

January 7, 2009

Mr. Jerry Wickham  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**RECEIVED**

10:58 am, Jan 15, 2009

Alameda County  
Environmental Health

SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT  
CERTIFICATION  
County File # RO 504  
William Wurzbach Company  
1200 20<sup>th</sup> Avenue  
Oakland, CA 94606

Dear Mr. Wickham:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc.

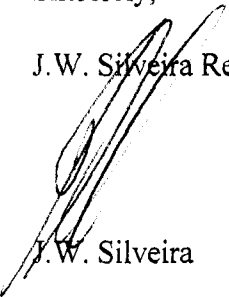
- Groundwater Monitoring and Sampling Report (June 6, 2007 Sampling Event) dated January 7, 2009 (document 0405.R1).

I declare under penalty of perjury, that the information and/or recommendations contained in the above-mentioned report for the subject site is true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact us at (510) 834-9811.

Sincerely,

J.W. Silveira Realty



J.W. Silveira

0405.L4

# **P&D ENVIRONMENTAL, INC.**

**55 Santa Clara Avenue, Suite 240**

**Oakland, CA 94610**

**(510) 658-6916**

January 7, 2009

Report 0405.R1

Mr. Jerry Wickham

Alameda County Environmental Health

1131 Harbor Bay Parkway, Suite 250

Alameda, CA 94502

**SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT  
(JUNE 6, 2007 SAMPLING EVENT)  
County File # RO 504  
William Wurzbach Company  
1200 20<sup>th</sup> Avenue  
Oakland, CA**

Dear Mr. Wickham:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the results of the most recent monitoring and sampling of the groundwater monitoring wells at the subject site. Field activities were performed on June 6, 2007. A Site Location Map (Figure 1) and Site Plan (Figure 2) are attached with this report. The wells have historically been referenced as MW-1, MW-2 and MW-3, and are referenced in this report as MW1, MW2 and MW3.

## BACKGROUND

The subject site is located in an industrially zoned area, at the northeastern corner of the intersection of 20<sup>th</sup> Avenue and Solano Way (Figure 1).

Historic investigations at the site have included the following.

- Removal of two gasoline USTs on January 19, 1994. Field activities are documented in a Results of Soil Sampling During Removal of Two Underground Storage Tanks report prepared by Epigene International of Fremont, California (Epigene) dated February 14, 1994. Following excavation of petroleum-impacted soil to a depth of approximately 15 feet in the UST pit, pit bottom and sidewall soil samples were collected. One sidewall soil sample located beneath 20<sup>th</sup> Avenue had TPH-G and benzene concentrations of 2,300 and 2.9 mg/kg, respectively. All other soil sample results were below their respective May 2008 SFRWQCB ESL Table A values for both residential and commercial land use with the exception of 0.080 mg/kg benzene in one other pit sidewall sample S-4. Groundwater was not encountered in the UST pit. The report concluded that over-excavation appears to have removed petroleum-impacted soil from beneath the USTs, but that there is still petroleum-impacted soil along the western sidewall of the excavation beneath Solano Way and beneath a portion of 20<sup>th</sup> Avenue.
- Installation of wells MW1 through MW3 on February 13 and 14, 1995. Field activities are documented in an Installation of Monitoring Wells and First Quarter Monitoring

report prepared by Epigene dated March, 1995. The locations of the wells are shown in Figure 2. Wells MW1 and MW3 were installed to a depth of 30 feet. Because the site is located on a hillside that slopes to the southwest, uphill well MW2 was installed to a depth of 35 feet. The report stated that the tops of the wells were surveyed to Mean Sea Level relative to a City of Oakland datum.

