



April 25, 2008

**881.060.03.004**

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

Attention: Mr. Jerry Wickham

**RECEIVED**

2:54 pm, Apr 28, 2008

Alameda County  
Environmental Health

**Transmittal  
First Quarter 2008  
Groundwater Monitoring Report  
Sparkle Cleaners  
Eastmont Town Center  
7000 Bancroft Avenue  
Oakland, California  
SLIC Case RO0002942**

Dear Mr. Wickham:

On behalf of SKB-Eastmont Oakland Associates, LLC, attached please find our report documenting the results of the first quarter 2008 groundwater monitoring event at the Sparkle Cleaners facility. 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.

We trust that this is the information that you require at this time. Please contact us with any further questions.

Yours very truly,

**PES ENVIRONMENTAL, INC.**

William W. Mast, P.G.  
Associate Engineer

cc: Ms. Kathleen Schulz - SKB - Eastmont Oakland Associates, LLC



A Report Prepared for:

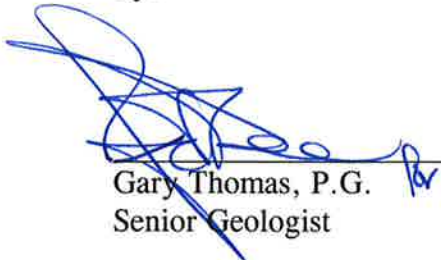
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502


Attention: Mr. Jerry Wickham

**FIRST QUARTER 2008  
GROUNDWATER MONITORING REPORT  
SPARKLE CLEANERS  
EASTMONT TOWN CENTER  
7000 BANCROFT AVENUE  
OAKLAND, CALIFORNIA**

**APRIL 25, 2008**

By:

  
\_\_\_\_\_  
Gary Thomas, P.G.  
Senior Geologist

  
\_\_\_\_\_  
William W. Mast, P.G.  
Associate Engineer



**881.060.03.004**

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DISTRIBUTION

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## 1.0 INTRODUCTION

This report presents the results of groundwater monitoring activities conducted during the first quarter 2008 monitoring event at the Sparkle Cleaners facility (Site). The Site is located at 7000 Bancroft Avenue, Oakland, California and is situated in the northwest portion of Eastmont Town Center (Plates 1 and 2). Sparkle Cleaners is an active dry-cleaning facility that uses tetrachloroethene (PCE) as a dry-cleaning solvent. This report has been prepared for the Alameda County Environmental Health Department (ACEH) by PES Environmental, Inc. (PES) on behalf of SKB – Eastmont Oakland Associates, LLC (SKBEOA), the property owner.

## 2.0 BACKGROUND INFORMATION

The groundwater monitoring activities were conducted in accordance with PES' Remedial Action Workplan (RAW) that was approved by ACEH in a letter dated February 27, 2007 (PES, 2007a; ACEH, 2007a). The RAW's scope of work also included removing the source of PCE soil contamination beneath Sparkle Cleaners and installing four groundwater monitoring wells. Excavation activities to remove the source of PCE in soil were successfully completed in July 2007 and documented in the report titled *Post-Remediation Report, Voluntary Soil Remediation, Sparkle Cleaners, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California* (PES, 2007b) that was previously submitted to ACEH. The groundwater monitoring wells were installed in July 2007 and the baseline groundwater sampling event was conducted in August 2007. The details of the well installations and the results of the baseline sampling event are presented in the *Third Quarter 2007 Groundwater Monitoring Report* (PES, 2007c). In a letter dated October 4, 2007, ACEH provided comments on the *Post-Remediation Report* and requested additional analytical testing during two quarters of groundwater monitoring (ACEH, 2007b).

As described in the RAW, the purpose of the groundwater monitoring is to: (1) document the initial concentrations of volatile organic compounds (VOCs) in the newly installed wells at the Site; (2) monitor groundwater flow directions(s), gradient, and seasonal fluctuations; (3) evaluate the groundwater chemical response to the removal of the source of contamination; and (4) verify that groundwater quality down gradient of Sparkle Cleaners are not declining.

## 3.0 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 seal 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).

#### **4.0 GROUNDWATER MONITORING WELL SAMPLING ACTIVITIES**

First quarter 2008 groundwater monitoring activities consisted of: (1) collection of depth to groundwater measurements and calculation of groundwater elevations; (2) groundwater sample collection; and (3) laboratory analysis of the samples for halogenated VOCs, naphthalene, methyl-tert-butyl ether (MTBE), gasoline oxygenates, total petroleum hydrocarbons quantified as gasoline (TPHg), and TPH quantified as diesel (TPHd). Field activities were conducted by Blaine Tech Services (BTS) of San Jose, California on February 6, 2008. Construction details for the four monitoring wells are provided in Table 1.

##### **4.1 Depth to Groundwater Measurements**

Depth-to-groundwater measurements were obtained for the monitoring wells using an electronic water-level indicator and recorded to the nearest 0.01-foot. The portion of the water-level indicator that was submerged in the wells was cleaned with a solution of Alconox and deionized (DI) water, and then rinsed with DI water between measurements. Decontamination fluids were stored temporarily on site in a DOT-approved 55-gallon drum pending offsite disposal. Depth-to-groundwater data were converted to groundwater elevations referenced to mean sea level and are presented in Table 2. Groundwater elevation contours are presented on Plate 2.

##### **4.2 Monitoring Well Sampling**

After collecting water-level data, BTS sampled the four monitoring wells. Three casing volumes of groundwater were purged from each well prior to collecting the samples. The wells were purged using a new disposable bailer for each well. Samples were collected using a disposable bailer and decanted into laboratory-provided sample containers. Groundwater temperature, pH, conductivity, and turbidity were monitored during purging. The BTS monitoring well sampling forms are presented in Appendix A.

The samples were transported to TestAmerica Laboratories, Inc. (TestAmerica) under chain-of-custody protocol and analyzed for:

- Halogenated VOCs (8010 list), MTBE, fuel oxygenates, and naphthalene by U.S. Environmental Protection Agency (EPA) Test Method 8260B;
- TPHg by U.S. EPA Test Method 8260B; and
- TPHd by U.S. EPA Test Method 8015B.

## **5.0 GROUNDWATER MONITORING RESULTS**

### **5.1 Groundwater Elevation Measurements**

Groundwater elevations measured on February 6, 2008 ranged from 26.58 feet MSL in well MW-01 to 34.96 feet MSL in well MW-02 (see Table 2 and Plate 2). As indicated on Plate 2, the elevation data from well MW-02 is not used for contouring because the groundwater elevation in this well is significantly higher than the elevations in the other wells. As described in the previous monitoring reports, the cause of the higher water-level elevation at Well MW-02 appears to be from a screen interval that is at least 9 feet shallower (i.e., relative to the ground surface) than the other three wells. Well MW-2 was constructed in this manner because groundwater was detected at a shallower depth while drilling the borehole for this well.

Based on the groundwater elevation data from wells MW-01, MW-03, and MW-04, the hydraulic gradient during the first quarter 2008 monitoring event was approximately 0.007 foot per foot to the west (see Plate 2). In addition, the analytical results discussed below suggest a westerly to northwesterly direction for groundwater flow.

