15, 2015

**1488.001.01.001**

Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Attention: Mr. Jerry Wickham

**Transmittal**  
**Work Plan for Soil Vapor Sampling**  
**Sparkle Cleaners**  
**7000 Bancroft Avenue**  
**Oakland, California**  
**SLIC Case RO0002942**

Dear Mr. Wickham:

Submitted herewith for your review is the *Work Plan for Soil Vapor Sampling, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, California* dated December 15, 2015, prepared by PES Environmental, Inc.

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.

Yours very truly,

**Palm Peninsula, LLC and 7200 Bancroft, LLC**



Jacob Levy  
Member of 7200 Bancroft, LLC

cc: Gary Thomas – PES Environmental, Inc.



December 15, 2015

**1488.001.01.001**

Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Attention: Mr. Jerry Wickham

**WORK PLAN FOR SOIL VAPOR SAMPLING  
SPARKLE CLEANERS  
7000 BANCROFT AVENUE  
OAKLAND, CALIFORNIA**

Dear Mr. Wickham:

On behalf of Palm Peninsula, LLC and 7200 Bancroft LLC, the tenants-in-common owner of the subject property, PES Environmental, Inc. (PES) has prepared this Work Plan to conduct soil vapor sampling at the Sparkle Cleaners facility located at 7000 Bancroft Avenue in the Eastmont Town Center, Oakland, California (the site). The site location and configuration are presented on Plates 1 and 2. Sparkle Cleaners is an active dry-cleaning facility. Until approximately December 2008, tetrachloroethene (PCE) was used as the dry-cleaning solvent. At that time the PCE-based equipment was decommissioned, removed from the property, and replaced with new clothes cleaning equipment that utilizes “wet-cleaning” technology with a soy-based cleaner (i.e., no hazardous chemicals are used or stored on the site).

In order to move the case towards closure, Alameda County Environmental Health (ACEH) requested that a work plan be prepared to conduct “sampling within the source area and downgradient from the source area to confirm that the residual contamination at the site does not pose a risk of vapor intrusion”.<sup>1</sup>

Background information for the site and the proposed scope of work are presented below.

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<sup>1</sup> ACEH, 2015. *Subject: SLIC Case RO0002942 and Geotracker Global ID SLT19735483, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, CA 94605.* August 26.

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December 15, 2015  
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## BACKGROUND INFORMATION

### Site Description

The Sparkle Cleaners tenant space (Suite 11) covers approximately 1,800 square feet in the northwest portion of Eastmont Town Center (Plate 2). The area in front (north) of Sparkle Cleaners includes storefront parking and a mall driveway. The rear (south) of the tenant space opens into a common hallway that traverses the width of the building from east to west. An alleyway is located approximately 20 feet to the east.

The ground surface elevation at Sparkle Cleaners is approximately 60 feet above mean sea level (MSL). The site topography slopes gently to the southwest. To the east and northeast of the site, the topography steepens and continues to rise to approximately 360 feet MSL (Plate 1).

### Summary of Previous Environmental Investigations and Remedial Actions

As part of environmental due diligence activities during a prior real estate transaction, PES conducted a subsurface investigation in October 2006<sup>2</sup> to evaluate for the presence of dry cleaning solvents beneath and in the vicinity of Sparkle Cleaners. The results of the investigation are presented in the October 25, 2006 document titled *Summary of Phase II Testing Results, Sparkle Cleaners, Eastmont Town Center*. Pertinent data from this investigation is included in the Appendix. The investigation consisted of: (1) soil matrix and soil vapor sampling at six interior locations and four exterior locations; (2) one grab groundwater sample collected in the service alley along the northeast exterior side of Sparkle Cleaners.

Prior sampling locations are shown on Plate 3. PCE, trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE) were detected in the majority of the soil vapor samples. In addition, PCE was detected in the three interior soil matrix samples near the location of the former dry-cleaning unit (DCU) at concentrations ranging from 1,400 to 3,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ). No volatile organic compounds (VOCs) were detected in the other interior soil matrix samples, the exterior soil matrix samples, or the exterior groundwater sample from location B-3.

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<sup>2</sup> PES, 2006. *Summary of Phase II Testing Results, Sparkle Cleaners, Eastmont Town Center, Oakland, California*. October 25.

**Mr. Jerry Wickham**  
**December 15, 2015**  
**Page 3**

Additional investigation was performed in November 2006, to further evaluate the extent of PCE-affected soil and groundwater. The results of this subsequent investigation are presented in the January 5, 2007 document titled *Remedial Action Workplan, Sparkle Cleaners, Eastmont Town Center*<sup>3</sup> (RAW), which was reviewed and approved by ACEH. Pertinent data from this investigation is included in the Appendix. As part of the investigation, soil matrix samples were collected at 10 interior drilling locations at depths ranging up to 18 feet below ground surface (bgs). In addition, groundwater samples were collected from four sample locations in the parking lot and driveway areas to the northwest and southwest of Sparkle Cleaners. These sampling locations are shown on Plates 2 and 3. PCE (up to 140  $\mu\text{g}/\text{kg}$ ) and TCE (up to 6.8  $\mu\text{g}/\text{kg}$ ) were detected in the soil samples; no other VOCs were detected. PCE and TCE were also detected in two of the four groundwater grab samples at concentrations ranging up to 40 and 2.4 micrograms per liter ( $\mu\text{g}/\text{L}$ ), respectively.

In July 2007, remedial actions were implemented at the Sparkle Cleaners facility to:

- (1) remove with elevated concentrations of VOCs related to dry-cleaning operations; and
- (2) assess and monitor VOC concentrations in groundwater following removal of the source of contamination. The remedial actions were conducted in accordance with the RAW. Soil excavation was conducted to remove soil containing concentrations of PCE above the target soil cleanup concentration of 240  $\mu\text{g}/\text{kg}$ . The excavation extended vertically to an approximate depth of 5.5 feet bgs and resulted in removal of approximately 37 cubic yards of soil (Plate 3). The excavation was backfilled using controlled density fill. The results of the remedial action activities are presented in the September 9, 2007 document titled *Post-Remediation Report, Voluntary Soil Remediation*<sup>4</sup>. Pertinent data from this report are included in the Appendix.

In accordance with the RAW, four monitoring wells (i.e., MW-01 through MW-04) were installed in July 2007 to evaluate groundwater conditions near Sparkle Cleaners (Plate 2). To date, 13 groundwater monitoring events (on a quarterly or semi-annual basis) have been conducted at the site. Pertinent data associated with groundwater monitoring activities is included in the Appendix. Based on the groundwater elevation data collected during the most recent monitoring event conducted in March 2015<sup>5</sup>, groundwater flow is westerly, which is consistent with previous monitoring events. The only VOC constituents detected above laboratory reporting limits in groundwater during this monitoring event were PCE, TCE, and cis-1,2-DCE. The maximum concentrations of PCE and TCE were detected in well MW-01 at 140  $\mu\text{g}/\text{L}$  and 3.5  $\mu\text{g}/\text{L}$ , respectively. Groundwater monitoring data collected since removal

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<sup>3</sup> PES, 2007a. *Remedial Action Workplan, Voluntary Soil Remediation, Sparkle Cleaners, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California*. January 5.

<sup>4</sup> PES, 2007b. *Post-Remediation Report, Voluntary Soil Remediation, Sparkle Cleaners, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California*. September 9.

<sup>5</sup> PES, 2015. *Groundwater Monitoring Report, First Semi-Annual 2015 Event, Sparkle Cleaners, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California*. June 5.

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of the vadose zone source area have indicated that VOC concentrations are fairly stable in downgradient monitoring wells MW-01 and MW-02.

## **SCOPE OF WORK**

As shown on Plate 3, eight temporary soil vapor probes will be installed to evaluate soil vapor conditions within and or immediately adjacent to the Sparkle Cleaners tenant space as follows:

- Five soil vapor sampling locations are proposed in the vicinity of the former source area (i.e., near the former DCU) where soil remediation was conducted in 2007;
- One soil vapor sampling location is proposed near the current DCU; and
- Two soil vapor sampling locations are proposed in the northwestern portion of Sparkle Cleaners to evaluation conditions downgradient of the former source area.

The methods and procedures that will be used during the soil vapor investigation are presented below.

### **Field Planning Activities**

Prior to conducting the proposed scope of work, PES will:

- Obtain a drilling permit from the Alameda County Public Works Agency (ACPWA);
- Coordinate with the subcontractors; and
- Contact Underground Service Alert to schedule visits by public and private utility companies to locate their underground utilities. In addition, a private underground utility locating service will be contracted to conduct a subsurface electromagnetic survey to screen the proposed sampling locations for the presence of subsurface utilities.

The existing site-specific Health and Safety Plan, which complies with applicable federal and California Occupational Safety and Health Administration (OSHA) guidelines, will be used during the implementation of this work.

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### Soil Vapor Probe Installation and Sampling Methods and Procedures

An active soil vapor investigation will be conducted at locations discussed above to assess whether the residual contamination at the site poses a risk of vapor intrusion. The active soil vapor investigation will be conducted in accordance with the procedures outlined in the *Advisory for Active Soil Gas Investigations* (ASGI) published by the Department of Toxic Substances Control, the Regional Water Quality Control Board, Los Angeles Region and the California Regional Water Quality Control Board, San Francisco Bay Region dated July 2015<sup>6</sup>. The soil vapor samples will be collected at approximately 5 feet bgs.

The temporary soil vapor probes will be installed using a hand-held rotary hammer equipped to drive direct-push tooling. The temporary soil vapor probes will be installed in an approximate 1-inch diameter borehole. A PES geologist or engineer will supervise the drilling and probe installation activities.

Once the target depth is reached, ¼-inch outside-diameter Teflon<sup>®</sup> tubing equipped with a filter cartridge will be extended to the bottom of the rod and a minimum 1-foot thick sand pack will be placed around it as the rod is slowly raised. One foot of dry granular bentonite will be placed on top of each sand pack, followed by hydrated bentonite to the surface. The soil vapor probe will be allowed to equilibrate for a minimum of 2 hours prior to purging and soil vapor sampling.

Prior to the collection of soil vapor samples, shut-in leak testing, purging, and sample train leak testing will be performed at each sample location. The shut-in test will consist of assembling 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 will be used to assess if there is any observable loss of vacuum (for at least one minute) prior to purging and the collection of soil vapor samples. If observable vacuum loss is noted, the sample train will be re-assembled and the shut-in test will be repeated. This process will be repeated as necessary until a successful shut-in test has been performed.

A default of three purge volumes will be extracted prior to collecting the soil vapor samples. The stagnant air will be purged with a six-liter SUMMA canister. The purge volume will be 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 annular

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<sup>6</sup> DTSC, 2015. *Advisory - Active Soil Gas Investigations*. Jointly developed by the California Environmental Protection Agency Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) and RWQCB - San Francisco Region (SFRWQCB). July.

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space. In accordance with the ASGI, purging and collection of soil vapor samples will be performed using a flow rate of 100 to 200 milliliters per minute (mL/min) and maintaining a low vacuum of less than 100 inches of water to mitigate ambient air breakthrough into samples.

Following completion of the shut-in leak test and purging, sample train leak testing will be performed using a propellant tracer in combination with a shroud box. The shroud box will consist of a polycarbonate box equipped with an access port to allow charging of the box with a propellant tracer. The shroud box will be positioned over the wellhead with the sample collection tubing passing through the bottom. Once in position, the sample train will be connected to a 1-liter soil vapor sample SUMMA canister. The shroud box will then be charged by spraying the tracer propellant into the shroud box. The shroud box will be allowed to remain in place for the duration of sampling. For quality assurance/quality control (QA/QC) evaluation, a second 1-liter SUMMA canister will be placed within the shroud and used to collect a shroud air sample concurrent with each soil vapor sample. The shroud air sample will be analyzed for the tracer gas only to quantitatively assess representative leak check compound concentrations in the shroud.

A 1-liter vapor sample SUMMA canister that is batch-certified clean by a California-certified analytical laboratory will be utilized to collect the soil vapor sample. Each shroud and soil vapor sample canister will be filled until the vacuum gauge reads approximately 5 inches of mercury (Hg) or less. Field QA/QC samples for the soil vapor investigation will consist of one duplicate sample per every ten samples. The duplicate sample will be collected concurrent with the collection of the primary sample.

After sampling, the SUMMA canisters will be transported to the analytical laboratory under chain-of-custody protocol. The soil vapor samples and duplicates will be analyzed by K-Prime Inc. (K-Prime), of Santa Rosa, California for VOCs using U.S. Environmental Protection Agency (U.S. EPA) Test Method TO-15 and for the propellant tracer by U.S. EPA Test Method TO-3. In addition, the shroud samples will be analyzed for the propellant tracer by U.S. EPA Test Method TO-3.

Upon completion of soil vapor sampling activities, the boreholes will be overdrilled and backfilled to the surface with a neat cement grout. Grouting will be performed on the same day the temporary soil vapor probes are advanced and sampled. The borehole surface will be patched to match the existing surface materials.

