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**Alameda County  
Environmental Health**

March 29, 2007

Mr. Vic Lum  
Vic's Automotive  
245 8<sup>th</sup> Street  
Oakland, CA 94607

**Subject: Quarterly Monitoring Report  
1<sup>st</sup> Quarter, 2007**  
245 8<sup>th</sup> Street  
Oakland, California 94607  
AEI Project No. 111783  
ACEH Case No. RO0000202 / State ID 263

Dear Mr. Lum:

Enclosed is one bound copy of the recently completed *Quarterly Monitoring Report* (1<sup>st</sup> Quarter, 2007) prepared for the above-reference property.

As required, electronic copies have been uploaded to the State Water Resources Control Board's GeoTracker information system and Alameda County Environmental Health's ftp site for review by Mr. Jerry Wickham.

Also enclosed is the invoice for the subject reports and the fieldwork associated with the reports, along with all of the backup documentation and subcontractor invoices needed for processing your next UST Cleanup Fund reimbursement.

Should you have any questions or comments, you may reach me at (925) 944-2899 ext 143.

Sincerely,  
**AEI Consultants**



Calvin Hee  
Staff Engineer

Enclosures (4)

March 29, 2007

**QUARTERLY MONITORING REPORT**  
**1<sup>st</sup> Quarter, 2007**

245 8th Street  
Oakland, California 94607

AEI Project No. 111783  
ACEH Case No. RO0000202 / State ID 263

Prepared For

Mr. Vic Lum  
Vic's Automotive  
245 8th Street  
Oakland, CA 94607

Prepared By

**AEI Consultants**  
2500 Camino Diablo Blvd., Suite 200  
Walnut Creek, California 94597  
(925) 283-6000

**AEI**

March 29, 2007

Mr. Vic Lum  
Vic's Automotive  
245 8th Street  
Oakland, CA 94607

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1<sup>st</sup> Quarter, 2007**  
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Oakland, California 94607  
AEI Project No. 111783  
ACEH No. RO0000202 / State ID 263

Dear Mr. Lum:

AEI Consultants (AEI) has prepared this report on behalf of Mr. Vic Lum of Vic's Automotive and documents the ongoing groundwater and soil gas investigation at the above-referenced property (Figure 1). This investigation was initiated by the property owner in accordance with the requirements of the Alameda County Environmental Health (ACEH) local oversight program. The purpose of this investigation is to monitor pollution associated with the release of fuel hydrocarbons from the former underground storage tank system. This report presents the findings of the 1<sup>st</sup> Quarter, 2007 monitoring.

## **I. Site Description and Background**

The subject property (hereafter referred to as the "site" or "property") is located in a mixed commercial and residential area of Oakland. The site is a lot on the south corner of Alice Street and 8<sup>th</sup> Street, and is currently developed with a gasoline station and auto repair facility (Figure 2). The property covers approximately 9,375 square feet and is improved with an approximately 1,200 square foot building located centrally on the property used for automotive repair, cashier, and office. The current UST hold and the dispenser island are located to the north of the building, along 8<sup>th</sup> Street. The remainder of the property is paved with asphalt.

Between June 1993 and August 1994, AEI removed a total of seven (7) underground storage tanks (USTs) from the property. The tanks consisted of four (4) 1,000-gallon and two (2) 6,000-gallon gasoline tanks and one (1) 250-gallon waste oil tank. The former locations of the tanks are shown on Figure 2. Impacted soil was removed from beneath the former tank area. Groundwater was encountered beneath the former 6,000-gallon tanks. Light non-aqueous phase liquid (LNAPL) was observed on the water table beneath the southern tank. The excavated soil was transported to an appropriate disposal facility and the excavation was backfilled with clean fill material. A new tank system was installed just west of the dispenser island.

Two groundwater monitoring wells (MW-1 and MW-2) were installed in July 1995. The first two episodes of monitoring revealed total petroleum hydrocarbons as gasoline (TPH-g) and Benzene up to 210,000 µg/L and 720 µg/L, respectively, in MW-2. Free phase gasoline product (LNAPL), was discovered in MW-1, which ranged from 1.20 to 4.39 feet thick between December 1995 and March 1996.