### **5.2 Groundwater Sample Analytical Results**

The analytical results for the groundwater samples collected on February 6, 2008 are summarized below and presented in Table 3. The laboratory analytical report and chain-of-custody documentation are provided in Appendix B.

#### **5.2.1 Volatile Organic Compounds**

PCE was detected in three of the four monitoring wells at concentrations ranging from 2.0  $\mu\text{g/L}$  in well MW-03 to 130  $\mu\text{g/L}$  in well MW-01 (PCE was also detected at 130  $\mu\text{g/L}$  in the duplicate sample from well MW-01). TCE was detected at concentrations of 5.8 and 0.90  $\mu\text{g/L}$  in wells MW-01 and MW-02, and cis-1,2-dichloroethene (DCE) was detected at a concentration of 0.58  $\mu\text{g/L}$  in well MW-01. No other VOCs were detected at concentrations exceeding laboratory reporting limits in the samples from wells MW-01 through MW-03, and no VOCs were detected in well MW-04 (Table 3).

The distribution of PCE and TCE in groundwater is consistent with the observed westerly groundwater flow direction, and with prior monitoring data.

#### **5.2.2 Petroleum Hydrocarbons**

TPHg was detected in well MW-01 at a concentration of 140  $\mu\text{g/L}$  (TPHg was also detected at 140  $\mu\text{g/L}$  in the duplicate sample from well MW-01). However, the laboratory qualified these data and indicated that the reported TPHg concentration is due to presence of PCE.

TPHd was detected in three of the four monitoring wells at concentrations ranging from 57  $\mu\text{g/L}$  in well MW-01 (65  $\mu\text{g/L}$  in the duplicate sample from this well) to 200  $\mu\text{g/L}$  in well MW-02 (Table 3). The TPHd data were consistent with concentrations observed during fourth quarter 2007 monitoring.

BTEX compounds, fuel oxygenates, and naphthalene were not detected in the water samples.

### **5.3 Quality Assurance/Quality Control Assessment of Chemical Data**

The quality of the chemical data reported by TestAmerica was assessed from the results of internal laboratory spike and method blank. The data are within acceptable recovery limits. The results for the duplicate sample collected at MW-01 indicate good reproducibility with PCE, TCE, TPHg, and TPHd detected in both the regular and duplicate sample. The relative percent differences for the PCE, TCE, TPHg, and TPHd concentrations detected in this sample are 0, 0.87, 0, and 6.6 percent, respectively. The water samples were analyzed within acceptable EPA holding times. The data from TestAmerica are considered to be representative and of good quality.

## **6.0 SUMMARY**

The first quarter 2008 groundwater monitoring event has been conducted in accordance with the RAW.

Based on the groundwater elevation data from wells MW-01, MW-03, and MW-04, groundwater flow at the Site during the first quarter 2008 sampling event is westerly (see Plate 2). 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 130  $\mu\text{g/L}$  and 5.8  $\mu\text{g/L}$ , respectively. These concentrations are slightly higher than those observed during third and fourth quarter 2007 monitoring.

TPHd was detected above laboratory reporting limits in groundwater during this monitoring event in each well, except well MW-04. TPHd concentrations range from 57  $\mu\text{g/L}$  in well MW-01 to 200  $\mu\text{g/L}$  in well MW-02. According to the analytical laboratory, the TPHg detected in well MW-01 is due to the presence of PCE. No other petroleum hydrocarbons were detected.

The first quarter 2008 is the second of two quarters of total petroleum hydrocarbon (i.e., TPHd and TPHg) monitoring that were requested by ACEH (ACEH, 2007b). As such, no further monitoring for these constituents will be performed. Monitoring of the four wells will continue for another quarter to assess whether concentrations of VOCs in groundwater decrease as a result of the Site remediation activities. The second quarter 2008 groundwater monitoring event will be conducted in early May 2008.



## 7.0 REFERENCES

Alameda County Environmental Health (ACEH), 2007a. *SLIC Case RO0002942 and Geotracker Global ID SLT19735483, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, CA 94605 – Work Plan Approval*. February 27.

ACEH, 2007b. *SLIC Case RO0002942 and Geotracker Global ID SLT19735483, Sparkle Cleaners, 7000 Bancroft Avenue, Oakland, CA 94605 – Post-Remediation Report Review*. October 4.

PES Environmental, Inc. (PES), 2007a. *Remedial Action Workplan, Voluntary Soil Remediation, Sparkle Cleaner, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California*. January 5.

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

PES, 2007c. *Third Quarter 2007 Groundwater Monitoring Report, Sparkle Cleaners, Eastmont Town Center, 7000 Bancroft Avenue, Oakland, California*. October 8.

**TABLES**

**Table 1**  
**Groundwater Monitoring Well Construction Details**  
**Sparkle Cleaners**  
**Eastmont Town Center**  
**7000 Bancroft Avenue**  
**Oakland, California**

<b>Well ID</b>	<b>Date Completed</b>	<b>Top of Casing Elevation (feet MSL)</b>	<b>Borehole Diameter (inches)</b>	<b>Borehole Depth (feet bgs)</b>	<b>Well Depth (feet bgs)</b>	<b>Casing Diameter (inches)</b>	<b>Screen Interval (feet bgs)</b>	<b>Sand Filter Interval (feet bgs)</b>	<b>Screen Slot Size (inches)</b>
MW-01	7/23/2007	49.51	8	47	47	2	31.5 to 46.5	29.5 to 47	0.020
MW-02	7/24/2007	49.07	8	36.5	35	2	19.5 to 34.5	17.5 to 36.5	0.020
MW-03	7/24/2007	50.43	8	44	44	2	28.5 to 43.5	26.5 to 44	0.020
MW-04	7/23/2007	49.81	8	48.5	48.5	2	33 to 48	31 to 48.5	0.020

**Note:**

bgs - Below ground surface

MSL - Mean sea level

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

Well ID	Date Measured	Top of Casing Elevation (feet MSL)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)
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-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-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-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

**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-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-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-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

**Notes:**

TPHg - Gasoline range organics (C5-C12)

TPHd - Diesel range organics (C10-C28)