To reduce the potential for cross-contamination between sampling locations, downhole soil vapor equipment will be thoroughly cleaned prior to initiating work at each sampling location with either: (1) a dilute Alconox solution, rinse with potable water, and final rinse with distilled water; or (2) a high-pressure hot water wash.

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Decontamination fluids and soil cuttings generated during the soil vapor investigation will be temporarily stored on the site. The investigation-derived waste (IDW) will be stored in secured, labeled 55-gallon steel drums, until proper off-site management in accordance with applicable State and Federal laws can be arranged. The IDW will be disposed of or recycled based on the results of the laboratory analyses and/or existing waste characterization data.

## **REPORTING**

A description of the methods and procedures of the above-referenced scope of work will be presented in a report along with the results of the sampling activities. The report will also provide tabulated data, illustrations of contaminant concentrations, laboratory reports, findings of the completed scope of work, and recommendations, as appropriate.

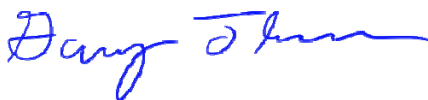
## **SCHEDULE**

It is anticipated that the field work (including drilling permit and utility clearance) will be performed approximately three weeks after receiving ACEH approval of the Work Plan, depending on drilling subcontractor availability. Laboratory analysis will take approximately two weeks. A report summarizing the field investigation and presenting the testing results will be submitted to ACEH within approximately six weeks following receipt of the laboratory analytical results.

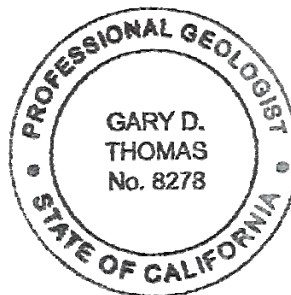
Please call Will Mast at (415) 899-1600 if you have any questions or comments regarding this work plan.

Very truly yours,

**PES ENVIRONMENTAL, INC.**



Gary Thomas, P.G.  
Associate Geologist



William W. Mast, P.G.  
Principal Engineer



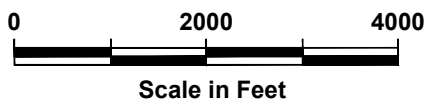
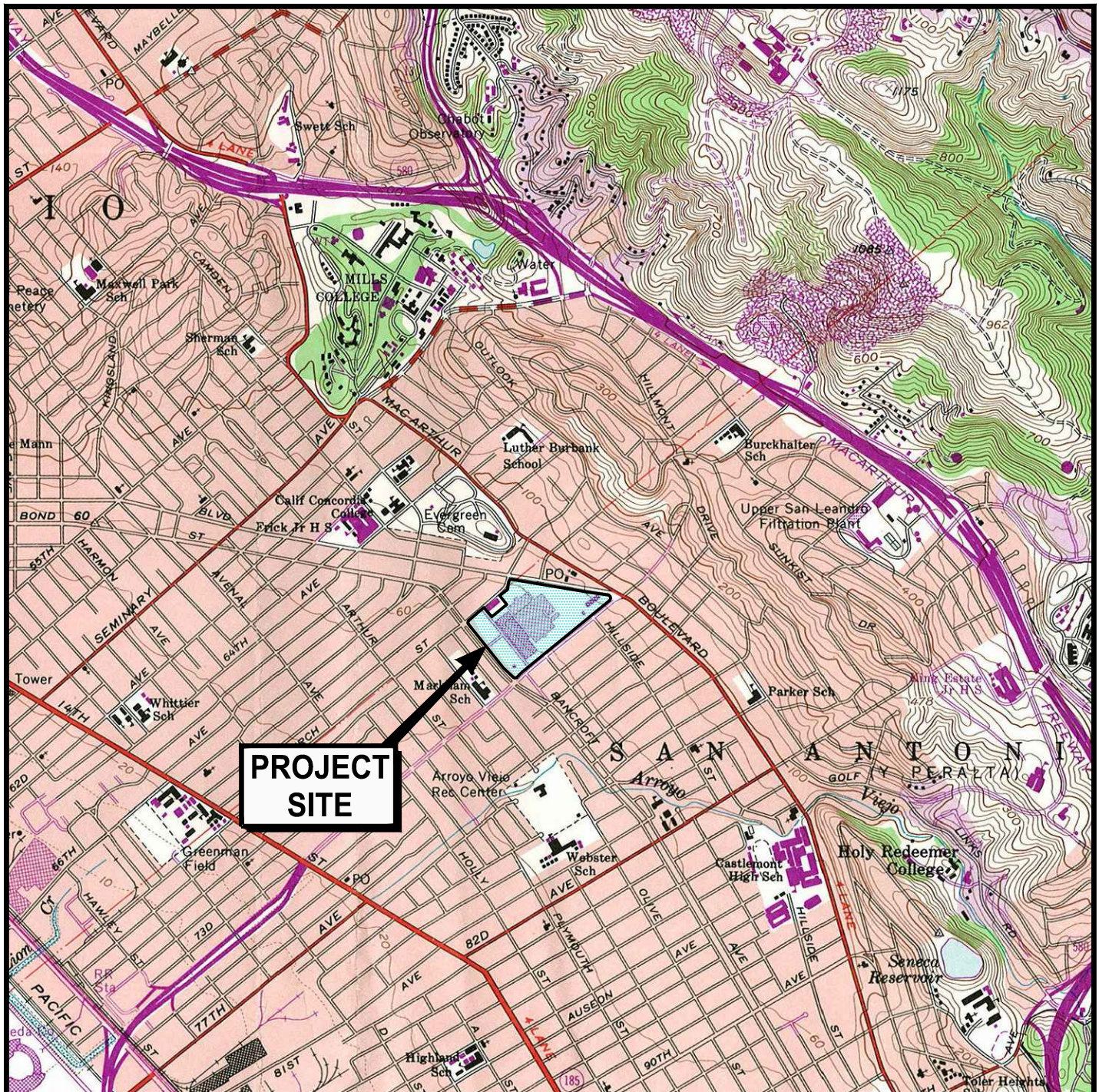
**Mr. Jerry Wickham**  
**December 15, 2015**  
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Attachments: Plate 1 – Site Location  
Plate 2 – Site Plan  
Plate 3 – Proposed Soil Vapor Sampling Locations  
Appendix – Pertinent Historical Investigation Data

cc: Jacob Levy – Palm Peninsula, LLC and 7200 Bancroft LLC

## **ILLUSTRATIONS**





U.S.G.S. Topo Map - Oakland East, California, 7.5-minute quadrangle. Map version 1959; current as of 1980.

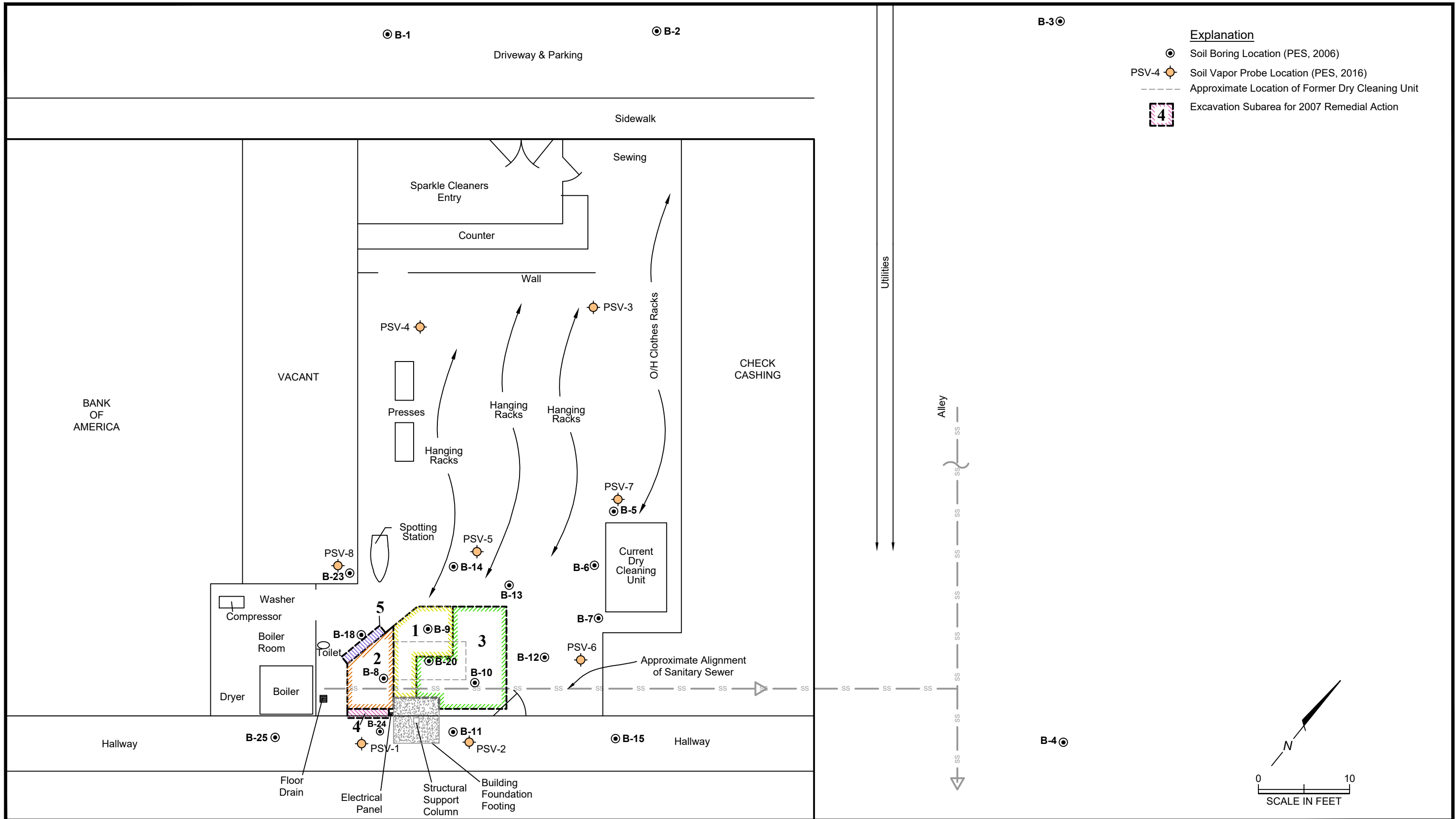


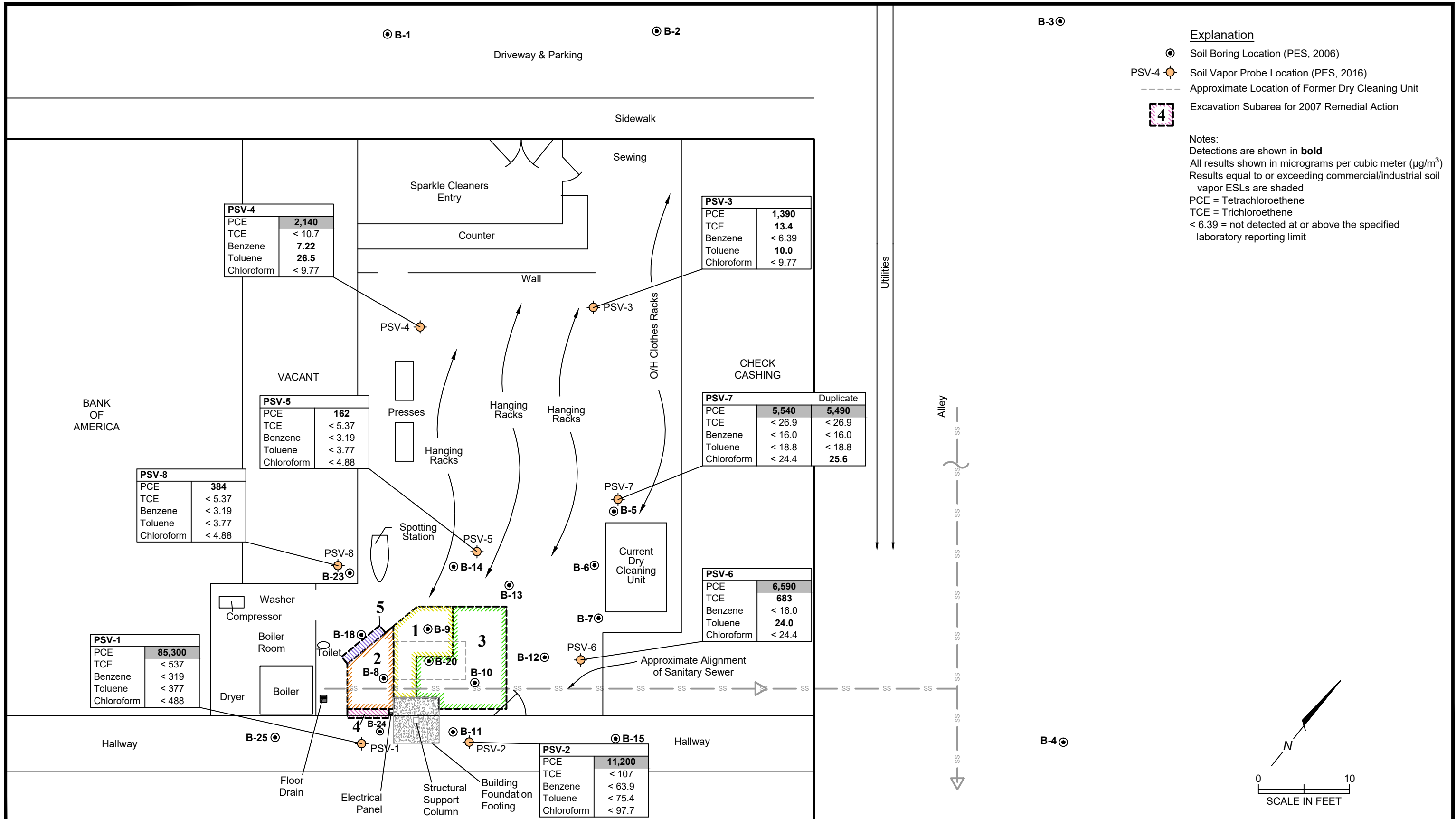
**PES Environmental, Inc.**  
 Engineering & Environmental Services