- Drilling of boreholes SB-1 and SB-2. Field activities are documented in an Additional Site Characterization Report prepared by Tetra Tech EM, Inc. (Tetra Tech) that is undated. Borehole SB-1 was drilled in June 1999 at a location to the south of the former UST pit, and borehole SB-2 was drilled in August 1999 at a location to the southwest of the former UST pit. The boreholes were each drilled to refusal at depths of 36 and 37.7 feet, respectively. No groundwater samples were collected from either of the boreholes. Borehole SB-1 was left open for approximately two weeks to see if groundwater would seep in. The report stated that groundwater was not detected in the borehole after 24 hours, that after one week 6 inches of water was measured in the bottom of the boring, and that after two weeks the boring had closed in at a depth of 34.5 feet and groundwater was not detected at this depth. Groundwater was not detected during drilling in borehole SB-2. Because there was no evidence of petroleum hydrocarbons in the soil samples from borehole SB-1, no soil samples were retained for laboratory analysis. Soil samples were retained at depths of 8.5 and 26.5 feet for laboratory analysis from borehole SB-2. The report text states that no petroleum hydrocarbons were detected in either of the soil samples.
- Quarterly monitoring and sampling of wells on various dates. Review of water quality summary tables provided in a Site Closure Report prepared by Tetra Tech dated December, 2003 shows that the three wells were sampled thirteen times between February 1995 and December 2000. The report shows that well MW1 only was also sampled in August 2001. With the exception of the well sampling documented in the well installation report referenced above the measured depth to water in the wells is not provided in any of the reports. No reports documenting the well sampling events between well installation in 1995 and well sampling by Tetra Tech in 1999 were available for review. The Tetra Tech Site Closure Report states that prior to 1999 well sampling was performed by another environmental consultant. Review of the water quality data provided in the summary tables in the Site Closure Report shows that in well MW1 TPH-G concentrations have consistently exceeded 1,000 ug/L and benzene concentrations have ranged from 92 to 3,700 ug/L with all benzene concentrations exceeding 100 ug/L except for the February 1995 sampling event. In wells MW2 and MW3, petroleum hydrocarbons were detected during periodic sampling events between June 1995 and January 1997, but were subsequently not detected in either well the six sampling events from July 1998 through December 2000. The Tetra Tech Site Closure Report also discusses the groundwater flow direction and gradient for the monitoring events in 2000 and 2001, stating that the groundwater flow direction ranged from N13E to N29E with a gradient ranging from 0.038 to 0.06. All available historic depth to water measurements and water table elevations for the wells is summarized in Appendix A. All available water quality data obtained from summary tables in the Site Closure Report is summarized in Appendix B.
- Groundwater remediation at well MW1. The Tetra Tech Site Closure Report states that following the December 2000 sampling event nine oxygen-releasing compound (ORC)

- socks manufactured by Regenesys, Inc. were placed in well MW1 until one month before the August 2001 sampling event. The report concluded that placement of the socks in the well appeared to have little to no effect on the groundwater analytical results.
- ACDEH request for additional investigation. In a letter dated July 19, 2005 the ACDEH referenced the December 2003 Tetra Tech Site Closure Report and requested that the following items be addressed.
    - Resolve concerns associated with the calculated groundwater flow direction at the site. The concern is primarily associated with the calculated elevation of water in well MW2 being consistently lower than in wells MW1 and MW3, resulting in a calculated northerly (uphill) groundwater flow direction.
    - Show that the lateral extent of petroleum in soil is not under the building.
    - Define the extent of petroleum in soil and groundwater vertically.
    - Identify existing wells within 2,000 feet of the site (perform a well survey).
    - Perform a preferential pathway survey for underground utilities in the vicinity of the site.
    - Identify sensitive receptors in the site vicinity.
    - Evaluate the potential for groundwater and contaminants to migrate in permeable zones identified in boring logs.
    - Survey wellhead elevations.
    - Upload to GeoTracker all analytical data dated after September 1, 2001 and all reports dated after July 1, 2005.
  - Work plan submittal for additional subsurface investigation. Tetra Tech submitted to ACDEH a Draft Work Plan dated October 11, 2005 for additional subsurface investigation at the subject site. The work plan included installation of two groundwater monitoring wells to address the historic northerly groundwater flow direction at the site, surveying of all wellhead elevations, identification of wells within 2,000 feet of the site, a review of available underground utility information, and installation of as many as two additional soil borings to further define the extent of petroleum in soil and in groundwater.
  - Work plan approval by ACDEH. In a letter dated November 1, 2005 the ACDEH conditionally approved the October 11, 2005 Tetra Tech work plan. The ACDEH comments included requests for collection and analysis of additional soil samples above and below petroleum-impacted zones; additional laboratory analysis of soil samples for TPH-D, 1,2-DCA and EDB; sampling of existing wells when new wells are sampled; and identification of reporting limits on tables and figures. The ACDEH letter also commented that delineation of the vertical extent of petroleum hydrocarbons had not been addressed and might be required in the future.

### FIELD ACTIVITIES

On June 6, 2007 P&D personnel monitored wells MW1, MW2, and MW3 for depth to water to the nearest 0.01 foot using an electric water level indicator, and sampled all three wells. The wells were first evaluated for the presence of free product or sheen by using a transparent bailer. No free product was detected in any of the wells. Petroleum hydrocarbon sheen and petroleum hydrocarbon odors were detected on the purge water from well MW1.

Prior to sampling, all of the wells were purged of a minimum of three casing volumes of water. During purging operations, the field parameters of pH, electrical conductivity and temperature were monitored. Once a minimum of three casing volumes had been purged, water samples were collected using a clean Teflon bailer. The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative and to one-liter amber glass bottles that were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present.

The sample containers were then transferred to a cooler with ice, and later were transported to McCampbell Analytical, Inc. in Pittsburg, California. McCampbell Analytical, Inc. is a State-Accredited hazardous waste testing laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report.