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

MTBE - Methyl tert-butyl ether

TAME - Tert-amyl methyl ether

TBA - Tert-butyl alcohol

DIPE - Diisopropyl ether

ETBE - Ethyl tert-butyl ether

µg/L - Micrograms per liter

NA - Not Analyzed

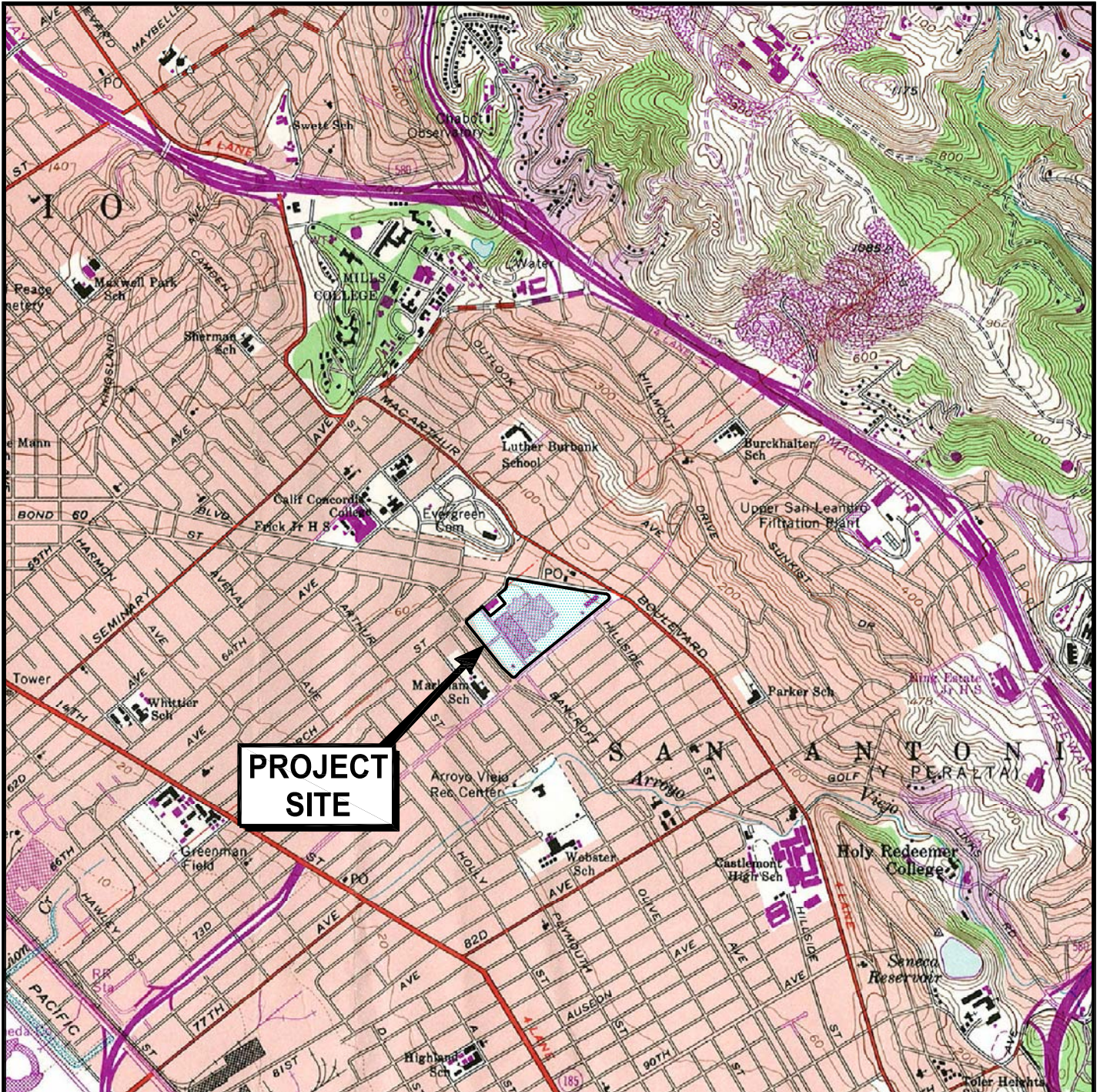
ND (0.5) - Not detected at or above indicated laboratory reporting limit

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

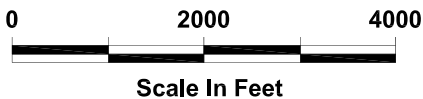
<sup>(D)</sup> - Field duplicate sample

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

## **ILLUSTRATIONS**



**PROJECT SITE**



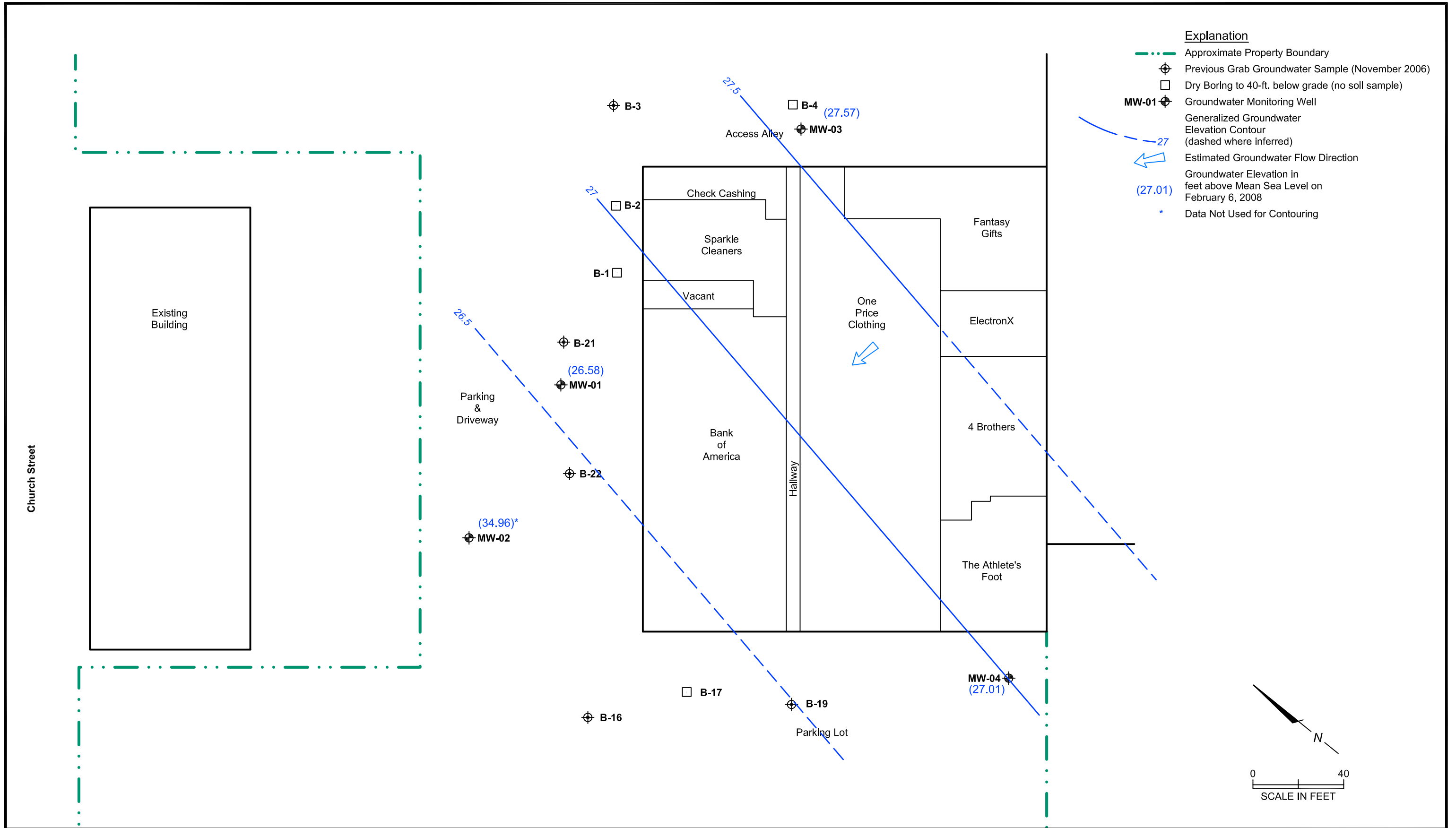
U.S.G.S. Topo Map - Oakland East, California, 7.5-minute quadrangle. Map version 1959; current as of 1980.