**Site Location Map**  
 Soil Vapor Sampling Report  
 Sparkle Cleaners  
 Eastmont Town Center  
 Oakland, California

PLATE  
**1**







**Summary of Soil Vapor Analytical Results**  
 Soil Vapor Sampling Report  
 Sparkle Cleaners  
 Eastmont Town Center  
 Oakland, California

**APPENDIX**

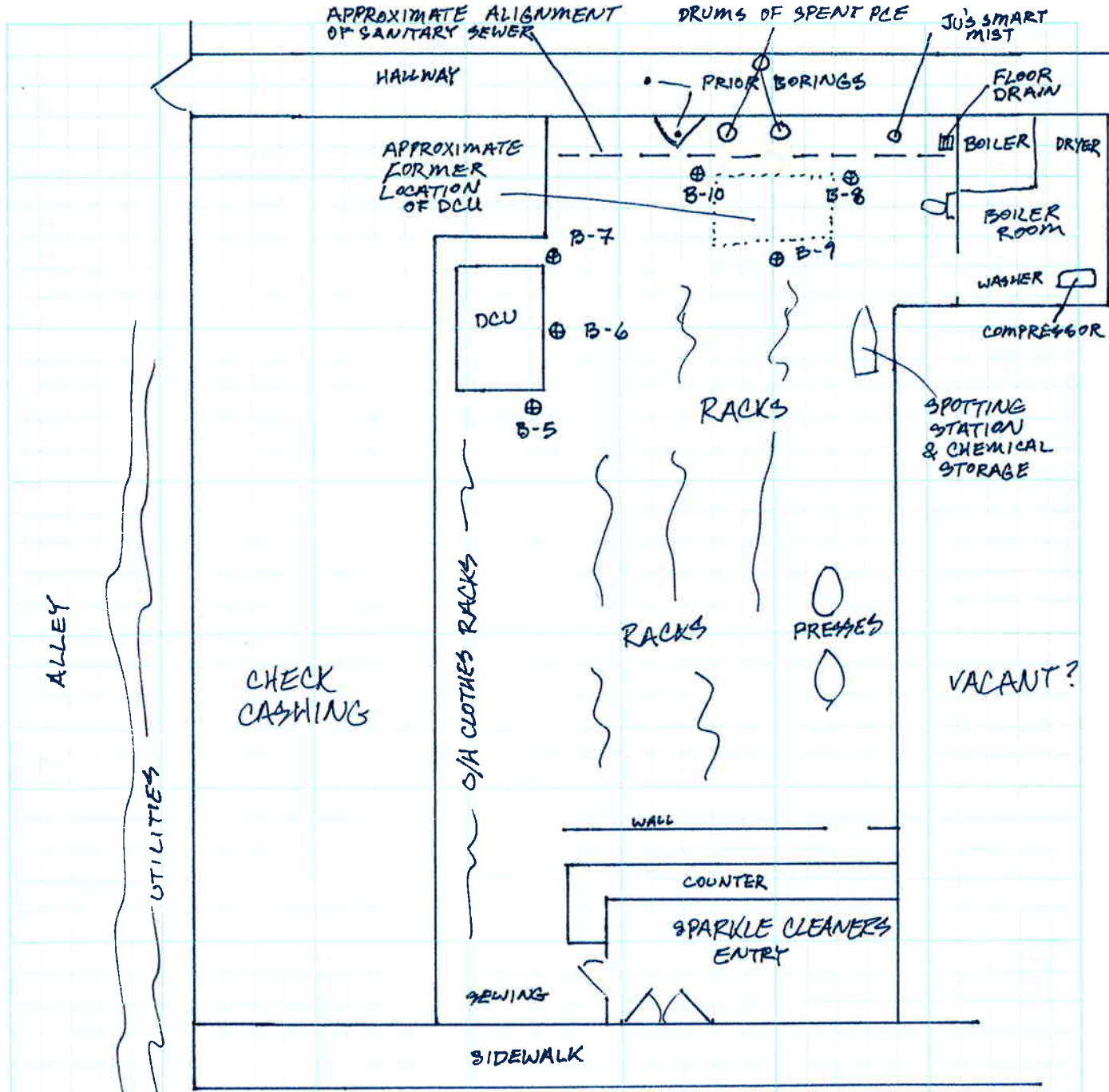
**PERTINENT HISTORICAL INVESTIGATION DATA**

**PHASE II TESTING RESULTS**



SHEET	OF	
JOB NO.	881.060.01.002	
FILE NAME		
PROJECT	SPARKLE CLEANERS	COMPUTED BY WWM DATE 10.24.06
SUBJECT	EASTMONT TOWN CENTER	CHECKED BY DATE

⊕ B-4



⊕ B-3

⊕ B-2

⊕ B-1



⊕ PES BORING LOCATION  
• PRIOR BORING LOCATION



**Table 1**  
**Summary of Laboratory Analytical Results- Soil Vapor Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Date	PCE (µg/L)	TCE (µg/L)	c-1,2-DCE (µg/L)
B-1	B-1-G	10/9/2006	ND(0.1)	ND(0.1)	ND(0.2)
B-2	B-2-G	10/9/2006	<b>0.62</b>	ND(0.1)	ND(0.2)
B-3	B-3-G	10/9/2006	<b>0.15</b>	ND(0.1)	ND(0.2)
B-4	B-4-G	10/9/2006	<b>0.26</b>	ND(0.1)	ND(0.2)
B-5	B-5-G	10/9/2006	<b>0.42</b>	ND(0.1)	ND(0.2)
B-6	B-6-G	10/9/2006	<b>0.22</b>	<b>0.16</b>	ND(0.2)
B-7	B-7-G	10/9/2006	<b>6.4</b>	<b>0.15</b>	ND(0.2)
B-8	B-8-G	10/9/2006	<b>20</b>	<b>3.9</b>	<b>0.42</b>
B-9	B-9-G	10/9/2006	<b>36</b>	<b>0.30</b>	ND(0.2)
B-10	B-10-G	10/9/2006	<b>16</b>	<b>11</b>	<b>0.26</b>
RWQCB Environmental Screening Level <sup>1</sup>			<b>1.4</b>	<b>4.1</b>	<b>20</b>

**Notes:**

All samples collected at 5 feet bgs

PCE - Tetrachloroethylene

TCE - Trichloroethylene

c-1,2-DCE - cis-1,2-Dichloroethene

µg/l - Micrograms per liter of air

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

1 - California Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, February 2005. Table E-2, Shallow Soil Gas Screening Levels For Evaluation of Potential Vapor Intrusion Concerns.

- Exceeds ESL

**Table 2**  
**Summary of Laboratory Analytical Results-Soil Matrix Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Date	Sample Depth (feet bgs)	PCE (µg/kg)
B-1	B-1-4.5'	10/9/2006	4.5	ND(4.0)
	B-1-19.5'	10/10/2006	19.5	ND(3.9)
B-2	B-2-4.5'	10/9/2006	4.5	ND(4.3)
	B-2-19.5'	10/10/2006	19.5	ND(3.9)
B-3	B-3-2.25'	10/9/2006	2.25	ND(4.0)
	B-3-19.5'	10/9/2006	19.5	ND(4.2)
B-4	B-4-4.5'	10/9/2006	4.5	ND(4.0)
	B-4-19.5'	10/10/2006	19.5	ND(3.9)
B-5	B-5-4.5'	10/9/2006	4.5	ND(4.1)
B-6	B-6-4.5'	10/9/2006	4.5	ND(4.1)
B-7	B-7-4.5'	10/9/2006	4.5	ND(4.0)
B-8	B-8-4.5'	10/9/2006	4.5	<b>1,400</b>
B-9	B-9-4.5'	10/9/2006	4.5	<b>3,000</b>
B-10	B-10-4.5'	10/9/2006	4.5	<b>2,500</b>
RWQCB Environmental Screening Level <sup>1</sup>				<b>240</b>

**Notes:**

bgs - Below ground surface

µg/kg - Micrograms per kilogram

PCE - Tetrachloroethylene

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

1 - California Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, February 2005. Table A-2, Shallow Soil Screening Levels (<3m bgs), Commercial / Industrial Land Use.

- Exceeds ESL

**Table 3**  
**Summary of Analytical Results - Grab Groundwater Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Depth (feet bgs)	Sample Date	PCE (µg/L)
B-1	NFWE	40	--	--
B-2	NFWE	40	--	--
B-3	B-3-W	20	10/9/2006	ND(2.0)
B-4	NFWE	40	--	--
EPA Maximum Contaminant Level <sup>1</sup>				<b>5</b>

**Notes:**

NFWE - No free water encountered

µg/l - Micrograms per liter

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

1 - Environmental Protection Agency, Region 9. June 2003

**REMEDIAL ACTION WORKPLAN DATA**

**Table 1**  
**Summary of Laboratory Analytical Results- Soil Vapor Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Date	PCE (µg/L)	TCE (µg/L)	c-1,2-DCE (µg/L)
B-1	B-1-G	10/9/2006	ND(0.1)	ND(0.1)	ND(0.2)
B-2	B-2-G	10/9/2006	<b>0.62</b>	ND(0.1)	ND(0.2)
B-3	B-3-G	10/9/2006	<b>0.15</b>	ND(0.1)	ND(0.2)
B-4	B-4-G	10/9/2006	<b>0.26</b>	ND(0.1)	ND(0.2)
B-5	B-5-G	10/9/2006	<b>0.42</b>	ND(0.1)	ND(0.2)
B-6	B-6-G	10/9/2006	<b>0.22</b>	<b>0.16</b>	ND(0.2)
B-7	B-7-G	10/9/2006	<b>6.4</b>	<b>0.15</b>	ND(0.2)
B-8	B-8-G	10/9/2006	<b>20</b>	<b>3.9</b>	<b>0.42</b>
B-9	B-9-G	10/9/2006	<b>36</b>	<b>0.30</b>	ND(0.2)
B-10	B-10-G	10/9/2006	<b>16</b>	<b>11</b>	<b>0.26</b>
RWQCB Environmental Screening Level (ESL) <sup>1</sup>			<b>1.4</b>	<b>4.1</b>	<b>20</b>

**Notes:**

All samples collected at 5 feet bgs

PCE - Tetrachloroethene

TCE - Trichloroethene

c-1,2-DCE - cis-1,2-Dichloroethene

µg/l - Micrograms per liter of air

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

1 - California Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, February 2005.

Table E-2, Shallow Soil Gas Screening Levels For Evaluation of Potential Vapor Intrusion Concerns.