## HYDROGEOLOGY

Water levels in wells MW1, MW2, and MW3 were monitored once during the quarter. The measured depth to groundwater in wells MW1, MW2 and MW3 on June 6, 2007 was 11.23, 15.36, and 10.39 feet, respectively. Since the previous monitoring and sampling event on August 30, 2001 the water levels in the wells have increased by 8.30, 9.26 and 8.21 feet, respectively. Water level measurements for June 6, 2007 are summarized in Table 1. Historic groundwater level measurements are presented in Appendix A. Based on the measured depth to water in the wells on June 6, 2007, the calculated groundwater flow direction at the site is to the north-northeast with a gradient of 0.029. The calculated groundwater flow direction is consistent with historic reported groundwater flow directions calculated from water levels in the groundwater monitoring wells. The groundwater flow direction at the site on June 6, 2007 is shown on Figure 2.

Review of Figure 1 shows that the Brooklyn Basin (connected to San Francisco Bay by way of a Tidal Canal to the south and the Oakland Inner Harbor to the north) is located approximately 1,100 feet to the southwest of the subject site, and Sausal Creek is located approximately 4,300 feet to the east of the subject site. Review of Figure 1 also shows that the site is located on a hillside that slopes to the southwest.

Review of groundwater flow direction information for nearby sites that have groundwater monitoring wells shows that the groundwater flow direction at 2200 East 12<sup>th</sup> Street (located approximately 685 feet southeast of the subject site) has historically been to the west-southwest, and the groundwater flow direction at 2345 International Boulevard (located approximately 1,600 feet southeast of the subject site) has historically been to the southwest. Additionally, the groundwater flow direction at 2301 East 12<sup>th</sup> Street (located approximately 1,440 feet southeast of the subject site) has historically been calculated to be to the northwest. However, the calculated groundwater flow direction at the site on June 4, 2007 was to the west-southwest.

Prior to 2002, the calculated groundwater elevations in wells MW1 and MW3 ranged from approximately 0.4 to -4.9 feet, and in well MW2 ranged from approximately -2.0 to -7.7 feet. Review of the water level data from prior to 2002 shows that in 1995 the calculated groundwater elevations in wells MW1 and MW3 were approximately -5 feet, and in well MW2 was

approximately -7.5 feet. In 2007 the calculated groundwater elevations in wells MW1, MW2 and MW3 were 5.92, 4.75, and 5.67 feet, respectively. Since 1995, the water levels in wells MW1 and MW3 have increased by approximately 10.5 to 11 feet, and in well MW2 have increased by approximately 12 feet.

The groundwater flow direction at the subject site has historically been calculated to be to the north-northeast. However, the calculated groundwater flow direction is uphill, and is questionable based on the calculated groundwater elevations in well MW2. The cause for the lower groundwater surface elevation at well MW2 appears to be related to the site geology, and is not understood at this time with the available subsurface and regional geologic information.

Review of the water level data in the Site Closure Report water level summary table shows that the water levels reported for February 9, 2000 are the same as the April 1, 1999 water levels reported in the undated Tetra Tech Additional Site Characterization Report. No purge data sheets or other field documents were available for review with either of the Tetra Tech reports. Based on the reporting of the April 1, 1999 water level data in a report issued prior to the Site Closure Report, it appears that the water levels reported for February 9, 2000 in the summary table in the Site Closure Report were incorrectly reported.

#### LABORATORY RESULTS

The groundwater samples collected from wells MW1, MW2, and MW3 were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Method 3510C in conjunction with modified EPA Method 8015C; TPH-G and methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 5030B in conjunction with modified EPA Method 8015C and EPA Method 8021B; and for the lead scavengers Ethylene Dibromide (EDB) and 1,2-Dichloroethane (1,2-DCA) using EPA Method 5030B in conjunction with EPA Method 8260B.

No analytes were detected in wells MW2 and MW3. In well MW1 TPH-D and TPH-G were detected at concentrations of 1,900 and 9,000 µg/L, respectively. Review of the laboratory analytical report shows that the result reported as TPH-D for well MW1 is identified as gasoline-range compounds. Benzene, toluene, ethylbenzene, and xylenes were detected in well MW1 at concentrations of 1,200, 63, 130, and 74 µg/L, respectively. 1,2-DCA was detected in well MW1 at a concentration of 59 µg/L, and EDB was not detected. The laboratory analytical results are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

Since the last sampling event in August of 2001 for well MW1 and December 2000 for wells MW2 and MW3, all analytes have remained not detected in wells MW2 and MW3. In well MW1 the TPH-G concentration has increased and MTBE has remained not detected. The benzene concentration has increased in well MW1 since the previous monitoring and sampling episode, and all other BTEX concentrations in well MW1 have decreased.