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

**Site Location Map**  
Sparkle Cleaners  
Eastmont Town Center  
Oakland, California

PLATE  
**1**





**APPENDIX A**

**MONITORING WELL SAMPLING FORMS**

## SPH or Purge Water Drum Log

Client: PES  
 Site Address: 7200 Bancroft Ave Oakland

STATUS OF DRUM(S) UPON ARRIVAL						
Date	8-1-07	8/7/07	11/19/07	02/06/08		
Number of drum(s) empty:	3	1	2	2		
Number of drum(s) 1/4 full:	1					
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:		1				
Number of drum(s) full:	2	B4	5	0		
Total drum(s) on site:	6	6	7	2		
Are the drum(s) properly labeled?		Y	Y	N		
Drum ID & Contents:		Purge water soil cuttings	Purge H <sub>2</sub> O			
If any drum(s) are partially or totally filled, what is the first use date:	-	-	-			

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.
- If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	8-1-07	8/7/07	11/19/07	02/06/08		
Number of drums empty:	1	2	2	2		
Number of drum(s) 1/4 full:						
Number of drum(s) 1/2 full:				1		
Number of drum(s) 3/4 full:		1	Ⓟ			
Number of drum(s) full:	5	4	<del>5</del> 6	3		
Total drum(s) on site:	6	7	8	3		
Are the drum(s) properly labeled?	Y	Y	Y	Y		
Drum ID & Contents:		Soil/Purge water	Purge water	Asph + P <sub>2</sub> O <sub>5</sub>		

**LOCATION OF DRUM(S)**  
 Describe location of drum(s): In Storage area next to cleaners / Rm # 15

FINAL STATUS						
Number of new drum(s) left on site this event	0	1	1	1		
Date of inspection:	8-1-07	8/7/07	11/19/07	02/06/08		
Drum(s) labelled properly:	Y	Y	Y	Y		
Logged by BTS Field Tech:	DW	PC	Y	MD		
Office reviewed by:	N	N	PC	PC		

## WELL GAUGING DATA

Project # 080205-M01 Date 02/06/03 Client PES

Site 720 Bancroft, Oakland, Ca

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <del>TC</del>	Notes
MW-1	0940	2					22.93	48.29	↓	
MW-2	0933	2				14.11	34.64			
MW-3	0927	2	—			22.86	46.85			
MW-4	0917	2	—			22.90	44.11			

# WELLHEAD INSPECTION CHECKLIST

Page \_\_\_\_ of \_\_\_\_

Date 02/06/06 Client PES  
 Site Address 720 Bancroft  
 Job Number 080206-MD1 Technician M. PIERCE

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-2		Annular Seal has a hole in it						#
MW-3	X							
MW-4	J							

NOTES: \_\_\_\_\_  
 \_\_\_\_\_ 4321  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**WELL MONITORING DATA SHEET**

Project #: <b>080206-M01</b>	Client: <b>PES - 7200 Bancroft, Oakland, CA</b>
Sampler: <b>MO</b>	Date: <b>02/06/08</b>
Well I.D.: <b>MW-1</b>	Well Diameter: <b>2</b> 3 4 6 8
Total Well Depth (TD): <b>46.29</b>	Depth to Water (DTW): <b>22.93</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>PVC</b> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <b>28.0</b>	

Purge Method: Bailer	Waters: Peristaltic	Sampling Method: Bailer
<input checked="" type="checkbox"/> Disposable Bailer	<input type="checkbox"/> Extraction Pump	<input checked="" type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Positive Air Displacement	<input type="checkbox"/> Other _____	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible		<input type="checkbox"/> Dedicated Tubing
Other: _____		

$4.0 \text{ (Gals.)} \times 3 = 12.0 \text{ Gals.}$ <p style="font-size: small; margin: 0;"> <input type="checkbox"/> Case Volume      <input type="checkbox"/> Specified Volumes      <input type="checkbox"/> Calculated Volume         </p>	<table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><del>2"</del></td> <td><del>0.16</del></td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	<del>2"</del>	<del>0.16</del>	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
<del>2"</del>	<del>0.16</del>	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1115	17.8	7.90	925	235	4.0	—
1118	19.0	7.09	910	606	8.0	—
1121	18.6	7.23	920	676	12.0	—

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <b>12.0</b>	
Sampling Date: <b>02/06/08</b>	Sampling Time: <b>1131</b>	Depth to Water: <b>27.30</b>
Sample I.D.: <b>MW-1</b>	Laboratory: Kiff CalScience Other: <b>TD</b>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <b>see COC</b>		
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable): <b>DUP</b>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <b>see COC</b>		
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

## WELL MONITORING DATA SHEET

Project #: 090206-MD1	Client: PES - 7200 Bancroft, Oakland <span style="float: right;">cc</span>
Sampler: MD	Date: 02/06/08
Well I.D.: MW-2	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 34.64	Depth to Water (DTW): 14.11
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.22	

Purge Method: Bailer <input checked="" type="radio"/> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="radio"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	--

3.3 (Gals.) X 3 = 9.9 Gals.  
 I Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
<u>2"</u>	<u>0.16</u>	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F or <u>C</u> )	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1044	17.4	7.20	1231	620	3.3	—
1046	18.1	7.14	1189	796	6.6	—
1049	19.1	6.94	1157	813	9.9	—

Did well dewater? Yes  No  Gallons actually evacuated: 9.9

Sampling Date: 02/06/08 Sampling Time: 1101 Depth to Water: 17.21

Sample I.D.: MW-2 Laboratory: Kiff CalScience Other JA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

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

## WELL MONITORING DATA SHEET

Project #: 080205-MD1	Client: PES - 7200 Bancroft, Oakland
Sampler: MD	Date: 02/06/08
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 46.85	Depth to Water (DTW): 22.86
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVE) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.66	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

$3.8 \text{ (Gals.)} \times 3 = 11.4 \text{ Gals.}$ I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><del>2"</del></td> <td><del>0.16</del></td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	<del>2"</del>	<del>0.16</del>	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
<del>2"</del>	<del>0.16</del>	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1021	17.9	8.15	525	65	3.8	—
1024	19.0	7.65	533	516	7.6	—
1028	19.3	7.40	547	746	11.4	—