Three soil borings (SB-1 through SB-3) were advanced in August 1996. Groundwater samples collected from each of the borings contained TPH-g and Benzene ranging from 120,000 to 140,000 µg/L, and from 12,000 to 19,000 µg/L, respectively. Methyl tertiary-butyl ether (MTBE) was also present in all three samples, up to 27,000 µg/L. Although free phase product was not observed in the field, qualitative laboratory observations indicated immiscible sheen. Manual bailing and pumping of NAPL from MW-1, and monitoring of MW-2 occurred intermittently through 1997.

Two additional groundwater monitoring wells (MW-3 and MW-4) were installed in May 2001. Refer to Tables 1 and 2 for data collected from these wells. A free product recovery pump was installed in MW-1 in June 2001.

Fourteen (14) additional soil borings were performed on and offsite in 2003, from which soil, groundwater, and soil vapor samples were collected to further characterize the extent of the release.

On January 11, 19, and 20, 2005, AEI installed a total of six (6) additional wells, three (3) extraction/monitoring wells on the subject site and three (3) extraction/monitoring wells at 708 Alice Street. The locations of the six (6) additional wells (labeled MW-5 through MW-7 and MW-10 through MW-12) are shown on Figure 2. Note that wells MW-8 and MW-9 were proposed for installation in the public right of way, north of and west of the site. However, due to insurance and permitting limitations imposed by the City of Oakland, these wells were not been installed, and likely cannot be installed in City of Oakland right-of-way.

A high vacuum dual phase extraction (HVDPE) pilot test was performed at the site from July 11 to July 27, 2005, using wells MW-1 through MW-3 and MW-10 through MW-12. Vapor flow rates ranged from approximately 170 to 190 standard cubic feet per minute (scfm) under a sustained vacuum of 16 to 17 inches of mercury. Significant drawdown and vacuum response was observed in many of the monitoring points. A total of 80,740 gallons of water was recovered and treated for an average flow rate of about 4.1 gallons per minute over the 15-day pilot test. Approximately 5 pounds per day of dissolved phase and 697 lbs/day of vapor phase hydrocarbons were recovered. Based on the favorable results, and following review and approval by ACEH, implementation of a fixed base HVDPE system is currently underway.

On July 13, 2006, four (4) permanent soil gas probes (GP-1 through GP-4) were installed to evaluate the potential risk for vapor intrusion into indoor air. Two soil gas probes were installed

on the western side of the subject property near 718 Alice Street and the remaining two on an empty lot at 708 Alice Street near 712 Alice Street. The locations of the four permanent soil gas probes are shown on Figure 2.

Soil gas sampling was conducted in conjunction with the quarterly groundwater monitoring episode.

## **II. Summary of Groundwater Monitoring Activities**

AEI measured depth to groundwater in wells MW-1 through MW-7 and MW-10 through MW-12 on February 8, 2007. The well locations are shown in Figure 2. The depth from the top of the well casings was measured with an electric water level indicator prior to sampling. An oil-water interface meter was used to measure thickness of LNAPL observed in MW-1 and MW-6. The eight (8) wells with no measurable free product (MW-2 through MW-5, MW-7 and MW-10 through MW-12) were purged of at least three well volumes of water with a submersible purge pump and sampled using disposable polyethylene bailers.

Temperature, turbidity, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured during the purging of the wells. The turbidity was visually noted. Once temperature, pH, specific conductivity stabilized after three consecutive readings and following the recovery of water levels to at least 90%, a water sample was collected. The well locations are shown in Figure 2.

The groundwater samples were collected with disposable bailers into 40-millileter (mL) volatile organic analysis (VOA) vials and capped so that neither head space nor air bubbles were present within the sample containers. Samples were preserved on ice and transported under proper chain of custody protocol to McCampbell Analytical, Inc. of Bay Point, California (Department of Health Services Certification #1644). The eight (8) groundwater samples were submitted for chemical analysis for analyses of TPH-g by Method SW8015Cm and Benzene, Toluene, Ethylbenzene, and total Xylenes and MTBE by Method SW8021B.

## **III. Field Results**

LNAPL was encountered in wells MW-1 and MW-6 at thicknesses of 0.03 feet and 0.34 feet, respectively. No measurable thickness of free product was encountered in the remaining wells. However, sheen of LNAPL was noted in well MW-2, MW-7, and MW-11.

Groundwater elevations for this monitoring event ranged from 15.42 (MW-11) to 17.34 (MW-6) feet above mean sea level (amsl). The current groundwater elevations were an average of 0.07 feet lower than the previous monitoring event (November 8, 2006). The groundwater flow direction at the time of measurement is to the south-southeast with a calculated hydraulic gradient of approximately 0.0009 ft/ft.