## DISCUSSION AND RECOMMENDATIONS

Groundwater monitoring wells MW1, MW2, and MW3 were monitored and sampled on June 6, 2007. Petroleum hydrocarbon sheen and petroleum hydrocarbon odors were detected on the purge water from well MW1. Groundwater elevations in the wells have increased approximately 8.3 to 9.3 feet since the previous monitoring and sampling event in 2001, and have increased by approximately 10.5 to 12 feet since 1995. Petroleum hydrocarbon concentrations have remained not detected in wells MW2 and MW3, and have remained elevated in well MW1, which is located near the former UST pit. The groundwater flow direction remains north-northeasterly, which is consistent with historic groundwater flow directions. The calculated groundwater flow direction is not consistent with the site topography, and is the result of lower water levels in uphill well MW2 than in the downhill wells. The cause for the lower groundwater surface elevation at well MW2 appears to be related to the site geology, and is not understood at this time with the available subsurface and regional geologic information.

Based on the results of the groundwater sample analysis, P&D recommends that additional investigation be performed to assess the presence of residual petroleum hydrocarbons in soil adjacent to the former UST pit and to assess the presence of petroleum hydrocarbons in groundwater downslope from the former UST pit and well MW1.

## DISTRIBUTION

A copy of this report will be uploaded to the ACDEH website, in accordance with ACDEH requirements. In addition, a copy of this report will be uploaded to the GeoTracker database.

## LIMITATIONS

This report was prepared solely for the use of J.W. Silveira Realty. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a

January 7, 2009  
Report 0405.R1

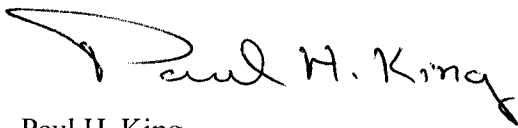
similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities, which are used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made.

The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions or comments, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King  
Professional Geologist #5901  
Expires: 12/31/09



Attachments:

Table 1 – Well Monitoring Data  
Table 2 – Summary of Laboratory Analytical Results  
Figure 1 - Site Location Map  
Figure 2 - Site Vicinity Map  
Groundwater Monitoring/Well Purging Data Sheets  
Laboratory Analytical Reports and Chain of Custody Documentation  
Appendix A – Historic Water Level Data  
Appendix B- Historic Water Quality Data

PHK  
0405.R1



# **TABLES**

<b>Table 1. Well Monitoring Data</b>				
Well Number	Date Monitored	* Top of Casing Elevation (ft-msl.)	Depth to Water (ft)	Water Table Elevation (ft-msl.)
MW1	6/6/2007	17.15	11.23	5.92
MW2	6/6/2007	20.11	15.36	4.75
MW3	6/6/2007	16.06	10.39	5.67

**Abbreviations and Notes:**  
 ft-msl = feet above mean sea level  
 ft = feet  
 \* = From Epigene International Consulting March 31, 1995 Installation of Monitoring Wells and First Quarter Monitoring report.

<b>Table 2. Summary of Laboratory Analytical Results</b>										
Well Number	Sample Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	1,2-DCA
MW1	6/6/2007	1,900, a	9,000	ND < 160	1,200	63	130	74.0	ND < 5.0	59.0
MW2	6/6/2007	ND < 50	ND < 50	ND < 5.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
MW3	6/6/2007	ND < 50	ND < 50	ND < 5.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5

**Abbreviations and Notes:**  
 TPH-D = Total Petroleum Hydrocarbons as Diesel  
 TPH-G = Total Petroleum Hydrocarbons as Gasoline  
 MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8021B.  
 EDB = Ethylene Dibromide analyzed by EPA Method 8260B.  
 1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B.  
 Benzene, Toluene, Ethylbenzene and Total Xylenes analyzed by EPA Method 8021B.  
 ND = Not detected.  
 a = Laboratory Note: gasoline range compounds are significant.  
 Results in micrograms per liter ( $\mu\text{g/L}$ ) unless otherwise specified.