- Exceeds ESL

**Table 2**  
**Summary of Laboratory Analytical Results-Soil Matrix Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Date	Sample Depth (feet bgs)	PCE (µg/kg)	TCE (µg/kg)
B-1	B-1-4.5'	10/9/2006	4.5	ND(4.0)	ND(4.0)
	B-1-19.5'	10/10/2006	19.5	ND(3.9)	ND(3.9)
B-2	B-2-4.5'	10/9/2006	4.5	ND(4.3)	ND(4.3)
	B-2-19.5'	10/10/2006	19.5	ND(3.9)	ND(3.9)
B-3	B-3-2.25'	10/9/2006	2.25	ND(4.0)	ND(4.0)
	B-3-19.5'	10/9/2006	19.5	ND(4.2)	ND(4.2)
B-4	B-4-4.5'	10/9/2006	4.5	ND(4.0)	ND(4.0)
	B-4-19.5'	10/10/2006	19.5	ND(3.9)	ND(3.9)
B-5	B-5-4.5'	10/9/2006	4.5	ND(4.1)	ND(4.1)
B-6	B-6-4.5'	10/9/2006	4.5	ND(4.1)	ND(4.1)
B-7	B-7-4.5'	10/9/2006	4.5	ND(4.0)	ND(4.0)
B-8	B-8-4.5'	10/9/2006	4.5	<b>1,400</b>	ND(830)
B-9	B-9-4.5'	10/9/2006	4.5	<b>3,000</b>	ND(830)
B-10	B-10-4.5'	10/9/2006	4.5	<b>2,500</b>	ND(790)
B-11	B-11-1.5-2.0	11/13/2006	2	<b>53</b>	ND(2.0)
	B-12-5.5-6.0	11/13/2006	6	<b>49</b>	ND(2.0)
	B-11-9.5-10.0	11/13/2006	10	<b>8.9</b>	ND(2.0)
	B-11-17.5-18.0	11/13/2006	18	ND(2.0)	ND(2.0)
B-12	B-12-1.5-2.0	11/13/2006	2	ND(2.0)	ND(2.0)
	B-12-5.5-6.0	11/13/2006	6	ND(2.0)	ND(2.0)
	B-12-9.5-10.0	11/13/2006	10	<b>5.5</b>	ND(2.0)
B-13	B-13-1.5-2.0	11/13/2006	2	ND(2.0)	ND(2.0)
	B-13-5.5-6.0	11/13/2006	6	ND(2.0)	ND(2.0)
	B-13-9.5-10.0	11/13/2006	10	<b>3.9</b>	ND(2.0)
	B-13-17.5-18.0	11/13/2006	18	ND(2.0)	ND(2.0)
B-14	B-14-1.5-2.0	11/13/2006	2	<b>4.3</b>	ND(2.0)
	B-14-5.5-6.0	11/14/2006	6	<b>25</b>	ND(2.0)
	B-14-9.5-10.0	11/14/2006	10	ND(2.0)	ND(2.0)
	B-14-17.5-18.0	11/14/2006	18	ND(2.0)	ND(2.0)
B-15	B-15-3.5-4.0	11/14/2006	4	ND(2.0)	ND(2.0)
	B-15-9.5-10.0	11/14/2006	10	ND(2.0)	ND(2.0)
B-18	B-18-1.5-2.0	11/14/2006	2	<b>110</b>	<b>6.8</b>
	B-18-5.5-6.0	11/14/2006	6	<b>65</b>	ND(2.0)
	B-18-9.5-10.0	11/14/2006	10	<b>13</b>	ND(2.0)
	B-18-17.5-18.0	11/14/2006	18	<b>2.0</b>	ND(2.0)
B-20	B-20-5.5-6.0	11/14/2006	6	<b>30</b>	ND(2.0)
	B-20-9.5-10.0	11/14/2006	10	ND(2.0)	ND(2.0)

**Table 2**  
**Summary of Laboratory Analytical Results-Soil Matrix Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Sample Date	Sample Depth (feet bgs)	PCE (µg/kg)	TCE (µg/kg)
	B-20-11.5-12.0	11/14/2006	12	ND(2.0)	ND(2.0)
B-23	B-23-2.0	11/15/2006	2	<b>59</b>	ND(4.2)
	B-23-6.0	11/15/2006	6	ND(5.0)	ND(5.0)
	B-23-10	11/15/2006	10	<b>8.3</b>	ND(4.7)
	B-23-18	11/15/2006	18	ND(4.2)	ND(4.2)
B-24	B-24-2	11/15/2006	2	<b>77</b>	ND(4.4)
	B-24-6	11/15/2006	6	<b>72</b>	ND(4.1)
	B-24-10	11/15/2006	10	<b>8.2</b>	ND(4.2)
	B-24-18	11/15/2006	18	<b>6.1</b>	ND(3.9)
B-25	B-25-2	11/15/2006	2	<b>140</b>	ND(4.5)
	B-25-6	11/15/2006	6	<b>57</b>	ND(4.5)
	B-25-10	11/15/2006	10	ND(4.3)	ND(4.3)
	B-25-18	11/15/2006	18	<b>36</b>	ND(4.2)
RWQCB Environmental Screening Level (ESL) <sup>1</sup>				<b>240</b>	<b>460</b>

**Notes:**

PCE - Tetrachloroethene


TCE - Trichloroethene

bgs - Below ground surface

µg/kg - Micrograms per kilogram

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

1 - California Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, February 2005. Table A-2, Shallow Soil Screening Levels (<3m bgs), Commercial / Industrial Land Use.

 - Exceeds ESL

**Table 3**  
**Summary of Analytical Results - Grab Groundwater Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**Oakland, California**

Sample Location	Sample Identification	Depth to First Water (feet bgs)	Static Depth to Water (feet bgs)	Sample Date	PCE (µg/L)	TCE (µg/L)
B-1	NFWE	--	--	--	--	--
B-2	NFWE	--	--	--	--	--
B-3	B-3-W	20	17	10/9/2006	ND(2.0)	ND(2.0)
B-4	NFWE	--	--	--	--	--
B-16	B-16-W	40	26	11/14/2006	ND(2.0)	ND(2.0)
B-17	NFWE	--	--	--	--	--
B-19	B-19-W	42	40	11/14/2006	ND(2.0)	ND(2.0)
B-21	B-21-W	42	23	11/14/2006	<b>40</b>	<b>2.1</b>
B-22	B-22-W	40	36	11/15/2006	<b>19</b>	<b>2.4</b>
Maximum Contaminant Level (MCL) <sup>1</sup>					<b>5</b>	<b>5</b>

**Notes:**

PCE - Tetrachloroethene

TCE - Trichloroethene

µg/l - Micrograms per liter

NFWE - No free water encountered

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

1 - (a) Title 22 California Code of Regulations (CCR) §64431-§64444; and

(b) U.S. Environmental Protection Agency, Region 9. June 2003



**POST-REMEDIATION DATA**

**Table 1**  
**Summary of Excavation Verification Soil Sample Results - Volatile Organic Compounds <sup>(1)</sup>**  
**Sparkle Cleaners**  
**7200 Bancroft Avenue**  
**Eastmont Town Center**  
**Oakland, California**

Excavation Cell Designation	Sample Designation	Sample Depth (feet bgs)	Sample Type	Date Collected	PCE (µg/kg)	TCE (µg/kg)	cis-1,2-DCE (µg/kg)
A1	A1-S1-3.5	3.5	Sidewall	7/11/2007	40	ND(4.3)	ND(4.3)
	A1-S2-4.0	4	Sidewall	7/11/2007	ND(4.6)	28	6.4
	A1-B1-5.5	5.5	Bottom	7/11/2007	7.5	ND(4.6)	ND(4.6)
A2	A2-S1-3.5	3.5	Sidewall	7/5/2007	180	ND(4.3)	ND(4.3)
	A2-S5-4'	4	Sidewall	7/5/2007	220	ND(4.4)	ND(4.4)
	A2-B1-5.5'	5.5	Bottom	7/5/2007	84	ND(4.1)	ND(4.1)
B1	B1-S2-2.0	2	Sidewall	7/11/2007	16	7.4	ND(4.3)
	B1-S3-3.0	3	Sidewall	7/11/2007	150	9.8	ND(4.7)
	B1-B1-5.5	5.5	Bottom	7/11/2007	97	ND(4.3)	ND(4.3)
B2	B2-B1-5.5	5.5	Bottom	7/5/2007	70	ND(4.6)	ND(4.6)
B3	B3-S3-4.0 <sup>(2)</sup>	4	Sidewall	7/9/2007	310	ND(4.2)	ND(4.2)
	B3-S3-4.0'-1.0'	4	Sidewall Stepout	7/16/2007	93	ND(4.4)	ND(4.4)
	B3-S4-3.0	3	Sidewall	7/9/2007	ND(4.9)	15	12
	B3-S6-3.5 <sup>(3)</sup>	3.5	Sidewall	7/9/2007	ND(4.6)	7.9	13
	B3-S5-2.0	2	Sidewall	7/9/2007	340	26	ND(4.8)
	B3-S5-2.0'-1.0'	2	Sidewall Stepout	7/16/2007	74	5.0	ND(4.0)
	B3-B1-5.5	5.5	Bottom	7/9/2007	7.3	ND(4.8)	ND(4.8)
B3-B1-6.5 <sup>(4)</sup>	6.5	Bottom	7/9/2007	22	ND(4.5)	ND(4.5)	
<b>Target Soil Cleanup Goals:</b>					<b>240</b>	<b>460</b>	<b>190</b>

**Notes:**

PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

µg/kg = micrograms per kilogram

feet bgs = feet below ground surface

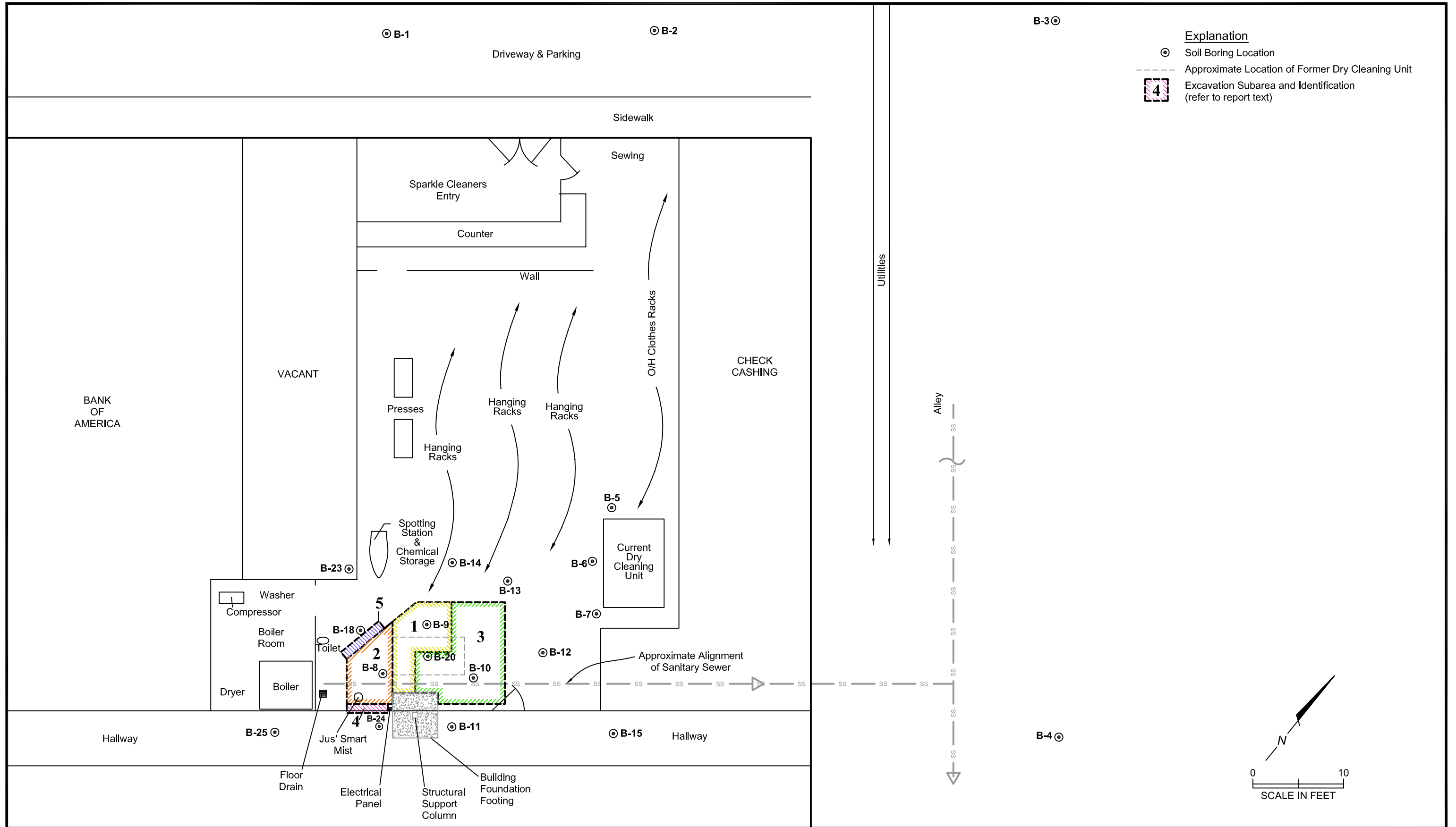
ND(4.4) = Compound not detected at or above the indicated laboratory reporting limit