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 11.4	
Sampling Date: 02/06/08	Sampling Time: 1031	Depth to Water: 27.12
Sample I.D.: MW-3	Laboratory: Kiff CalScience	Other: (JA)
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other: See COC	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other:	
D.O. (if req'd): Pre-purge:	mg/L	Post-purge: mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge: mV

## WELL MONITORING DATA SHEET

Project #: 090206-M01	Client: PES - 7200 Bancroft
Sampler: MD	Date: 02/06/08
Well I.D.: MW - 4	Well Diameter: $\emptyset$ 3 4 6 8 _____
Total Well Depth (TD): 99.11	Depth to Water (DTW): 22.80
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.06	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

$3.4$ (Gals.) X $3$ = $10.2$ Gals. 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><u>2"</u></td> <td><u>0.16</u></td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	<u>2"</u>	<u>0.16</u>	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
<u>2"</u>	<u>0.16</u>	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1000	18.8	8.94	596	811	3.4	
1003	18.9	8.00	703	7100	6.8	
1005	19.7	7.65	681	7100	10.2	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 10.2	
Sampling Date: 02/06/08	Sampling Time: 1011	Depth to Water: 26.31
Sample I.D.: MW - 4	Laboratory: Kiff CalScience	Other: <u>ETA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other: See CWC	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other:	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	



**APPENDIX B**

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

## ANALYTICAL REPORT

Job Number: 720-12932-1

Job Description: Eastmont Town Center

For:

PES Environmental, Inc.

1682 Novato Boulevard

Suite 100

Novato, CA 94947-7021

Attention: Mr. Miguel Rizo



---

Afsaneh Salimpour

Project Manager I

afsaneh.salimpour@testamericainc.com

02/18/2008

Revision: 1

**Job Narrative**  
**720-J12932-1**

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: Sample 720-12932-1,5 had gases hits duo to discrete peak(Tetrachloroethene).

No other analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.

## EXECUTIVE SUMMARY - Detections

Client: PES Environmental, Inc.

Job Number: 720-12932-1

Lab Sample ID	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>720-12932-1</b>	<b>MW-1</b>				
Gasoline Range Organics (GRO)-C5-C12		140	50	ug/L	8260B
Trichloroethene		5.8	0.50	ug/L	8260B
Tetrachloroethene		130	1.0	ug/L	8260B
cis-1,2-Dichloroethene		0.58	0.50	ug/L	8260B
Diesel Range Organics [C10-C28]		57	50	ug/L	8015B
<b>720-12932-2</b>	<b>MW-2</b>				
Trichloroethene		0.90	0.50	ug/L	8260B
Tetrachloroethene		25	0.50	ug/L	8260B
Diesel Range Organics [C10-C28]		200	50	ug/L	8015B
<b>720-12932-3</b>	<b>MW-3</b>				
Tetrachloroethene		2.0	0.50	ug/L	8260B
Diesel Range Organics [C10-C28]		70	50	ug/L	8015B
<b>720-12932-5</b>	<b>DUP</b>				
Gasoline Range Organics (GRO)-C5-C12		140	50	ug/L	8260B
Trichloroethene		5.7	0.50	ug/L	8260B
Tetrachloroethene		130	1.0	ug/L	8260B
cis-1,2-Dichloroethene		0.60	0.50	ug/L	8260B
Diesel Range Organics [C10-C28]		65	50	ug/L	8015B

## METHOD SUMMARY

Client: PES Environmental, Inc.

Job Number: 720-12932-1

<b>Description</b>	<b>Lab Location</b>	<b>Method</b>	<b>Preparation Method</b>
<b>Matrix: Water</b>			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260B	
Volatile Organic Compounds by GC/MS (Low Level)	TAL SF	SW846 8260B	
Purge-and-Trap	TAL SF		SW846 5030B
Purge-and-Trap	TAL SF		SW846 5030B
Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	TAL SF	SW846 8015B	
Separatory Funnel Liquid-Liquid Extraction	TAL SF		SW846 3510C

### Lab References:

TAL SF = TestAmerica San Francisco

### Method References:

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

## METHOD / ANALYST SUMMARY

Client: PES Environmental, Inc.

Job Number: 720-12932-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Ali, Badri	BA
SW846 8260B	Chen, Amy	AC
SW846 8260B	Le, Lien	LL
SW846 8015B	Hayashi, Derek	DH

## SAMPLE SUMMARY

Client: PES Environmental, Inc.

Job Number: 720-12932-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
720-12932-1	MW-1	Water	02/06/2008 0000	02/07/2008 1405
720-12932-2	MW-2	Water	02/06/2008 0000	02/07/2008 1405
720-12932-3	MW-3	Water	02/06/2008 0000	02/07/2008 1405
720-12932-4	MW-4	Water	02/06/2008 0000	02/07/2008 1405
720-12932-5	DUP	Water	02/06/2008 0000	02/07/2008 1405
720-12932-6TB	TB	Water	02/06/2008 0000	02/07/2008 1405

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-12932-1  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/08/2008 1318		Final Weight/Volume: 40 mL
Date Prepared:	02/08/2008 1318		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	5.8		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	0.58		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	%Rec	Acceptance Limits	
Toluene-d8 (Surr)	107	73 - 117	
4-Bromofluorobenzene	115	71 - 139	
1,2-Dichloroethane-d4 (Surr)	110	62 - 118	



## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-12932-1

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

---

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B

Analysis Batch: 720-31941

Instrument ID: Varian 3900G

Preparation: 5030B

Lab File ID: c:\saturnws\data\200802\02

Dilution: 2.0

Initial Weight/Volume: 40 mL

Date Analyzed: 02/15/2008 1209

Final Weight/Volume: 40 mL

Date Prepared: 02/15/2008 1209

---

Analyte	Result (ug/L)	Qualifier	RL
Tetrachloroethene	130		1.0

---

# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID:** MW-1

Lab Sample ID: 720-12932-1  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

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## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-31788 Instrument ID: Varian 3900C  
Preparation: 5030B Lab File ID: c:\saturnws\data\200802\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/12/2008 1523 Final Weight/Volume: 40 mL  
Date Prepared: 02/12/2008 1523

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	140		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	99		77 - 121
1,2-Dichloroethane-d4 (Surr)	92		73 - 130

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-2**

Lab Sample ID: 720-12932-2  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/08/2008 1351		Final Weight/Volume: 40 mL
Date Prepared:	02/08/2008 1351		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	0.90		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	25		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	%Rec	Acceptance Limits	
Toluene-d8 (Surr)	108	73 - 117	
4-Bromofluorobenzene	114	71 - 139	
1,2-Dichloroethane-d4 (Surr)	111	62 - 118	

# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

Client Sample ID: MW-2

Lab Sample ID: 720-12932-2

Client Matrix: Water

Date Sampled: 02/06/2008 0000

Date Received: 02/07/2008 1405

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## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-31788 Instrument ID: Varian 3900C  
Preparation: 5030B Lab File ID: c:\saturnws\data\200802\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/12/2008 1549 Final Weight/Volume: 40 mL  
Date Prepared: 02/12/2008 1549

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	90		77 - 121
1,2-Dichloroethane-d4 (Surr)	99		73 - 130