# **FIGURES**

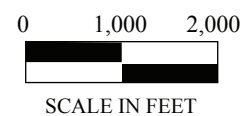


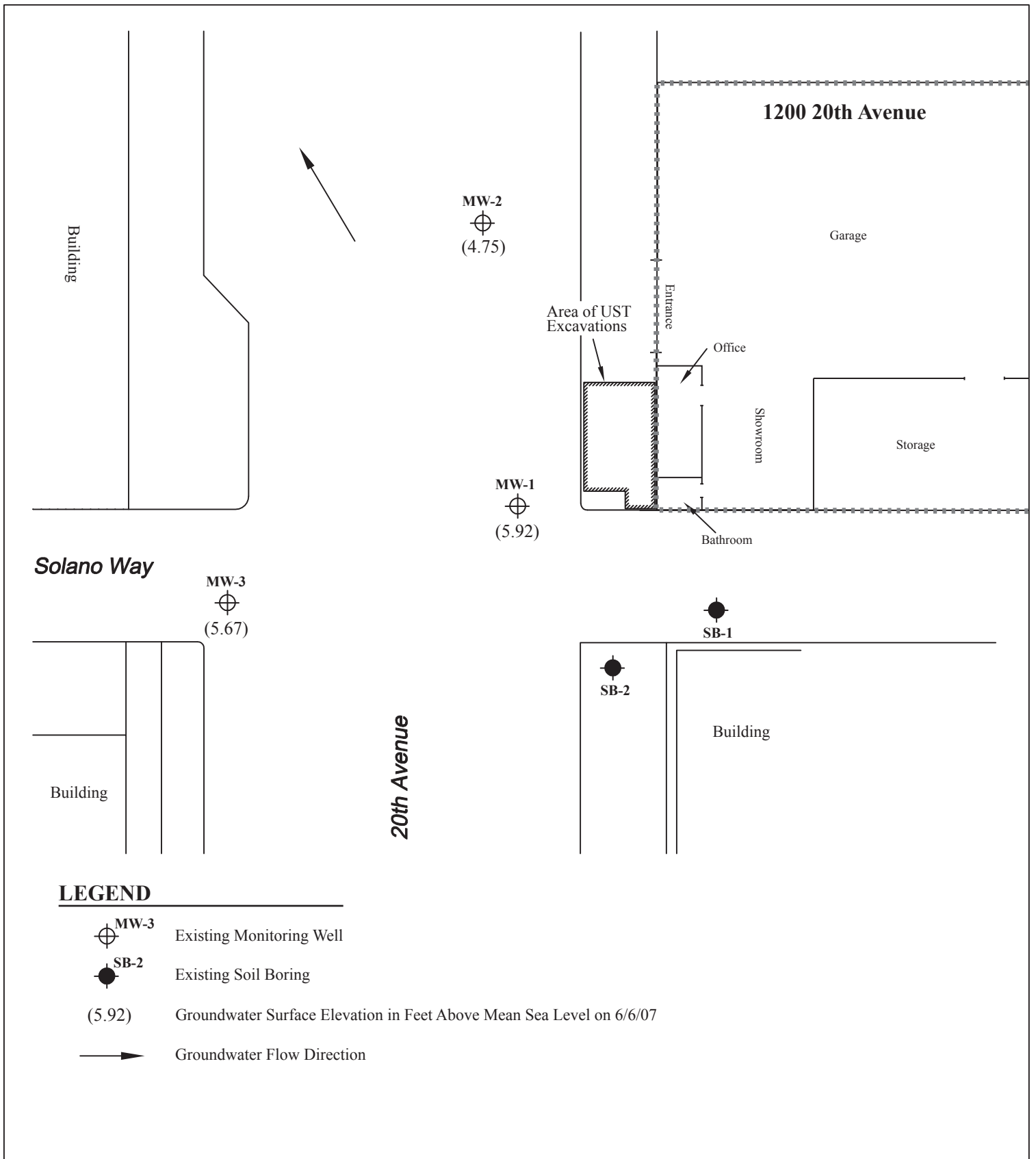
Figure 1  
 Site Location Map  
 William Wurzbach Company  
 1200 20th Avenue  
 Oakland, California



Base Map From:  
 U.S. Geological Survey  
 Oakland East and  
 Oakland West, California  
 7.5 Minute Quadrangles  
 Photorevised 1980

P&D Environmental, Inc.  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610





**LEGEND**




-  MW-3 Existing Monitoring Well
-  SB-2 Existing Soil Boring
- (5.92) Groundwater Surface Elevation in Feet Above Mean Sea Level on 6/6/07
-  Groundwater Flow Direction

Figure 2  
 Site Vicinity Map Showing Existing Wells and Soil Borings  
 William Wurzbach Company  
 1200 20th Avenue  
 Oakland, California



Base Map From:  
 Tetra Tech EM Inc.  
 Site Location Map

P&D Environmental, Inc.  
 55 Santa Clara Avenue, Suite 240  
 Oakland CA 94610



**WELL MONITORING AND  
PURGE DATA SHEETS**









**LABORATORY REPORTS  
AND CHAIN OF CUSTODY  
DOCUMENTATION**



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0405; J.W. Silveria Co/1200 20th Ave, Oakland	Date Sampled: 06/06/07
		Date Received: 06/06/07
	Client Contact: Steve Carmack	Date Reported: 06/13/07
	Client P.O.:	Date Completed: 06/13/07

**WorkOrder: 0706180**

June 13, 2007

Dear Steve:

Enclosed are:

- 1). the results of **3** analyzed samples from your **#0405; J.W. Silveria Co/1200 20th Ave, Oakland project,**
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