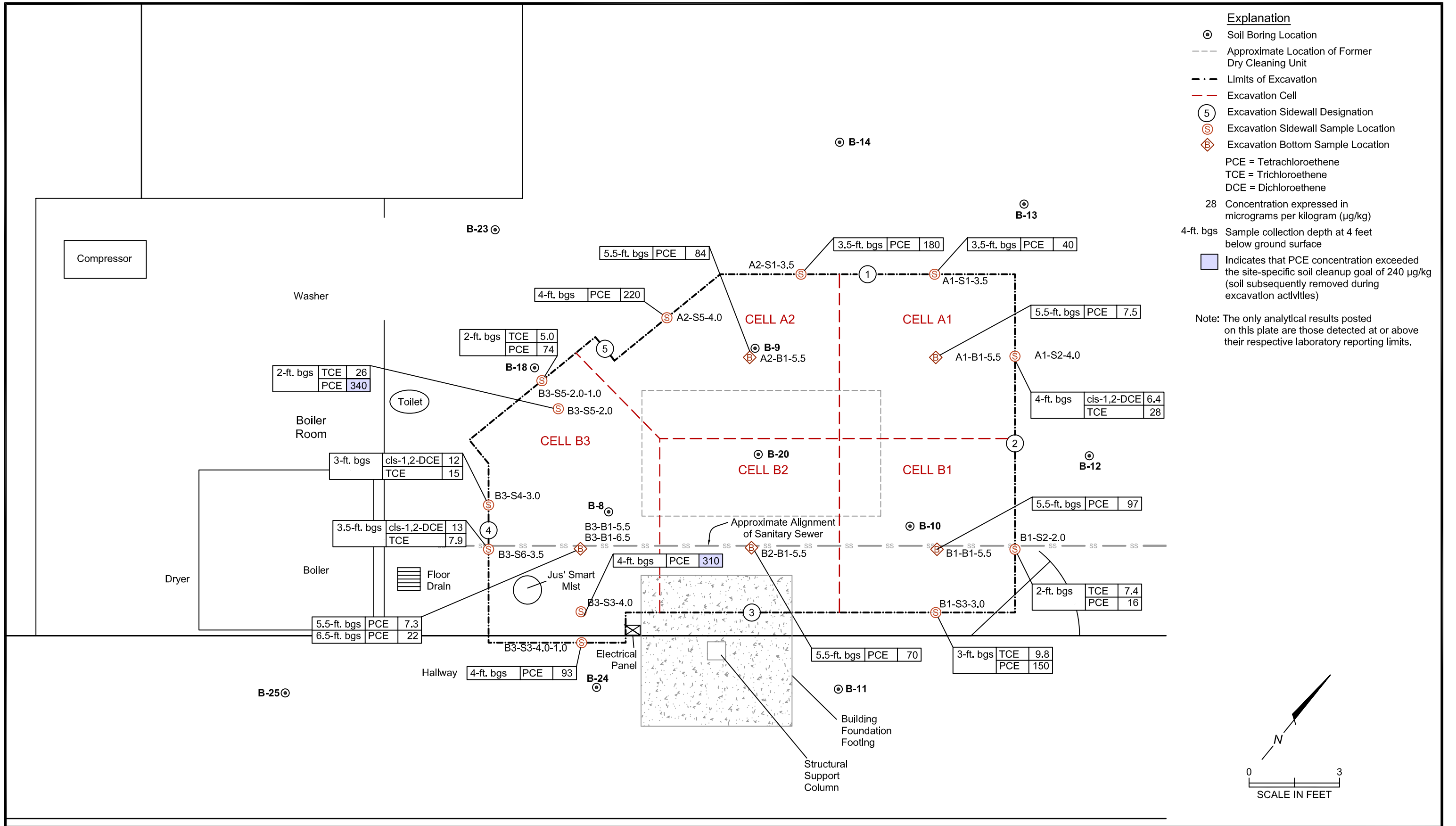
All other volatile organic compounds were not present at or above respective laboratory reporting limits.

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 - Equals or exceeds the target soil cleanup goals.

- (1) = All samples were analyzed for volatile organic compounds by U.S. EPA Test Method 5035/8260B using Test Method 8010 list of analytes.
- (2) = The excavation sidewall soil represented by this verification soil sample was removed during further lateral excavation, which was conducted until a subsequent sidewall soil sample was collected that contained chemical concentrations below the target soil cleanup goals.
- (3) = Sample was inadvertently given a designation as sidewall 6 (i.e., S6) rather than the correct designation as sidewall 4 (i.e., S4).
- (4) = Sample was inadvertently analyzed. Analysis was not required because the concentration of PCE in the shallower sample (i.e., sample B3-B1-5.5) was below the cleanup goal.





**2015 GROUNDWATER MONITORING DATA**

**Table 2  
Groundwater Elevation Data  
Sparkle Cleaners  
Eastmont Town Center  
7000 Bancroft Avenue  
Oakland, California**

<b>Well ID</b>	<b>Date Measured</b>	<b>Top of Casing Elevation (feet MSL)</b>	<b>Depth to Groundwater (feet BTOC)</b>	<b>Groundwater Elevation (feet MSL)</b>
MW-01	8/7/2007	49.51	23.62	25.89
MW-01	11/19/2007	49.51	24.85	24.66
MW-01	2/6/2008	49.51	22.93	26.58
MW-01	5/15/2008	49.51	23.52	25.99
MW-01	11/19/2008	49.51	26.80	22.71
MW-01	5/14/2009	49.51	23.92	25.59
MW-01	1/5/2010	49.51	25.64	23.87
MW-01	5/20/2011	49.51	21.02	28.49
MW-01	3/18/2013	49.51	23.40	26.11
MW-01	9/27/2013	49.51	25.69	23.82
MW-01	3/12/2014	49.51	26.52	22.99
MW-01	11/21/2014	49.51	27.41	22.10
MW-01	3/31/2015	49.51	25.09	24.42
MW-02	8/7/2007	49.07	14.30	34.77
MW-02	11/19/2007	49.07	14.83	34.24
MW-02	2/6/2008	49.07	14.11	34.96
MW-02	5/15/2008	49.07	13.07	36.00
MW-02	11/19/2008	49.07	17.57	31.50
MW-02	5/14/2009	49.07	14.21	34.86
MW-02	1/5/2010	49.07	15.05	34.02
MW-02	5/20/2011	49.07	10.28	38.79
MW-02	3/18/2013	49.07	13.02	36.05
MW-02	10/4/2013	49.07	15.00	34.07
MW-02	3/12/2014	49.07	14.64	34.43
MW-02	11/21/2014	49.07	17.04	32.03
MW-02	3/31/2015	49.07	15.29	33.78
MW-03	8/7/2007	50.43	17.82	32.61
MW-03	11/19/2007	50.43	24.70	25.73
MW-03	2/6/2008	50.43	22.86	27.57
MW-03	5/15/2008	50.43	22.27	28.16
MW-03	11/19/2008	50.43	23.64	26.79
MW-03	5/14/2009	50.43	22.37	28.06
MW-03	1/5/2010	50.43	24.00	26.43
MW-03	5/20/2011	50.43	18.31	32.12
MW-03	3/18/2013	50.43	18.93	31.50
MW-03	9/27/2013	50.43	20.26	30.17
MW-03	3/12/2014	50.43	20.31	30.12
MW-03	11/21/2014	50.43	21.49	28.94
MW-03	3/31/2015	50.43	21.10	29.33
MW-04	8/7/2007	49.81	22.43	27.38
MW-04	11/19/2007	49.81	23.81	26.00
MW-04	2/6/2008	49.81	22.80	27.01
MW-04	5/15/2008	49.81	22.32	27.49
MW-04	11/19/2008	49.81	25.60	24.21
MW-04	5/14/2009	49.81	23.50	26.31
MW-04	1/5/2010	49.81	24.52	25.29
MW-04	5/20/2011	49.81	19.39	30.42
MW-04	3/18/2013	49.81	22.07	27.74
MW-04	9/27/2013	49.81	24.81	25.00
MW-04	3/12/2014	49.81	25.39	24.42
MW-04	11/21/2014	49.81	27.21	22.60
MW-04	3/31/2015	49.81	23.60	26.21

**Note:**

MSL - Mean sea level

BTOC - Below top of casing

**Table 3**  
**Summary of Analytical Results for Groundwater Monitoring Well Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**7000 Bancroft Avenue**  
**Oakland, California**

Sample Location	Sample Date	Petroleum Hydrocarbons		Volatile Organic Compounds									
		TPHg (µg/L)	TPHd (µg/L)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Naphthalene (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	Other VOCs (µg/L)
MW-01	8/7/2007	NA	NA	60	3.1	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	8/7/2007	NA	NA	71	3.1	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01	11/19/2007	110 <sup>(1)</sup>	52	110	5.2	ND (1.0)	ND (2.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01 <sup>(D)</sup>	11/19/2007	110 <sup>(1)</sup>	79	100	5.0	ND (1.0)	ND (2.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01	2/6/2008	140 <sup>(1)</sup>	57	130	5.8	0.58	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01 <sup>(D)</sup>	2/6/2008	140 <sup>(1)</sup>	65	130	5.7	0.60	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01	5/15/2008	NA	NA	130	5.5	0.53	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01 <sup>(D)</sup>	5/15/2008	NA	NA	140	5.4	0.54	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-01	11/19/2008	NA	NA	110	4.4	ND (1.0)	ND (2.0)	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	11/19/2008	NA	NA	110	4.3	ND (1.0)	ND (2.0)	NA	NA	NA	NA	NA	ND
MW-01	5/14/2009	NA	NA	160	5.3	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	5/14/2009	NA	NA	140	4.9	ND (2.0)	NA	NA	NA	NA	NA	NA	ND
MW-01	1/5/2010	NA	NA	110	4.1	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	1/5/2010	NA	NA	120	4.3	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01	5/20/2011	NA	NA	110	4.0	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	5/20/2011	NA	NA	120	4.3	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01	3/18/2013	NA	NA	150	3.4	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	3/18/2013	NA	NA	150	3.5	ND (1.0)	NA	NA	NA	NA	NA	NA	ND
MW-01	9/27/2013	NA	NA	120	3.1	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	9/27/2013	NA	NA	120	3.0	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01	3/12/2014	NA	NA	130	3.4	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	3/12/2014	NA	NA	130	3.3	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01	11/21/2014	NA	NA	120	3.0	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	11/21/2014	NA	NA	130	3.0	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01	3/31/2015	NA	NA	140	3.5	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-01 <sup>(D)</sup>	3/31/2015	NA	NA	140	3.5	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	8/7/2007	NA	NA	25	1.2	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	11/19/2007	ND (50)	120	26	0.93	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-02	2/6/2008	ND (50)	200	25	0.90	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-02	5/15/2008	NA	NA	20	0.91	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-02	11/19/2008	NA	NA	23	0.88	ND (0.50)	ND (1.0)	NA	NA	NA	NA	NA	ND
MW-02	5/14/2009	NA	NA	31	0.84	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	1/5/2010	NA	NA	24	0.60	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	5/20/2011	NA	NA	39	1.2	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	3/18/2013	NA	NA	36	0.95	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	10/4/2013	NA	NA	26	0.91	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	3/12/2014	NA	NA	26	0.70	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	11/21/2014	NA	NA	16	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-02	3/31/2015	NA	NA	22	0.54	ND (0.50)	NA	NA	NA	NA	NA	NA	ND

**Table 3**  
**Summary of Analytical Results for Groundwater Monitoring Well Samples**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**7000 Bancroft Avenue**  
**Oakland, California**

Sample Location	Sample Date	Petroleum Hydrocarbons		Volatile Organic Compounds									
		TPHg (µg/L)	TPHd (µg/L)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Naphthalene (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	Other VOCs (µg/L)
MW-03	8/7/2007	NA	NA	1.6	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-03	11/19/2007	ND (50)	79	2.1	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-03	2/6/2008	ND (50)	70	2.0	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-03	5/15/2008	NA	NA	1.5	ND (0.50)	0.50	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-03	11/19/2008	NA	NA	2.0	ND (0.50)	ND (0.50)	ND (1.0)	NA	NA	NA	NA	NA	ND
MW-03	5/14/2009	NA	NA	1.8	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-03	1/5/2010	NA	NA	1.5	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-03	5/20/2011	NA	NA	1.8	ND (0.50)	0.57	NA	NA	NA	NA	NA	NA	ND
MW-03	3/18/2013	NA	NA	1.6	ND (0.50)	0.67	NA	NA	NA	NA	NA	NA	ND
MW-03	9/27/2013	NA	NA	1.6	ND (0.50)	0.68	NA	NA	NA	NA	NA	NA	ND
MW-03	3/12/2014	NA	NA	1.7	ND (0.50)	0.85	NA	NA	NA	NA	NA	NA	ND
MW-03	11/21/2014	NA	NA	1.2	ND (0.50)	0.83	NA	NA	NA	NA	NA	NA	ND
MW-03	3/31/2015	NA	NA	0.99	ND (0.50)	0.58	NA	NA	NA	NA	NA	NA	ND
MW-04	8/7/2007	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	11/19/2007	ND (50)	69	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-04	2/6/2008	ND (50)	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-04	5/15/2008	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (5.0)	ND (1.0)	ND (0.50)	ND
MW-04	11/19/2008	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	NA	NA	NA	NA	NA	ND
MW-04	5/14/2009	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	1/5/2010	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	5/20/2011	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	3/18/2013	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	9/27/2013	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	3/12/2014	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	11/21/2014	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND
MW-04	3/31/2015	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	NA	NA	NA	NA	ND

**Notes:**

TPHg - Gasoline range organics (C5-C12)

TPHd - Diesel range organics (C10-C28)

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

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

µg/L - Micrograms per liter

NA - Not Analyzed

ND (0.50) - Not detected at or above indicated laboratory reporting limit

ND - Not detected at or above the laboratory reporting limit (varies by analyte)

<sup>(D)</sup> - Field duplicate sample<sup>(1)</sup> - The analytical laboratory narrative states that the reported gasoline range organics concentration is due to the presence of PCE.