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-12932-3  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation: 5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 02/08/2008 1531		Final Weight/Volume: 40 mL
Date Prepared: 02/08/2008 1531		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	ND		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	2.0		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	107		73 - 117
4-Bromofluorobenzene	112		71 - 139
1,2-Dichloroethane-d4 (Surr)	116		62 - 118

# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-12932-3

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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## 8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 720-31788	Instrument ID: Varian 3900C
Preparation:	5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/12/2008 1615		Final Weight/Volume: 40 mL
Date Prepared:	02/12/2008 1615		

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	100		77 - 121
1,2-Dichloroethane-d4 (Surr)	112		73 - 130

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-4**

Lab Sample ID: 720-12932-4  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method:	8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation:	5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution:	1.0		Initial Weight/Volume: 40 mL
Date Analyzed:	02/08/2008 1711		Final Weight/Volume: 40 mL
Date Prepared:	02/08/2008 1711		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	ND		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	%Rec	Acceptance Limits	
Toluene-d8 (Surr)	107	73 - 117	
4-Bromofluorobenzene	111	71 - 139	
1,2-Dichloroethane-d4 (Surr)	111	62 - 118	

# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-4**

Lab Sample ID: 720-12932-4  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-31788 Instrument ID: Varian 3900C  
Preparation: 5030B Lab File ID: c:\saturnws\data\200802\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/12/2008 1942 Final Weight/Volume: 40 mL  
Date Prepared: 02/12/2008 1942

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	93		77 - 121
1,2-Dichloroethane-d4 (Surr)	113		73 - 130



## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: DUP**

Lab Sample ID: 720-12932-5  
Client Matrix: Water

Date Sampled: 02/06/2008 0000  
Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation: 5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 02/08/2008 1851		Final Weight/Volume: 40 mL
Date Prepared: 02/08/2008 1851		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	5.7		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	0.60		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	%Rec	Acceptance Limits	
Toluene-d8 (Surr)	108	73 - 117	
4-Bromofluorobenzene	112	71 - 139	
1,2-Dichloroethane-d4 (Surr)	114	62 - 118	

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: DUP**

Lab Sample ID: 720-12932-5

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B

Analysis Batch: 720-31941

Instrument ID: Varian 3900G

Preparation: 5030B

Lab File ID: c:\saturnws\data\200802\02

Dilution: 2.0

Initial Weight/Volume: 40 mL

Date Analyzed: 02/15/2008 1243

Final Weight/Volume: 40 mL

Date Prepared: 02/15/2008 1243

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Analyte	Result (ug/L)	Qualifier	RL
Tetrachloroethene	130		1.0

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# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

Client Sample ID: DUP

Lab Sample ID: 720-12932-5

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-31788 Instrument ID: Varian 3900C  
Preparation: 5030B Lab File ID: c:\saturnws\data\200802\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/12/2008 2008 Final Weight/Volume: 40 mL  
Date Prepared: 02/12/2008 2008

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	140		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	98		77 - 121
1,2-Dichloroethane-d4 (Surr)	110		73 - 130

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: TB**

Lab Sample ID: 720-12932-6TB  
 Client Matrix: Water

Date Sampled: 02/06/2008 0000  
 Date Received: 02/07/2008 1405

### 8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B	Analysis Batch: 720-31689	Instrument ID: Varian 3900F
Preparation: 5030B		Lab File ID: c:\saturnws\data\200802\02
Dilution: 1.0		Initial Weight/Volume: 40 mL
Date Analyzed: 02/08/2008 1138		Final Weight/Volume: 40 mL
Date Prepared: 02/08/2008 1138		

Analyte	Result (ug/L)	Qualifier	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	ND		0.50
Chlorobenzene	ND		0.50
Naphthalene	ND		1.0
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	107	73 - 117
4-Bromofluorobenzene	112	71 - 139
1,2-Dichloroethane-d4 (Surr)	113	62 - 118

# Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

Client Sample ID: TB

Lab Sample ID: 720-12932-6TB

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 720-31788 Instrument ID: Varian 3900C  
Preparation: 5030B Lab File ID: c:\saturnws\data\200802\02  
Dilution: 1.0 Initial Weight/Volume: 40 mL  
Date Analyzed: 02/12/2008 1759 Final Weight/Volume: 40 mL  
Date Prepared: 02/12/2008 1759

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	91		77 - 121
1,2-Dichloroethane-d4 (Surr)	105		73 - 130

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-1**

Lab Sample ID: 720-12932-1

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:	8015B	Analysis Batch: 720-31887	Instrument ID: HP DRO5
Preparation:	3510C	Prep Batch: 720-31682	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 250 mL
Date Analyzed:	02/11/2008 2242		Final Weight/Volume: 1 mL
Date Prepared:	02/08/2008 1230		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	57		50
Surrogate	%Rec		Acceptance Limits
p-Terphenyl	91		50 - 150

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-2**

Lab Sample ID: 720-12932-2

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:	8015B	Analysis Batch: 720-31887	Instrument ID: HP DRO5
Preparation:	3510C	Prep Batch: 720-31682	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 250 mL
Date Analyzed:	02/12/2008 0029		Final Weight/Volume: 1 mL
Date Prepared:	02/08/2008 1230		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	200		50
Surrogate	%Rec		Acceptance Limits
p-Terphenyl	81		50 - 150

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-3**

Lab Sample ID: 720-12932-3

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:	8015B	Analysis Batch: 720-31887	Instrument ID: HP DRO5
Preparation:	3510C	Prep Batch: 720-31682	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 250 mL
Date Analyzed:	02/12/2008 0056		Final Weight/Volume: 1 mL
Date Prepared:	02/08/2008 1230		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	70		50
Surrogate	%Rec		Acceptance Limits
p-Terphenyl	91		50 - 150



## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: MW-4**

Lab Sample ID: 720-12932-4

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:	8015B	Analysis Batch: 720-31887	Instrument ID: HP DRO5
Preparation:	3510C	Prep Batch: 720-31682	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 250 mL
Date Analyzed:	02/12/2008 0122		Final Weight/Volume: 1 mL
Date Prepared:	02/08/2008 1230		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		50
Surrogate	%Rec		Acceptance Limits
p-Terphenyl	91		50 - 150

## Analytical Data

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Client Sample ID: DUP**

Lab Sample ID: 720-12932-5

Date Sampled: 02/06/2008 0000

Client Matrix: Water

Date Received: 02/07/2008 1405

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### 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:	8015B	Analysis Batch: 720-31887	Instrument ID: HP DRO5
Preparation:	3510C	Prep Batch: 720-31682	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 250 mL
Date Analyzed:	02/12/2008 0149		Final Weight/Volume: 1 mL
Date Prepared:	02/08/2008 1230		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	65		50
Surrogate	%Rec		Acceptance Limits
p-Terphenyl	85		50 - 150

## DATA REPORTING QUALIFIERS

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
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# QUALITY CONTROL RESULTS