0706180

PDEO

# P & D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240  
Oakland, CA 94610  
(510) 658-6916

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: <b>0405</b>		PROJECT NAME: <b>J.W. Silveira Co. / 1200 20th Ave, Oakland</b>			NUMBER OF CONTAINERS	ANALYSIS(ES): <b>TPH-6 MBTEX</b> <b>TPH-P</b> <b>EPB + 12 PCA</b>	PRESERVATIVE	REMARKS	
SAMPLED BY: (PRINTED AND SIGNATURE) <b>Steven Carmack</b> <i>Steven Carmack</i>									
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION					
<b>MW1</b>	<b>6/6/07</b>	<b>1420</b>	<b>H<sub>2</sub>O</b>		<b>8</b>	<b>X X X</b>	<b>ICE</b> Normal Sdky Transcond Time		
<b>MW2</b>		<b>1337</b>			<b>8</b>	<b>X X X</b>			
<b>MW3</b>		<b>1237</b>			<b>8</b>	<b>X X X</b>			
					ICUP: <b>6.60C</b> ✓ CONDITON: ✓ HEADSPACE ABSENT: ✓ DECHLORIN: D IN LAB PRESERVATION:				
RELINQUISHED BY: (SIGNATURE) <i>Steven Carmack</i>					DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT) <b>3</b>	LABORATORY: <b>McCampbell Analytical</b>
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>					DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	TOTAL NO. OF CONTAINERS (THIS SHIPMENT) <b>24</b>	LABORATORY CONTACT: <b>Angela Rydelius</b>
RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	LABORATORY PHONE NUMBER: <b>(877) 252-9262</b>	
Results and billing to: P&D Environmental, Inc. lab@pdenviro.com					REMARKS: <b>VOAS preserved w/ HCL</b>				

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 0706180**

**ClientID: PDEO**

EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty

**Report to:**

Steve Carmack  
 P & D Environmental  
 55 Santa Clara, Ste.240  
 Oakland, CA 94610

Email: p\_denvironmental@msn.com  
 TEL: (510) 658-691    FAX: 510-834-0152  
 ProjectNo: #0405; J.W. Silveria Co/1200 20th Ave,  
 PO:

**Bill to**

Accounts Payable  
 P & D Environmental  
 55 Santa Clara, Ste.240  
 Oakland, CA 94610  
 PDKing0000@aol.com

**Requested TAT: 5 days**

*Date Received 06/06/2007*

*Date Printed: 06/06/2007*

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0706180-001	MW1	Water	06/06/07 2:20:00	<input type="checkbox"/>	A	C	B									
0706180-002	MW2	Water	06/06/07 1:37:00	<input type="checkbox"/>	A	C	B									
0706180-003	MW3	Water	06/06/07 12:37:00	<input type="checkbox"/>	A	C	B									

**Test Legend:**

1	G-MBTX_W	2	PBSCV_W	3	TPH(D)_W	4		5	
6		7		8		9		10	
11		12							

**Prepared by: Chloe Lam**

**Comments:**

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **06/06/07 9:13:34 PM**  
 Project Name: **#0405; J.W. Silveria Co/1200 20th Ave, Oakland** Checklist completed and reviewed by: **Chloe Lam**  
 WorkOrder N°: **0706180** Matrix Water Carrier: Client Drop-In

#### Chain of Custody (COC) Information

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 6.6°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted   
 Sample labels checked for correct preservation? Yes  No   
 TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Comments: \_\_\_\_\_











### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0706180

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 28584			Spiked Sample ID: 0706174-003A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	111	119	7.58	101	105	4.34	70 - 130	30	70 - 130	30
MTBE	ND	10	96.4	95.7	0.788	96.2	92.4	4.03	70 - 130	30	70 - 130	30
Benzene	ND	10	99.1	91.4	8.09	94.6	93.6	1.08	70 - 130	30	70 - 130	30
Toluene	ND	10	110	103	5.93	106	105	1.10	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	107	101	6.11	103	102	1.04	70 - 130	30	70 - 130	30
Xylenes	ND	30	120	110	8.70	113	113	0	70 - 130	30	70 - 130	30
%SS:	97	10	98	96	1.81	94	96	1.51	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 28584 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0706180-001A	06/06/07 2:20 PM	06/09/07	06/09/07 7:30 AM	0706180-002A	06/06/07 1:37 PM	06/09/07	06/09/07 9:51 PM
0706180-003A	06/06/07 12:37 PM	06/09/07	06/09/07 8:57 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0706180

EPA Method SW8260B	Extraction SW5030B			BatchID: 28571			Spiked Sample ID: 0706155-002C					
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
1,2-Dibromoethane (EDB)	ND	10	101	101	0	104	97.7	6.33	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	103	104	0.276	105	112	6.38	70 - 130	30	70 - 130	30
%SS1:	106	10	103	102	0.917	105	114	8.27	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 28571 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0706180-001C	06/06/07 2:20 PM	06/09/07	06/09/07 4:34 AM	0706180-002C	06/06/07 1:37 PM	06/09/07	06/09/07 5:18 AM
0706180-003C	06/06/07 12:37 PM	06/08/07	06/08/07 6:48 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0706180

Analyte	EPA Method SW8015C		Extraction SW3510C			BatchID: 28579			Spiked Sample ID: N/A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	109	107	2.29	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	119	116	2.26	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