MTBE - Methyl tert-butyl ether

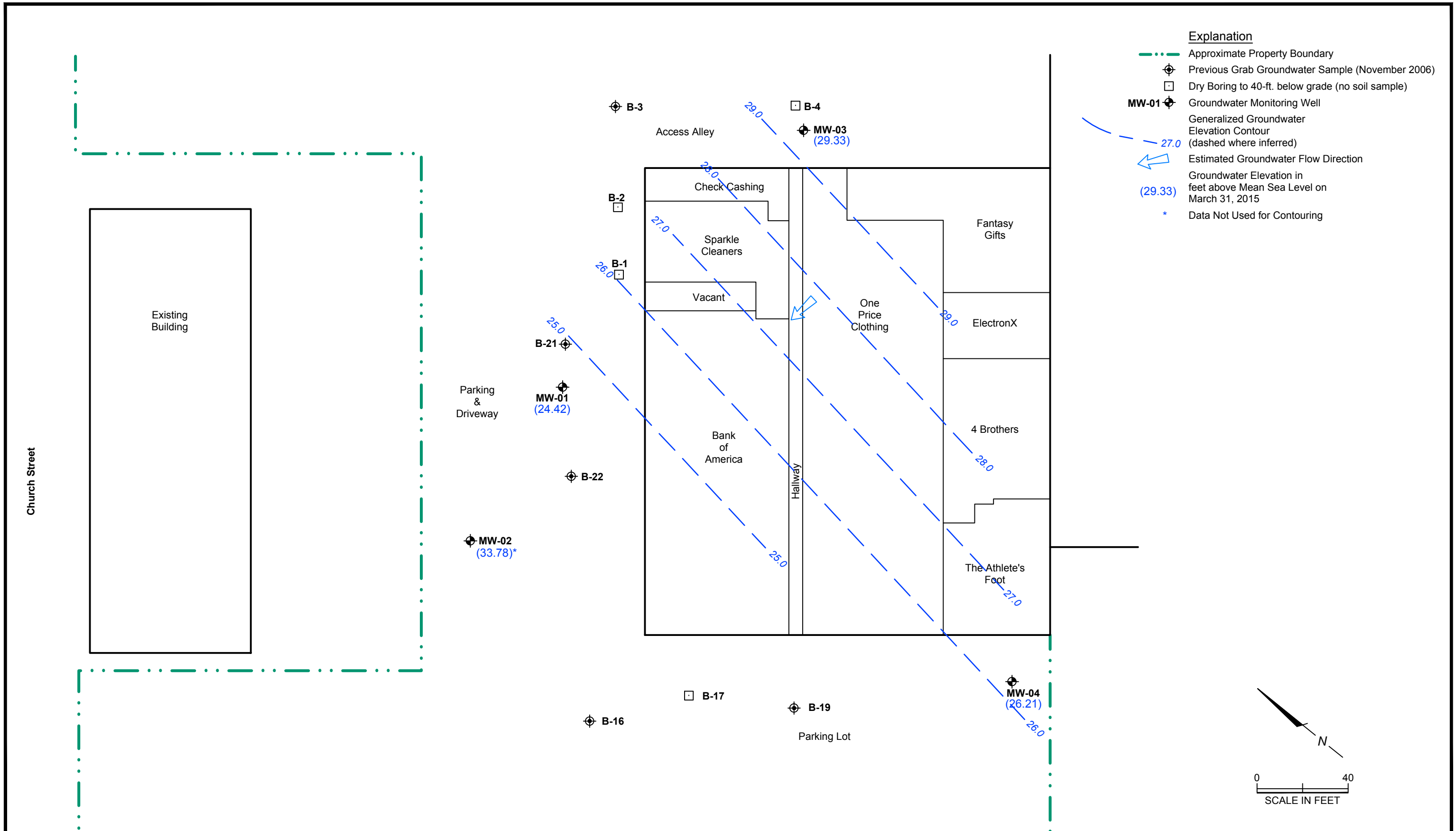
TAME - Tert-amyl methyl ether

TBA - Tert-butyl alcohol

DIPE - Diisopropyl ether

ETBE - Ethyl tert-butyl ether

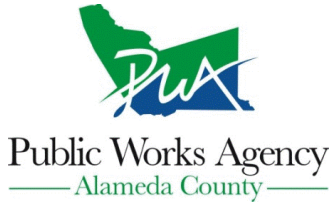




**APPENDIX B**

**ACPWA DRILLING PERMIT**

# Alameda County Public Works Agency - Water Resources Well Permit



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

**Application Approved on: 09/12/2016 By jamesy**

**Permit Numbers: W2016-0662**  
**Permits Valid from 09/23/2016 to 09/28/2016**

<b>Application Id:</b> 1472673135743	<b>City of Project Site:</b> Oakland
<b>Site Location:</b> 7000 Bancroft Avenue, Oakland, CA	<b>Completion Date:</b> 09/14/2016
<b>Project Start Date:</b> 09/14/2016	<b>Extension End Date:</b> 09/28/2016
<b>Assigned Inspector:</b> Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org	<b>Extended By:</b> marcelino2
<b>Extension Start Date:</b> 09/23/2016	
<b>Extension Count:</b> 1	

<b>Applicant:</b> PES Environmental, Inc. - Gary Thomas 7665 Redwood Boulevard, Suite 200, Novato, CA 94945	<b>Phone:</b> 415-899-1600
<b>Property Owner:</b> Attn. Jacob Levy Palm Peninsula, LLC and 7200 Bancroft LLC 810 NW Marshall Street, Suite 300, Portland, OR 97209	<b>Phone:</b> --
<b>Client:</b> ** same as Property Owner **	
<b>Contact:</b> Gary Thomas	<b>Phone:</b> 415-899-1600 <b>Cell:</b> 415-250-7217

<b>Receipt Number: WR2016-0444</b>	<b>Total Due:</b>	\$265.00
<b>Payer Name : Gary Thomas</b>	<b>Total Amount Paid:</b>	\$265.00
	Paid By: VISA	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Well Construction-Vapor monitoring well-Vapor monitoring well - 8 Wells  
Driller: Cascade Drilling, L.P. - Lic #: 938110 - Method: DP

**Work Total: \$265.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2016-0662	09/12/2016	12/13/2016	SV-1	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-2	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-3	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-4	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-5	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-6	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-7	1.50 in.	1.00 in.	1.00 ft	6.00 ft
W2016-0662	09/12/2016	12/13/2016	SV-8	1.50 in.	1.00 in.	1.00 ft	6.00 ft

**Specific Work Permit Conditions**

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
  
2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter

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

10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 30 days, including permit number and site map.

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. 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.

5. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an 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.

6. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.

7. Applicant shall submit the copies of the approved encroachment permit to this office within 10 days.

8. 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.

9. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

10. 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.

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

12. Vapor monitoring wells above water level constructed with tubing maybe be backfilled with pancake-batter consistency bentonite. Minimum surface seal thickness is two inches of cement grout around well box.

Vapor monitoring wells above water level constructed with pvc pipe shall have a minimum seal depth (Neat Cement Seal) of 2 feet below ground surface (BGS). Minimum surface seal thickness is two inches of cement grout around well box. All other conditions for monitoring well construction shall apply.

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

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**APPENDIX C**

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

# K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.  
Santa Rosa CA 95403  
Phone: 707 527 7574  
FAX: 707 527 7879

## TRANSMITTAL

**DATE:** 10/3/2016

**TO:** MR. WILL MAST  
PES ENVIRONMENTAL, INC.  
7665 REDWOOD BLVD., SUITE 200  
NOVATO, CA 94945

**ACCT:** 9418  
**PROJ:** 1488.001.01

Phone: 415-899-1600  
Fax: 415-899-1601  
Email: [wmast@pesenv.com](mailto:wmast@pesenv.com)

**CC:** MR. GARY THOMAS  
Email: [gthomas@pesenv.com](mailto:gthomas@pesenv.com)

**FROM:** Richard A. Kage1, Ph.D. *RAMC 10/3/2016*  
Laboratory Director

**SUBJECT:** LABORATORY RESULTS FOR YOUR PROJECT 1488.001.01

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
PSV-8	AIR	9/26/2016	9:36	147533
PSV-3	AIR	9/26/2016	10:38	147534
PSV-4	AIR	9/26/2016	11:07	147535
PSV-5	AIR	9/26/2016	12:03	147536
PSV-6	AIR	9/26/2016	12:24	147537
PSV-7	AIR	9/26/2016	12:56	147538
PSV-7 DUP	AIR	9/26/2016	12:56	147539
PSV-1	AIR	9/26/2016	14:28	147540
PSV-2	AIR	9/26/2016	15:09	147541

The above listed sample group was received on 9/27/2016 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.  
Thank you for this opportunity to be of service.

**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 9418  
CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-8  
LAB NO: 147533  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/26/2016  
TIME SAMPLED: 09:36  
BATCH ID: 092216A1  
DATE ANALYZED: 09/27/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFUOROMETHANE	75-69-4	1.00	ND	5.62	ND
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	ND	3.47	ND
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
C-1,2-DICHLOROETHENE	159-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
T-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
C-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	56.6	6.78	384
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: AMK  
DATE: 10/3/16



**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 9418  
CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-3  
LAB NO: 147534  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/28/2016  
TIME SAMPLED: 10:38  
BATCH ID: 092216A1  
DATE ANALYZED: 09/28/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	ND	6.95	ND
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
C-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	ND	6.39	ND
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	2.49	10.7	13.4
T-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
C-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	2.66	7.54	10.0
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	205	13.6	1390
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
RL - REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE  
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                     KMM                      
DATE:                     10/3/16

**K PRIME, INC.**  
**LABORATORY REPORT**

K PRIME PROJECT: 9418  
 CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
 REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-4  
 LAB NO: 147535  
 SAMPLE TYPE: AIR  
 DATE SAMPLED: 09/26/2016  
 TIME SAMPLED: 11:07  
 BATCH ID: 092216A1  
 DATE ANALYZED: 09/27/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	ND	6.95	ND
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
C-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	2.26	6.39	7.22
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	ND	10.7	ND
T-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
C-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	7.04	7.54	26.5
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	316	13.6	2140
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RAM  
 DATE: 10/3/16

**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9418**  
**CLIENT PROJECT: 1488.001.01**

**METHOD: VOC'S IN AIR**  
**REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)**

**SAMPLE ID: PSV-5**  
**LAB NO: 147536**  
**SAMPLE TYPE: AIR**  
**DATE SAMPLED: 09/26/2016**  
**TIME SAMPLED: 12:03**  
**BATCH ID: 092216A1**  
**DATE ANALYZED: 09/27/2016**

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.00	ND	5.62	ND
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	ND	3.47	ND
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
C-1,2-DICHLOROETHENE	159-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
T-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
C-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	23.9	6.78	162
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                     *RMK*                      
DATE:                     10/3/16

**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 9418  
CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-6  
LAB NO: 147537  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/26/2016  
TIME SAMPLED: 12:24  
BATCH ID: 092216A1  
DATE ANALYZED: 09/27/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	5.00	ND	24.7	ND
CHLOROMETHANE	74-87-3	5.00	ND	10.3	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	5.00	ND	35.0	ND
VINYL CHLORIDE	75-01-4	5.00	ND	12.8	ND
BROMOMETHANE	74-83-9	5.00	ND	19.4	ND
CHLOROETHANE	75-00-3	5.00	ND	13.2	ND
TRICHLOROFLUOROMETHANE	75-69-4	5.00	ND	28.1	ND
1,1-DICHLOROETHENE	75-35-4	5.00	ND	19.8	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	5.00	ND	38.3	ND
METHYLENE CHLORIDE	75-09-2	5.00	ND	17.4	ND
1,1-DICHLOROETHANE	75-34-3	5.00	ND	20.2	ND
C-1,2-DICHLOROETHENE	159-59-2	5.00	ND	19.8	ND
CHLOROFORM	67-66-3	5.00	ND	24.4	ND
1,1,1-TRICHLOROETHANE	71-55-6	5.00	ND	27.3	ND
1,2-DICHLOROETHANE	107-06-2	5.00	ND	20.2	ND
BENZENE	71-43-2	5.00	ND	16.0	ND
CARBON TETRACHLORIDE	56-23-5	5.00	ND	31.5	ND
1,2-DICHLOROPROPANE	78-87-5	5.00	ND	23.1	ND
TRICHLOROETHENE	79-01-6	5.00	127	26.9	683
T-1,3-DICHLOROPROPENE	10061-02-6	5.00	ND	22.7	ND
C-1,3-DICHLOROPROPENE	10061-01-5	5.00	ND	22.7	ND
TOLUENE	108-88-3	5.00	6.38	18.8	24.0
1,1,2-TRICHLOROETHANE	79-00-5	5.00	ND	27.3	ND
1,2-DIBROMOETHANE	106-93-4	5.00	ND	38.4	ND
TETRACHLOROETHENE	127-18-4	5.00	972	33.9	6590
CHLOROBENZENE	108-90-7	5.00	ND	23.0	ND
ETHYLBENZENE	100-41-4	5.00	ND	21.7	ND
XYLENE (M+P)	179601-23-1	10.0	ND	43.4	ND
STYRENE	100-42-5	5.00	ND	21.3	ND
XYLENE (O)	95-47-6	5.00	ND	21.7	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	5.00	ND	34.3	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	5.00	ND	24.6	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	5.00	ND	24.6	ND
1,3-DICHLOROBENZENE	541-73-1	5.00	ND	30.1	ND
1,4-DICHLOROBENZENE	106-46-7	5.00	ND	30.1	ND
1,2-DICHLOROBENZENE	95-50-1	5.00	ND	30.1	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5.00	ND	37.1	ND
HEXACHLOROBUTADIENE	87-68-3	5.00	ND	53.3	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                     RMK                      
DATE:                     10/3/16