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:720-31689</b>					
LCS 720-31689/2	Lab Control Spike	T	Water	8260B	
LCSD 720-31689/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-31689/3	Method Blank	T	Water	8260B	
720-12932-1	MW-1	T	Water	8260B	
720-12932-2	MW-2	T	Water	8260B	
720-12932-2MS	Matrix Spike	T	Water	8260B	
720-12932-2MSD	Matrix Spike Duplicate	T	Water	8260B	
720-12932-3	MW-3	T	Water	8260B	
720-12932-4	MW-4	T	Water	8260B	
720-12932-5	DUP	T	Water	8260B	
720-12932-6TB	TB	T	Water	8260B	
<b>Analysis Batch:720-31788</b>					
LCS 720-31788/2	Lab Control Spike	T	Water	8260B	
LCSD 720-31788/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-31788/3	Method Blank	T	Water	8260B	
720-12932-1	MW-1	T	Water	8260B	
720-12932-1MS	Matrix Spike	T	Water	8260B	
720-12932-1MSD	Matrix Spike Duplicate	T	Water	8260B	
720-12932-2	MW-2	T	Water	8260B	
720-12932-3	MW-3	T	Water	8260B	
720-12932-4	MW-4	T	Water	8260B	
720-12932-5	DUP	T	Water	8260B	
720-12932-6TB	TB	T	Water	8260B	
<b>Analysis Batch:720-31941</b>					
LCS 720-31941/2	Lab Control Spike	T	Water	8260B	
LCSD 720-31941/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-31941/3	Method Blank	T	Water	8260B	
720-12932-1	MW-1	T	Water	8260B	
720-12932-5	DUP	T	Water	8260B	

**Report Basis**

T = Total

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 720-31682</b>					
LCS 720-31682/2-A	Lab Control Spike	T	Water	3510C	
LCSD 720-31682/3-A	Lab Control Spike Duplicate	T	Water	3510C	
MB 720-31682/1-A	Method Blank	T	Water	3510C	
720-12932-1	MW-1	T	Water	3510C	
720-12932-2	MW-2	T	Water	3510C	
720-12932-3	MW-3	T	Water	3510C	
720-12932-4	MW-4	T	Water	3510C	
720-12932-5	DUP	T	Water	3510C	
<b>Analysis Batch:720-31887</b>					
LCS 720-31682/2-A	Lab Control Spike	T	Water	8015B	720-31682
LCSD 720-31682/3-A	Lab Control Spike Duplicate	T	Water	8015B	720-31682
MB 720-31682/1-A	Method Blank	T	Water	8015B	720-31682
720-12932-1	MW-1	T	Water	8015B	720-31682
720-12932-2	MW-2	T	Water	8015B	720-31682
720-12932-3	MW-3	T	Water	8015B	720-31682
720-12932-4	MW-4	T	Water	8015B	720-31682
720-12932-5	DUP	T	Water	8015B	720-31682

#### Report Basis

T = Total

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Method Blank - Batch: 720-31689**

**Method: 8260B**  
**Preparation: 5030B**

Lab Sample ID: MB 720-31689/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/08/2008 1105  
Date Prepared: 02/08/2008 1105

Analysis Batch: 720-31689  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	ND		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8 (Surr)	110	73 - 117	
4-Bromofluorobenzene	116	71 - 139	
1,2-Dichloroethane-d4 (Surr)	114	62 - 118	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-31689**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-31689/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/08/2008 0957  
Date Prepared: 02/08/2008 0957

Analysis Batch: 720-31689  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200802\020  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-31689/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/08/2008 1032  
Date Prepared: 02/08/2008 1032

Analysis Batch: 720-31689  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900F  
Lab File ID: c:\satumws\data\200802\020  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1-Dichloroethene	99	96	65 - 125	3	20		
Trichloroethene	89	91	74 - 134	3	20		
Chlorobenzene	101	104	61 - 121	2	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8 (Surr)	105		107		73 - 117		
4-Bromofluorobenzene	112		114		71 - 139		
1,2-Dichloroethane-d4 (Surr)	110		107		62 - 118		

Calculations are performed before rounding to avoid round-off errors in calculated results.



## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-31689**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 720-12932-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/08/2008 1424  
Date Prepared: 02/08/2008 1424

Analysis Batch: 720-31689  
Prep Batch: N/A

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 720-12932-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/08/2008 1458  
Date Prepared: 02/08/2008 1458

Analysis Batch: 720-31689  
Prep Batch: N/A

Instrument ID: Varian 3900F  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethene	108	105	65 - 125	3	20		
Trichloroethene	92	90	74 - 134	2	20		
Chlorobenzene	105	108	61 - 121	3	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8 (Surr)	106		108		73 - 117		
4-Bromofluorobenzene	109		114		71 - 139		
1,2-Dichloroethane-d4 (Surr)	113		115		62 - 118		

Calculations are performed before rounding to avoid round-off errors in calculated results.

# Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

## Method Blank - Batch: 720-31788

**Method: 8260B**  
**Preparation: 5030B**

Lab Sample ID: MB 720-31788/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/12/2008 1214  
Date Prepared: 02/12/2008 1214

Analysis Batch: 720-31788  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900C  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec		Acceptance Limits
Toluene-d8 (Surr)	98		77 - 121
1,2-Dichloroethane-d4 (Surr)	95		73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-31788**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-31788/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/12/2008 1332  
Date Prepared: 02/12/2008 1332

Analysis Batch: 720-31788  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900C  
Lab File ID: c:\satumws\data\200802\021  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-31788/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/12/2008 1357  
Date Prepared: 02/12/2008 1357

Analysis Batch: 720-31788  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900C  
Lab File ID: c:\satumws\data\200802\021  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	90	78	64 - 140	15	20		
MTBE	91	92	44 - 134	1	20		
Toluene	101	89	52 - 109	12	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8 (Surr)	101		96		77 - 121		
1,2-Dichloroethane-d4 (Surr)	108		108		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-31788**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 720-12932-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/12/2008 1641  
Date Prepared: 02/12/2008 1641

Analysis Batch: 720-31788  
Prep Batch: N/A

Instrument ID: Varian 3900C  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 720-12932-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/12/2008 1707  
Date Prepared: 02/12/2008 1707

Analysis Batch: 720-31788  
Prep Batch: N/A

Instrument ID: Varian 3900C  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	86	96	64 - 140	11	20		
MTBE	95	98	44 - 134	4	20		
Toluene	96	96	52 - 109	1	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8 (Surr)	101		94		77 - 121		
1,2-Dichloroethane-d4 (Surr)	114		100		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Method Blank - Batch: 720-31941**

**Method: 8260B**  
**Preparation: 5030B**

Lab Sample ID: MB 720-31941/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/15/2008 1029  
Date Prepared: 02/15/2008 1029