#### BATCH 28579 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0706180-001B	06/06/07 2:20 PM	06/06/07	06/09/07 3:33 PM	0706180-002B	06/06/07 1:37 PM	06/06/07	06/09/07 4:42 PM
0706180-003B	06/06/07 12:37 PM	06/06/07	06/09/07 5:50 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

## **APPENDIX A**

### **Historic Water Level Data**

Appendix A  
 Historic Groundwater Levels

Well Number	Date Monitored	*Top of Casing Elevation (ft- msl)	Depth to Water (ft)	Groundwater Elevation (ft-msl)
MW-1	1/5/2009	17.15	<b>11.90</b>	5.25
	6/6/2007		<b>11.23</b>	5.92
	8/30/2001		19.53	<b>-2.38</b>
	12/18/2000		19.60	<b>-2.45</b>
	9/27/2000		19.93	<b>-2.78</b>
	5/23/2000		16.73	<b>0.42</b>
	2/9/2000		17.08	<b>0.07</b>
	4/1/1999		17.08	<b>0.07</b>
	Jul-98	No Report with Data Available for Review		
	Jan-97	No Report with Data Available for Review		
	Sep-96	No Report with Data Available for Review		
	Jun-96	No Report with Data Available for Review		
	Feb-96	No Report with Data Available for Review		
	Oct-95	No Report with Data Available for Review		
	Jun-95	No Report with Data Available for Review		
	3/7/1995		<b>22.09</b>	-4.94
	2/22/1995		<b>21.98</b>	-4.83

NOTES:

ft-msl = feet above mean sea level

ft = feet

\* = From Epigene International Consulting March 31, 1995 Installation of Monitoring Wells and First Quarter Monitoring report.

Values in **BOLD** are reported values; values not in bold are calculated from reported values.

Groundwater elevation for 4/1/99 obtained from undated Tetrattech Additional Site Characterization Report.

Groundwater elevation for 2/9/00 obtained from summary table in December 2003 Tetrattech Site Closure Report.

Table 3  
 Historic Groundwater Levels  
 (Continued)

Well Number	Date Monitored	*Top of Casing Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft-msl)
MW-2	1/5/2009	20.11	<b>16.12</b>	3.99
	6/6/2007		<b>15.36</b>	4.75
	8/30/2001		24.62	<b>-4.51</b>
	12/18/2000		25.05	<b>-4.94</b>
	9/27/2000		25.05	<b>-4.94</b>
	5/23/2000		22.14	<b>-2.03</b>
	2/9/2000		22.61	<b>-2.50</b>
	4/1/1999		22.61	<b>-2.50</b>
	Jul-98	No Report with Data Available for Review		
	Jan-97	No Report with Data Available for Review		
	Sep-96	No Report with Data Available for Review		
	Jun-96	No Report with Data Available for Review		
	Feb-96	No Report with Data Available for Review		
	Oct-95	No Report with Data Available for Review		
	Jun-95	No Report with Data Available for Review		
	3/7/1995		<b>27.63</b>	-7.52
	2/22/1995		<b>27.82</b>	-7.71

NOTES:

ft-msl = feet above mean sea level

ft = feet

\* = From Epigene International Consulting March 31, 1995 Installation of Monitoring Wells and First Quarter Monitoring report.

Values in **BOLD** are reported values; values not in bold are calculated from reported values.

Groundwater elevation for 4/1/99 obtained from undated Tetrtech Additional Site Characterization Report.

Groundwater elevation for 2/9/00 obtained from summary table in December 2003 Tetrtech Site Closure Report.



Table 3  
Historic Groundwater Levels  
(Continued)

Well Number	Date Monitored	*Top of Casing Elevation (ft- msl)	Depth to Water (ft)	Groundwater Elevation (ft-msl)
MW-3	1/5/2009	16.06	<b>11.03</b>	5.03
	6/6/2007		<b>10.39</b>	5.67
	8/30/2001		18.60	<b>-2.54</b>
	12/18/2000		19.04	<b>-2.98</b>
	9/27/2000		18.72	<b>-2.66</b>
	5/23/2000		15.91	<b>0.15</b>
	2/9/2000		16.16	<b>-0.10</b>
	4/1/1999		16.16	<b>-0.10</b>
	Jul-98	No Report with Data Available for Review		
	Jan-97	No Report with Data Available for Review		
	Sep-96	No Report with Data Available for Review		
	Jun-96	No Report with Data Available for Review		
	Feb-96	No Report with Data Available for Review		
	Oct-95	No Report with Data Available for Review		
	Jun-95	No Report with Data Available for Review		
	3/7/1995		<b>21.04</b>	-4.98
	2/22/1995		<b>21.00</b>	-4.94

**NOTES:**

ft-msl = feet above mean sea level

ft = feet

\* = From Epigene International Consulting March 31, 1995 Installation of Monitoring Wells and First Quarter Monitoring report.