**K PRIME, INC.**  
**LABORATORY REPORT**

K PRIME PROJECT: 9418  
 CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
 REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-7  
 LAB NO: 147538  
 SAMPLE TYPE: AIR  
 DATE SAMPLED: 09/26/2016  
 TIME SAMPLED: 12:56  
 BATCH ID: 092216A1  
 DATE ANALYZED: 09/27/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	5.00	ND	24.7	ND
CHLOROMETHANE	74-87-3	5.00	ND	10.3	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	5.00	ND	35.0	ND
VINYL CHLORIDE	75-01-4	5.00	ND	12.8	ND
BROMOMETHANE	74-83-9	5.00	ND	19.4	ND
CHLOROETHANE	75-00-3	5.00	ND	13.2	ND
TRICHLOROFLUOROMETHANE	75-69-4	5.00	ND	28.1	ND
1,1-DICHLOROETHENE	75-35-4	5.00	ND	19.8	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	5.00	ND	38.3	ND
METHYLENE CHLORIDE	75-09-2	5.00	ND	17.4	ND
1,1-DICHLOROETHANE	75-34-3	5.00	ND	20.2	ND
C-1,2-DICHLOROETHENE	159-59-2	5.00	ND	19.8	ND
CHLOROFORM	67-66-3	5.00	ND	24.4	ND
1,1,1-TRICHLOROETHANE	71-55-6	5.00	ND	27.3	ND
1,2-DICHLOROETHANE	107-06-2	5.00	ND	20.2	ND
BENZENE	71-43-2	5.00	ND	16.0	ND
CARBON TETRACHLORIDE	56-23-5	5.00	ND	31.5	ND
1,2-DICHLOROPROPANE	78-87-5	5.00	ND	23.1	ND
TRICHLOROETHENE	79-01-6	5.00	ND	26.9	ND
T-1,3-DICHLOROPROPENE	10061-02-6	5.00	ND	22.7	ND
C-1,3-DICHLOROPROPENE	10061-01-5	5.00	ND	22.7	ND
TOLUENE	108-88-3	5.00	ND	18.8	ND
1,1,2-TRICHLOROETHANE	79-00-5	5.00	ND	27.3	ND
1,2-DIBROMOETHANE	106-93-4	5.00	ND	38.4	ND
TETRACHLOROETHENE	127-18-4	5.00	817	33.9	5540
CHLOROBENZENE	108-90-7	5.00	ND	23.0	ND
ETHYLBENZENE	100-41-4	5.00	ND	21.7	ND
XYLENE (M+P)	179601-23-1	10.0	ND	43.4	ND
STYRENE	100-42-5	5.00	ND	21.3	ND
XYLENE (O)	95-47-6	5.00	ND	21.7	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	5.00	ND	34.3	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	5.00	ND	24.6	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	5.00	ND	24.6	ND
1,3-DICHLOROBENZENE	541-73-1	5.00	ND	30.1	ND
1,4-DICHLOROBENZENE	106-46-7	5.00	ND	30.1	ND
1,2-DICHLOROBENZENE	95-50-1	5.00	ND	30.1	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5.00	ND	37.1	ND
HEXACHLOROBUTADIENE	87-68-3	5.00	ND	53.3	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
 RL - REPORTING LIMIT  
 NA - NOT APPLICABLE OR AVAILABLE  
 µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RMK  
 DATE: 10/3/16

**K PRIME, INC.**  
LABORATORY REPORT

K PRIME PROJECT: 9418  
CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-7 DUP  
LAB NO: 147539  
SAMPLE TYPE: AIR  
DATE SAMPLED: 09/26/2016  
TIME SAMPLED: 12:56  
BATCH ID: 092216A1  
DATE ANALYZED: 09/27/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	5.00	ND	24.7	ND
CHLOROMETHANE	74-87-3	5.00	ND	10.3	ND
DICHLOROTETRAFLUROETHANE	76-14-2	5.00	ND	35.0	ND
VINYL CHLORIDE	75-01-4	5.00	ND	12.8	ND
BROMOMETHANE	74-83-9	5.00	ND	19.4	ND
CHLOROETHANE	75-00-3	5.00	ND	13.2	ND
TRICHLOROFLUOROMETHANE	75-69-4	5.00	ND	28.1	ND
1,1-DICHLOROETHENE	75-35-4	5.00	ND	19.8	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	5.00	ND	38.3	ND
METHYLENE CHLORIDE	75-09-2	5.00	ND	17.4	ND
1,1-DICHLOROETHANE	75-34-3	5.00	ND	20.2	ND
C-1,2-DICHLOROETHENE	159-59-2	5.00	ND	19.8	ND
CHLOROFORM	67-66-3	5.00	5.25	24.4	25.6
1,1,1-TRICHLOROETHANE	71-55-6	5.00	ND	27.3	ND
1,2-DICHLOROETHANE	107-06-2	5.00	ND	20.2	ND
BENZENE	71-43-2	5.00	ND	16.0	ND
CARBON TETRACHLORIDE	56-23-5	5.00	ND	31.5	ND
1,2-DICHLOROPROPANE	78-87-5	5.00	ND	23.1	ND
TRICHLOROETHENE	79-01-6	5.00	ND	26.9	ND
T-1,3-DICHLOROPROPENE	10061-02-6	5.00	ND	22.7	ND
C-1,3-DICHLOROPROPENE	10061-01-5	5.00	ND	22.7	ND
TOLUENE	108-88-3	5.00	ND	18.8	ND
1,1,2-TRICHLOROETHANE	79-00-5	5.00	ND	27.3	ND
1,2-DIBROMOETHANE	106-93-4	5.00	ND	38.4	ND
TETRACHLOROETHENE	127-18-4	5.00	809	33.9	5490
CHLOROBENZENE	108-90-7	5.00	ND	23.0	ND
ETHYLBENZENE	100-41-4	5.00	ND	21.7	ND
XYLENE (M+P)	179601-23-1	10.0	ND	43.4	ND
STYRENE	100-42-5	5.00	ND	21.3	ND
XYLENE (O)	95-47-6	5.00	ND	21.7	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	5.00	ND	34.3	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	5.00	ND	24.6	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	5.00	ND	24.6	ND
1,3-DICHLOROBENZENE	541-73-1	5.00	ND	30.1	ND
1,4-DICHLOROBENZENE	106-46-7	5.00	ND	30.1	ND
1,2-DICHLOROBENZENE	95-50-1	5.00	ND	30.1	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5.00	ND	37.1	ND
HEXACHLOROBUTADIENE	87-68-3	5.00	ND	53.3	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                     *RM*                      
DATE:                     10/3/16

**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9418**  
**CLIENT PROJECT: 1488.001.01**

**METHOD: VOC'S IN AIR**  
**REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)**

**SAMPLE ID: PSV-1**  
**LAB NO: 147540**  
**SAMPLE TYPE: AIR**  
**DATE SAMPLED: 09/26/2016**  
**TIME SAMPLED: 14:28**  
**BATCH ID: 092216A1**  
**DATE ANALYZED: 09/28/2016**

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	100	ND	495	ND
CHLOROMETHANE	74-87-3	100	ND	207	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	100	ND	699	ND
VINYL CHLORIDE	75-01-4	100	ND	256	ND
BROMOMETHANE	74-83-9	100	ND	388	ND
CHLOROETHANE	75-00-3	100	ND	264	ND
TRICHLOROFLUOROMETHANE	75-69-4	100	ND	562	ND
1,1-DICHLOROETHENE	75-35-4	100	ND	397	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	100	ND	766	ND
METHYLENE CHLORIDE	75-09-2	100	ND	347	ND
1,1-DICHLOROETHANE	75-34-3	100	ND	405	ND
C-1,2-DICHLOROETHENE	159-59-2	100	ND	397	ND
CHLOROFORM	67-66-3	100	ND	488	ND
1,1,1-TRICHLOROETHANE	71-55-6	100	ND	546	ND
1,2-DICHLOROETHANE	107-06-2	100	ND	405	ND
BENZENE	71-43-2	100	ND	319	ND
CARBON TETRACHLORIDE	56-23-5	100	ND	629	ND
1,2-DICHLOROPROPANE	78-87-5	100	ND	462	ND
TRICHLOROETHENE	79-01-6	100	ND	537	ND
T-1,3-DICHLOROPROPENE	10061-02-6	100	ND	454	ND
C-1,3-DICHLOROPROPENE	10061-01-5	100	ND	454	ND
TOLUENE	108-88-3	100	ND	377	ND
1,1,2-TRICHLOROETHANE	79-00-5	100	ND	546	ND
1,2-DIBROMOETHANE	106-93-4	100	ND	768	ND
TETRACHLOROETHENE	127-18-4	100	12600	678	85300
CHLOROBENZENE	108-90-7	100	ND	460	ND
ETHYLBENZENE	100-41-4	100	ND	434	ND
XYLENE (M+P)	179601-23-1	200	ND	868	ND
STYRENE	100-42-5	100	ND	426	ND
XYLENE (O)	95-47-6	100	ND	434	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	100	ND	687	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	100	ND	492	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	100	ND	492	ND
1,3-DICHLOROBENZENE	541-73-1	100	ND	601	ND
1,4-DICHLOROBENZENE	106-46-7	100	ND	601	ND
1,2-DICHLOROBENZENE	95-50-1	100	ND	601	ND
1,2,4-TRICHLOROBENZENE	120-82-1	100	ND	742	ND
HEXACHLOROBUTADIENE	87-68-3	100	ND	1070	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

RL - REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                       
DATE:                     10/3/16

**K PRIME, INC.**  
**LABORATORY REPORT**

K PRIME PROJECT: 9418  
 CLIENT PROJECT: 1488.001.01

METHOD: VOC'S IN AIR  
 REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID: PSV-2  
 LAB NO: 147541  
 SAMPLE TYPE: AIR  
 DATE SAMPLED: 09/26/2016  
 TIME SAMPLED: 15:09  
 BATCH ID: 092216A1  
 DATE ANALYZED: 09/28/2016

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	20.0	ND	98.9	ND
CHLOROMETHANE	74-87-3	20.0	ND	41.3	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	20.0	ND	140	ND
VINYL CHLORIDE	75-01-4	20.0	ND	51.1	ND
BROMOMETHANE	74-83-9	20.0	ND	77.7	ND
CHLOROETHANE	75-00-3	20.0	ND	52.8	ND
TRICHLOROFLUOROMETHANE	75-69-4	20.0	ND	112	ND
1,1-DICHLOROETHENE	75-35-4	20.0	ND	79.3	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	20.0	ND	153	ND
METHYLENE CHLORIDE	75-09-2	20.0	ND	69.5	ND
1,1-DICHLOROETHANE	75-34-3	20.0	ND	81.0	ND
C-1,2-DICHLOROETHENE	159-59-2	20.0	ND	79.3	ND
CHLOROFORM	67-66-3	20.0	ND	97.7	ND
1,1,1-TRICHLOROETHANE	71-55-6	20.0	ND	109	ND
1,2-DICHLOROETHANE	107-06-2	20.0	ND	80.9	ND
BENZENE	71-43-2	20.0	ND	63.9	ND
CARBON TETRACHLORIDE	56-23-5	20.0	ND	126	ND
1,2-DICHLOROPROPANE	78-87-5	20.0	ND	92.4	ND
TRICHLOROETHENE	79-01-6	20.0	ND	107	ND
T-1,3-DICHLOROPROPENE	10061-02-6	20.0	ND	90.8	ND
C-1,3-DICHLOROPROPENE	10061-01-5	20.0	ND	90.8	ND
TOLUENE	108-88-3	20.0	ND	75.4	ND
1,1,2-TRICHLOROETHANE	79-00-5	20.0	ND	109	ND
1,2-DIBROMOETHANE	106-93-4	20.0	ND	154	ND
TETRACHLOROETHENE	127-18-4	20.0	1650	136	11200
CHLOROBENZENE	108-90-7	20.0	ND	92.1	ND
ETHYLBENZENE	100-41-4	20.0	ND	86.8	ND
XYLENE (M+P)	179601-23-1	40.0	ND	174	ND
STYRENE	100-42-5	20.0	ND	85.2	ND
XYLENE (O)	95-47-6	20.0	ND	86.8	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	20.0	ND	137	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	20.0	ND	98.3	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	20.0	ND	98.3	ND
1,3-DICHLOROBENZENE	541-73-1	20.0	ND	120	ND
1,4-DICHLOROBENZENE	106-46-7	20.0	ND	120	ND
1,2-DICHLOROBENZENE	95-50-1	20.0	ND	120	ND
1,2,4-TRICHLOROBENZENE	120-82-1	20.0	ND	148	ND
HEXACHLOROBUTADIENE	87-68-3	20.0	ND	213	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
 RL - REPORTING LIMIT  
 NA - NOT APPLICABLE OR AVAILABLE  
 µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:                     RMC                      
 DATE:                     10/3/16