Analysis Batch: 720-31941  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\saturnws\data\200802\02  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
1,1-Dichloroethene	ND		0.50
Trichloroethene	ND		0.50
Naphthalene	ND		1.0
Chlorobenzene	ND		0.50
1,1,1-Trichloroethane	ND		0.50
cis-1,3-Dichloropropene	ND		0.50
Bromoform	ND		1.0
Tetrachloroethene	ND		0.50
1,1-Dichloroethane	ND		0.50
1,2-Dichloroethane	ND		0.50
1,2-Dichloropropane	ND		0.50
1,1,2-Trichloroethane	ND		0.50
Dichlorodifluoromethane	ND		0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50
Methylene Chloride	ND		5.0
Chloromethane	ND		1.0
Bromomethane	ND		1.0
Chlorodibromomethane	ND		0.50
1,2,4-Trichlorobenzene	ND		1.0
1,3-Dichlorobenzene	ND		0.50
trans-1,2-Dichloroethene	ND		0.50
1,1,2,2-Tetrachloroethane	ND		0.50
Chloroethane	ND		1.0
1,2-Dichlorobenzene	ND		0.50
Trichlorofluoromethane	ND		1.0
trans-1,3-Dichloropropene	ND		0.50
cis-1,2-Dichloroethene	ND		0.50
Chloroform	ND		1.0
Vinyl chloride	ND		0.50
EDB	ND		0.50
Carbon tetrachloride	ND		0.50
1,4-Dichlorobenzene	ND		0.50
Dichlorobromomethane	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8 (Surr)	108	73 - 117	
4-Bromofluorobenzene	110	71 - 139	
1,2-Dichloroethane-d4 (Surr)	96	62 - 118	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-31941**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-31941/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/15/2008 0922  
Date Prepared: 02/15/2008 0922

Analysis Batch: 720-31941  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200802\021  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 720-31941/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/15/2008 0955  
Date Prepared: 02/15/2008 0955

Analysis Batch: 720-31941  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900G  
Lab File ID: c:\satumws\data\200802\021  
Initial Weight/Volume: 40 mL  
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1-Dichloroethene	99	95	65 - 125	5	20		
Trichloroethene	90	89	74 - 134	2	20		
Chlorobenzene	103	103	61 - 121	0	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8 (Surr)	102		92		73 - 117		
4-Bromofluorobenzene	106		97		71 - 139		
1,2-Dichloroethane-d4 (Surr)	92		87		62 - 118		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Method Blank - Batch: 720-31682**

**Method: 8015B  
Preparation: 3510C**

Lab Sample ID: MB 720-31682/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/11/2008 2215  
Date Prepared: 02/08/2008 1230

Analysis Batch: 720-31887  
Prep Batch: 720-31682  
Units: ug/L

Instrument ID: HP DRO5  
Lab File ID: N/A  
Initial Weight/Volume: 250 mL  
Final Weight/Volume: 1 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50
Surrogate	% Rec		Acceptance Limits
p-Terphenyl	86		50 - 150

**Lab Control Spike/  
Lab Control Spike Duplicate Recovery Report - Batch: 720-31682**

**Method: 8015B  
Preparation: 3510C**

LCS Lab Sample ID: LCS 720-31682/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/11/2008 2121  
Date Prepared: 02/08/2008 1230

Analysis Batch: 720-31887  
Prep Batch: 720-31682  
Units: ug/L

Instrument ID: HP DRO5  
Lab File ID: N/A  
Initial Weight/Volume: 250 mL  
Final Weight/Volume: 1 mL  
Injection Volume:  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-31682/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 02/11/2008 2148  
Date Prepared: 02/08/2008 1230

Analysis Batch: 720-31887  
Prep Batch: 720-31682  
Units: ug/L

Instrument ID: HP DRO5  
Lab File ID: N/A  
Initial Weight/Volume: 250 mL  
Final Weight/Volume: 1 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Diesel Range Organics [C10-C28]	77	73	50 - 130	6	30		
Surrogate		LCS % Rec	LCSD % Rec			Acceptance Limits	
p-Terphenyl		88	83			50 - 150	

Calculations are performed before rounding to avoid round-off errors in calculated results.

# BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE  
SAN JOSE, CALIFORNIA 95112-1105  
FAX (408) 573-7771  
PHONE (408) 573-0555

## CONDUCT ANALYSIS TO DETECT

LAB

TA - San Francisco

DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

- EPA
- LIA
- OTHER

RWQCB REGION

109330

SPECIAL INSTRUCTIONS

Invoice and Report to : PES

Attn: Gary Thomas

# 720-12932

CHAIN OF CUSTODY  
BTS #

CLIENT  
PES

SITE  
Eastmont Town Center

7200 Bancroft Ave.

Oakland, CA

C = COMPOSITE ALL CONTAINERS


VOCs including BTEX, Fuel Oxy, Naphthalene (EPA 8260B)


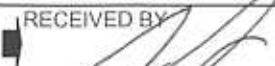
TPH-G (8260B)


TPH-D (8015)

SAMPLE I.D.	DATE	TIME	MATRIX		TOTAL	C = COMPOSITE ALL CONTAINERS	VOCs including BTEX, Fuel Oxy, Naphthalene (EPA 8260B)	TPH-G (8260B)	TPH-D (8015)							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #	
			S=SOIL	W=H <sub>2</sub> O																
✓mw-1	02/06	1131	W		7		X	X	X											
✓mw-2		1101			1		X	X	X											
✓mw-3		1031			1		X	X	X											
✓mw-4		1011			1		X	X	X											
✓DUP		1111			<del>1</del>		X	X	X											
TB	02/06		W		2		X	X												

SAMPLING COMPLETED DATE 02/06 TIME 1240 SAMPLING PERFORMED BY **M. PIERCE** RESULTS NEEDED NO LATER THAN STANDARD TAT

RELEASED BY  DATE 02/06/08 TIME 1752 RECEIVED BY **BTS CUSTOMER** DATE 2/6/08 TIME 1732

RELEASED BY  DATE 2/7/08 TIME 1225 RECEIVED BY  DATE 2/7/08 TIME 1225

RELEASED BY  DATE 2/7/08 TIME 1405 RECEIVED BY **Jay Bull TAC SF** DATE 2/7/08 TIME 1405

SHIPPED VIA DATE SENT TIME SENT COOLER # **Temp 2.4°C**



## Login Sample Receipt Check List

Client: PES Environmental, Inc.

Job Number: 720-12932-1

**Login Number: 12932**  
**Creator: Bullock, Tracy**  
**List Number: 1**

**List Source: TestAmerica San Francisco**

<b>Question</b>	<b>T / F / NA</b>	<b>Comment</b>
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

**DISTRIBUTION**

**FIRST QUARTER 2008  
GROUNDWATER MONITORING REPORT  
SPARKLE CLEANERS  
EASTMONT TOWN CENTER  
7000 BANCROFT AVENUE  
OAKLAND, CALIFORNIA**

**APRIL 25, 2008**

**COPY NO. \_\_\_\_\_**

Copy No.

1 Copy	Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502  Attention: Mr. Jerry Wickham	PDF only
1 Copy	SKB – Eastmont Oakland Associates, LLC 1211 SW Fifth Avenue, Suite 2600 Portland, Oregon 97204  Attention: Ms. Kathleen Schultz	1
1 Copy	PES Job File	2
1 Copy	Unbound Original	3