Values in **BOLD** are reported values; values not in bold are calculated from reported values.

Groundwater elevation for 4/1/99 obtained from undated Tetrtech Additional Site Characterization Report.

Groundwater elevation for 2/9/00 obtained from summary table in December 2003 Tetrtech Site Closure Report.

## **APPENDIX B**

### **Historic Water Quality Data**

**TABLE 2**  
**VOCs AND TPH CONCENTRATIONS IN GROUNDWATER**  
**MONITORING WELL MW-1**  
**FEBRUARY 1995 TO AUGUST 2001**  
**1200 20TH AVENUE, OAKLAND**

Date	TPH (µg/L)	VOC (µg/L)				
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Feb-95	1,900	92	39	57	260	--
Jun-95	4,100	410	32	14	180	--
Oct-95	1,300	180	22	32	81	--
Feb-96	1,700	200	21	41	120	--
Jun-96	1,900	160	7	34	31	--
Sep-96	4,700	460	66	190	680	--
Jan-97	2,200	230	35	100	330	--
Jul-98	23,000	3,500	450	1,000	3,100	--
Apr-99	14,000	2,600	560	340	1,600	--
Feb-00	3,000	280	17	92	118	ND
May-00	18,000	3,700	430	770	2,440	ND
Sep-00	4,300	1,200	59	420	330	ND
Dec-00	3,200	500	26	130	130	ND
Aug-01	5,400	850	64	230	200	ND

330

Notes:

MTBE	Methyl tertiary-butyl ether
µg/L	Micrograms per liter
--	Not analyzed
ND	Not detected
TPH	Total petroleum hydrocarbons
VOC	Volatile organic compound

For the Aug-01 xylenes result,  
 m, p-xylenes = 200 µg/L, o-xylenes  
 = 130 µg/L, total xylenes = 330 µg/L.  
 The summary table only reported  
 200 µg/L for xylenes. Previous  
 xylenes results in the summary  
 table are suspect for not  
 having o-xylene results included  
 in the total xylenes result.

**TABLE 3**  
**VOCs AND TPH CONCENTRATIONS IN GROUNDWATER**  
**MONITORING WELL MW-2**  
**FEBRUARY 1995 TO AUGUST 2001**  
**1200 20TH AVENUE, OAKLAND**

Date	TPH ( $\mu\text{g/L}$ )	VOC ( $\mu\text{g/L}$ )				
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Feb-95	ND	ND	ND	ND	ND	--
Jun-95	ND	1.8	ND	1.1	0.62	--
Oct-95	55	2.2	ND	1.5	ND	--
Feb-96	ND	3.3	2.7	0.99	2.4	--
Jun-96	ND	ND	0.6	ND	1.2	--
Sep-96	ND	9.3	0.57	1.3	1.9	--
Jan-97	ND	2.6	ND	ND	0.76	--
Jul-98	ND	ND	ND	ND	ND	--
Apr-99	ND	ND	ND	ND	ND	--
Feb-00	ND	ND	ND	ND	ND	ND
May-00	ND	ND	ND	ND	ND	ND
Sep-00	ND	ND	ND	ND	ND	ND
Dec-00	ND	ND	ND	ND	ND	ND
Aug-01	--	--	--	--	--	--

**Notes:**

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MTBE Methyl tertiary-butyl ether  
 $\mu\text{g/L}$  Micrograms per liter  
 -- Not analyzed  
 ND Not detected  
 TPH Total petroleum hydrocarbons  
 VOC Volatile organic compound

**TABLE 4**  
**VOCs AND TPH CONCENTRATIONS IN GROUNDWATER**  
**MONITORING WELL MW-3**  
**FEBRUARY 1995 TO AUGUST 2001**  
**1200 20TH AVENUE, OAKLAND**

Date	TPH (ug/L)	VOC (ug/L)				
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Feb-95	ND	ND	ND	ND	ND	--
Jun-95	160	0.6	ND	0.6	0.72	--
Oct-95	130	5.8	ND	3.2	ND	--
Feb-96	54	5.6	2.8	2.9	8.1	--
Jun-96	ND	ND	ND	ND	ND	--
Sep-96	96	12	7.1	4	6.2	--
Jan-97	ND	ND	ND	ND	ND	--
Jul-98	ND	ND	ND	ND	ND	--
Apr-99	ND	ND	ND	ND	ND	--
Feb-00	ND	ND	ND	ND	ND	ND
May-00	ND	ND	ND	ND	ND	ND
Sep-00	ND	ND	ND	ND	ND	ND
Dec-00	ND	ND	ND	ND	ND	ND
Aug-01	--	--	--	--	--	--

Notes:

---

MTBE Methyl tertiary-butyl ether  
µg/L Micrograms per liter  
-- Not analyzed  
ND Not detected  
TPH Total petroleum hydrocarbons  
VOC Volatile organic compound