**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9418**  
**CLIENT PROJECT: 1488.001.01**

**METHOD: 1,1-DIFLUOROETHANE**  
**REFERENCE: EPA TO 3**

**UNITS: PPMV**

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
PSV-8	147533	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-3	147534	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-4	147535	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-5	147536	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-6	147537	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-7	147538	AIR	09/26/2016	092716A1	09/27/2016	10.0	26.3
PSV-7 DUP	147539	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-1	147540	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND
PSV-2	147541	AIR	09/26/2016	092716A1	09/27/2016	10.0	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE  
MRL - METHOD REPORTING LIMIT

APPROVED BY:           *AMC*            
DATE:           10/3/16

**K PRIME, INC.**  
**LABORATORY METHOD BLANK REPORT**

**METHOD BLANK ID:** B092216A1  
**SAMPLE TYPE:** AIR

**BATCH ID:** 092216A1  
**DATE ANALYZED:** 09/22/2016

**METHOD:** VOC'S IN AIR  
**REFERENCE:** EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		RL	SAMPLE CONC	RL	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND	2.47	ND
CHLOROMETHANE	74-87-3	0.500	ND	1.03	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	0.500	ND	3.50	ND
VINYL CHLORIDE	75-01-4	0.500	ND	1.28	ND
BROMOMETHANE	74-83-9	0.500	ND	1.94	ND
CHLOROETHANE	75-00-3	0.500	ND	1.32	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND	2.81	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND	1.98	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND	3.83	ND
METHYLENE CHLORIDE	75-09-2	0.500	ND	1.74	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND	2.02	ND
C-1,2-DICHLOROETHENE	159-59-2	0.500	ND	1.98	ND
CHLOROFORM	67-66-3	0.500	ND	2.44	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND	2.73	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND	2.02	ND
BENZENE	71-43-2	0.500	ND	1.60	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND	3.15	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND	2.31	ND
TRICHLOROETHENE	79-01-6	0.500	ND	2.69	ND
T-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND	2.27	ND
C-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND	2.27	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND	2.73	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND	3.84	ND
TETRACHLOROETHENE	127-18-4	0.500	ND	3.39	ND
CHLOROBENZENE	108-90-7	0.500	ND	2.30	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	179601-23-1	1.00	ND	4.34	ND
STYRENE	100-42-5	0.500	ND	2.13	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND	3.43	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND	2.46	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND	2.46	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND	3.01	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND	3.01	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND	3.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	0.500	ND	3.71	ND
HEXACHLOROBUTADIENE	87-68-3	0.500	ND	5.33	ND

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

**K PRIME, INC.**  
**LABORATORY QUALITY CONTROL REPORT**

LAB CONTROL ID: L092216A1  
 LAB CONTROL DUPLICATE ID: D092216A1

SAMPLE TYPE: AIR  
 BATCH ID: 092216A1  
 DATE ANALYZED: 09/22/2016

METHOD: VOC'S IN AIR  
 REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	10.3	103	60 - 140
BENZENE	10.0	0.500	ND	9.40	94	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	10.7	107	60 - 140
TOLUENE	10.0	0.500	ND	10.6	106	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	10.7	107	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS RPD (%)	REC (%)
1,1-DICHLOROETHENE	10.0	10.0	100	2.3	25	60 - 140
BENZENE	10.0	9.18	92	2.4	25	60 - 140
TRICHLOROETHENE	10.0	10.5	105	1.7	25	60 - 140
TOLUENE	10.0	10.4	104	1.6	25	60 - 140
TETRACHLOROETHENE	10.0	10.6	106	1.6	25	60 - 140

**NOTES:**

NA - NOT APPLICABLE OR AVAILABLE

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

**K PRIME, INC.**  
LABORATORY QC REPORT

METHOD BLANK ID: B092716A1  
LAB CONTROL SAMPLE ID: L092716A1  
LAB CONTROL DUPLICATE ID: D092716A1  
BATCH ID: 092716A1

METHOD: 1,1-DIFLUOROETHANE  
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR  
UNITS: PPM -V/V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1-DIFLUOROETHANE	10.0	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	10000	9540	95	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	9540	9630	0.9	±30

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE



LABORATORY: K Prime

SAMPLERS: J. Phillips

JOB NUMBER: 1488.001.01

NAME / LOCATION: Sparkle Cleaners / Oakland, CA

PROJECT MANAGER: W. Mast

RECORDER: J. Phillips

ANALYSIS REQUESTED

DATE				SAMPLE NUMBER / DESIGNATION
YR	MO	DY	TIME	
16	09	26	0936	PSV-8
			1038	PSV-3
			1107	PSV-4
			1203	PSV-5
			1224	PSV-6
			1256	PSV-7
			1256	PSV-7 dup
			1428	PSV-1
↓	↓	↓	↓	↓
			1509	PSV-2

MATRIX				# of Containers & Preservatives							DEPTH # FEET
Vapor	Water	Soil	Sedim't	Unpres.	EnCore	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Summed		Can ID
X									1		S-261
X									1		S-653
X									1		S-291
X									1		S-293
X									1		S-656
X									1		S-354
X									1		S-232
X									1		S-264
X									1		S-267

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHm by 8015M	EPA 8270C	MNA Parameters (see notes)	VOCs (10-15)	H-DEA
								X	X
								X	X
								X	X
								X	X
								X	X
								X	X
								X	X
								X	X

**NOTES**

Turn Around Time: Standard 5-day TAT

Page 1 of 1

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature) <i>Jan Kline</i>	RECEIVED BY: (Signature) <i>John Chud</i>	DATE 9/27/16	TIME 0917
RELINQUISHED BY: (Signature) <i>John Chud</i>	RECEIVED BY: (Signature) <i>John Chud</i>	DATE 9/27/16	TIME 9:49
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)
METHOD OF SHIPMENT: <u>Picked up from office by lab courier</u>			

# K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.  
Santa Rosa CA 95403  
Phone: 707 527 7574  
FAX: 707 527 7879

## TRANSMITTAL

**DATE:** 10/3/2016

**TO:** MR. WILL MAST  
PES ENVIRONMENTAL, INC.  
7665 REDWOOD BLVD., SUITE 200  
NOVATO, CA 94945

**ACCT:** 9418  
**PROJ:** 1488.001.01

Phone: 415-899-1600  
Fax: 415-899-1601  
Email: [wmast@pesenv.com](mailto:wmast@pesenv.com)

**CC:** MR. GARY THOMAS  
Email: [gthomas@pesenv.com](mailto:gthomas@pesenv.com)

**FROM:** Richard A. Kage1, Ph.D. *RAK 10/3/2016*  
Laboratory Director

**SUBJECT:** LABORATORY RESULTS FOR YOUR PROJECT 1488.001.01

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
PSV-8-SHROUD	AIR	9/26/2016	9:36	147542
PSV-3-SHROUD	AIR	9/26/2016	10:38	147543
PSV-4-SHROUD	AIR	9/26/2016	11:07	147544
PSV-5-SHROUD	AIR	9/26/2016	12:03	147545
PSV-6-SHROUD	AIR	9/26/2016	12:24	147546
PSV-7-SHROUD	AIR	9/26/2016	12:56	147547
PSV-1-SHROUD	AIR	9/26/2016	14:28	147548
PSV-2-SHROUD	AIR	9/26/2016	15:09	147549

The above listed sample group was received on 9/27/2016 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.  
Thank you for this opportunity to be of service.

**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9418**  
**CLIENT PROJECT: 1488.001.01**

**METHOD: 1,1-DIFLUOROETHANE**  
**REFERENCE: EPA TO 3**

**UNITS: PPMV**

<b>SAMPLE ID</b>	<b>LAB NO.</b>	<b>SAMPLE TYPE</b>	<b>DATE SAMPLED</b>	<b>BATCH ID</b>	<b>DATE ANALYZED</b>	<b>MRL</b>	<b>SAMPLE CONC</b>
PSV-8-SHROUD	147542	AIR	09/26/2016	092716A1	09/27/2016	10.0	89600
PSV-3-SHROUD	147543	AIR	09/26/2016	092716A1	09/27/2016	10.0	108000
PSV-4-SHROUD	147544	AIR	09/26/2016	092716A1	09/27/2016	10.0	80300
PSV-5-SHROUD	147545	AIR	09/26/2016	092716A1	09/27/2016	10.0	132000
PSV-6-SHROUD	147546	AIR	09/26/2016	092716A1	09/27/2016	10.0	126000
PSV-7-SHROUD	147547	AIR	09/26/2016	092716A1	09/27/2016	10.0	135000
PSV-1-SHROUD	147548	AIR	09/26/2016	092716A1	09/27/2016	10.0	113000
PSV-2-SHROUD	147549	AIR	09/26/2016	092716A1	09/27/2016	10.0	61100

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

APPROVED BY:                       
DATE:                     10/3/16

**K PRIME, INC.**  
LABORATORY QC REPORT

METHOD BLANK ID: B092716A1  
LAB CONTROL SAMPLE ID: L092716A1  
LAB CONTROL DUPLICATE ID: D092716A1  
BATCH ID: 092716A1

METHOD: 1,1-DIFLUOROETHANE  
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR  
UNITS: PPM -V/V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1-DIFLUOROETHANE	10.0	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	10000	9540	95	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	9540	9630	0.9	±30

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE





# CHAIN OF CUSTODY RECORD

9418

LABORATORY: K Prime

SAMPLERS: J. Phillips

JOB NUMBER: 1488.001.01

NAME / LOCATION: Sparkle Cleaners / Oakland, CA

PROJECT MANAGER: W. Mast

RECORDER: J. Phillips

ANALYSIS REQUESTED

DATE				SAMPLE NUMBER / DESIGNATION
YR	MO	DY	TIME	
16	09	26	0936	PSV-8-shroud
			1038	PSV-3-shroud
			1107	PSV-4-shroud
			1203	PSV-5-shroud
			1224	PSV-6-shroud
			1256	PSV-7-shroud
			1428	PSV-1-shroud
↓	↓	↓	1509	PSV-2-shroud

MATRIX				# of Containers & Preservatives							DEPTH IN FEET		
Vapor	Water	Soil	Sedim't	Unpres.	EnCore	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Summe				
X									1				S-855
X									1				S-230
X									1				S-433
X									1				S-365
X									1				S-356
X									1				S-361
X									1				S-654
X									1				S-268

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)	
1,1-DCA	X
	X
	X
	X
	X
	X
	X
	X

**NOTES**

Turn Around Time: Standard 5-day TAT

Page 1 of 1

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature) <i>J. Phillips</i>	RECEIVED BY: (Signature) <i>John Chod</i>	DATE 9/27/16	TIME 09:17
RELINQUISHED BY: (Signature) <i>John Chod</i>	RECEIVED BY: (Signature) <i>John Chod</i>	DATE 9/27/16	TIME 9:18
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)
METHOD OF SHIPMENT: <u>Picked up from office by lab courier</u>			

**DISTRIBUTION**

**Soil Vapor Sampling Report  
Sparkle Cleaners  
7000 Bancroft Avenue  
Oakland, California  
SLIC Case: RO0002942  
GeoTracker Global ID: SLT19735483**

**October 31, 2016**

		<u>Copy No.</u>
1 Copy	Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502  Attention: Ms. Kit Soo	FTP upload only
2 Copies	Palm Peninsula, LLC and 7200 Bancroft LLC c/o Levy Affiliated Holdings 201 Wilshire Boulevard Santa Monica, California 90401  Attention: Mr. Jacob Levy	1 - 2
2 Copies	PES Files	3 - 4
1 Copy	Unbound Original	5