Groundwater elevation data are summarized in Table 1. A summary of the average groundwater elevations and flow directions are presented in Table 2. Water table contours are shown on Figure 5. Refer to Appendix A for the Monitoring Well Field Sampling Forms.

#### **IV. Summary of Soil Gas Sampling Activities**

On February 8, February 9, and March 6, 2007 soil gas sampling was attempted. Due to climatic wet conditions and water present in the vapor wells, sampling was not possible at the two screened depths of 5 feet bgs and 10 feet bgs in any of the vapor wells.

#### **V. Groundwater Monitoring Results**

For this monitoring event, the highest detected concentrations of fuel hydrocarbons were in MW-7, MW-11, and MW-12. TPH-g, benzene, toluene, ethylbenzene, total xylenes, and MTBE were detected in these wells at concentrations up to 230,000 µg/L, 43,000 µg/L, 44,000 µg/L, 3,900 µg/L, 20,000 µg/L, and 34,000 µg/L, respectively. Lower but elevated concentrations of TPH-g were detected in MW-2 (68,000 µg/L), MW-5 (67,000 µg/L) and MW-10 (69,000 µg/L). Non-detectable concentrations at laboratory reporting limits of fuel hydrocarbons were detected in MW-3 and MW-4

Analytical results of groundwater monitoring for this quarter suggest that reported concentrations of fuel hydrocarbons, BTEX compounds and MTBE for MW-2 and MW-3 were reversed. Historically, contamination concentrations in MW-3 have been near or at non-detect levels, whereas concentrations in MW-2 have been consistently elevated. The data has been presented in this report considering this adjustment.

A summary of groundwater sample analytical data is presented in Table 3 and on Figure 3. Laboratory analytical reports and chain of custody documents are included in Appendix B.

#### **VI. Summary and Upcoming Activities**

This report presents the findings of the 1<sup>st</sup> Quarter, 2007 groundwater monitoring and planned soil gas event. The results of this groundwater monitoring episode are generally consistent with previous episodes and indicates that a significant mass of free product and dissolved phase hydrocarbons exist on and offsite. LNAPL remains in wells MW-1 and MW-6 with significant dissolved phase contaminants present in many of the other wells. Due to wet soil conditions, soil gas sampling could not be performed. During the upcoming quarter, the following activities are planned:

- The next quarterly soil gas sampling and groundwater monitoring event (2<sup>nd</sup> Quarter, 2007) are scheduled for early May 2007. Groundwater samples will be analyzed for TPH-g, BTEX and MTBE and soil gas samples for TPH-g, BTEX, MTBE, and PCE.

- Mobilization and startup of the HVDPE system is expected to occur April 2007. Conveyance piping, underground work was completed in December 2006 with resurfacing and electrical hookup completed in late February 2007. The BAAQMD permit to construct has been received. Supplemental fuel supply installation was completed in late March 2007. The Delivery of the HVDPE unit is tentatively scheduled for the first week of April 2007. The ACHCSA will be notified of the anticipated system startup date as the schedule becomes firm or if there are any significant delays.
- Arrange access for the installation of a down-gradient groundwater monitoring well on private property along the eastern side of 7<sup>th</sup> Street. Informal access agreements have begun. ACHCSA will be notified once access is formalized.

## VII. Report Limitations and Signatures


This report presents a summary of work completed by AEI Consultants, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and geology fields that existed at the time and location of the work. If you have any questions or need any additional information, please contact either of the undersigned at (925) 283-6000.

Sincerely,  
**AEI Consultants**

  
Calvin Hee  
Staff Engineer

  
Ricky Bradford  
Senior Staff Engineer

  
Peter J. McIntyre, PG, REA  
Senior Project Manager



**Figures**

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Sample Analytical Data (2/8/07)
Figure 4	Groundwater Elevation Contours (2/8/07)

**Tables**

Table 1	Groundwater Elevation Data
Table 2	Groundwater Flow Summary
Table 3	Groundwater Sample Analytical Data
Table 4	Soil Gas Sample Analytical Data

**Appendix A** Monitoring Well and Soil Gas Field Sampling Forms

**Appendix B** Laboratory Analytical Reports w/ Chain of Custody Documentation

**Report Distribution**

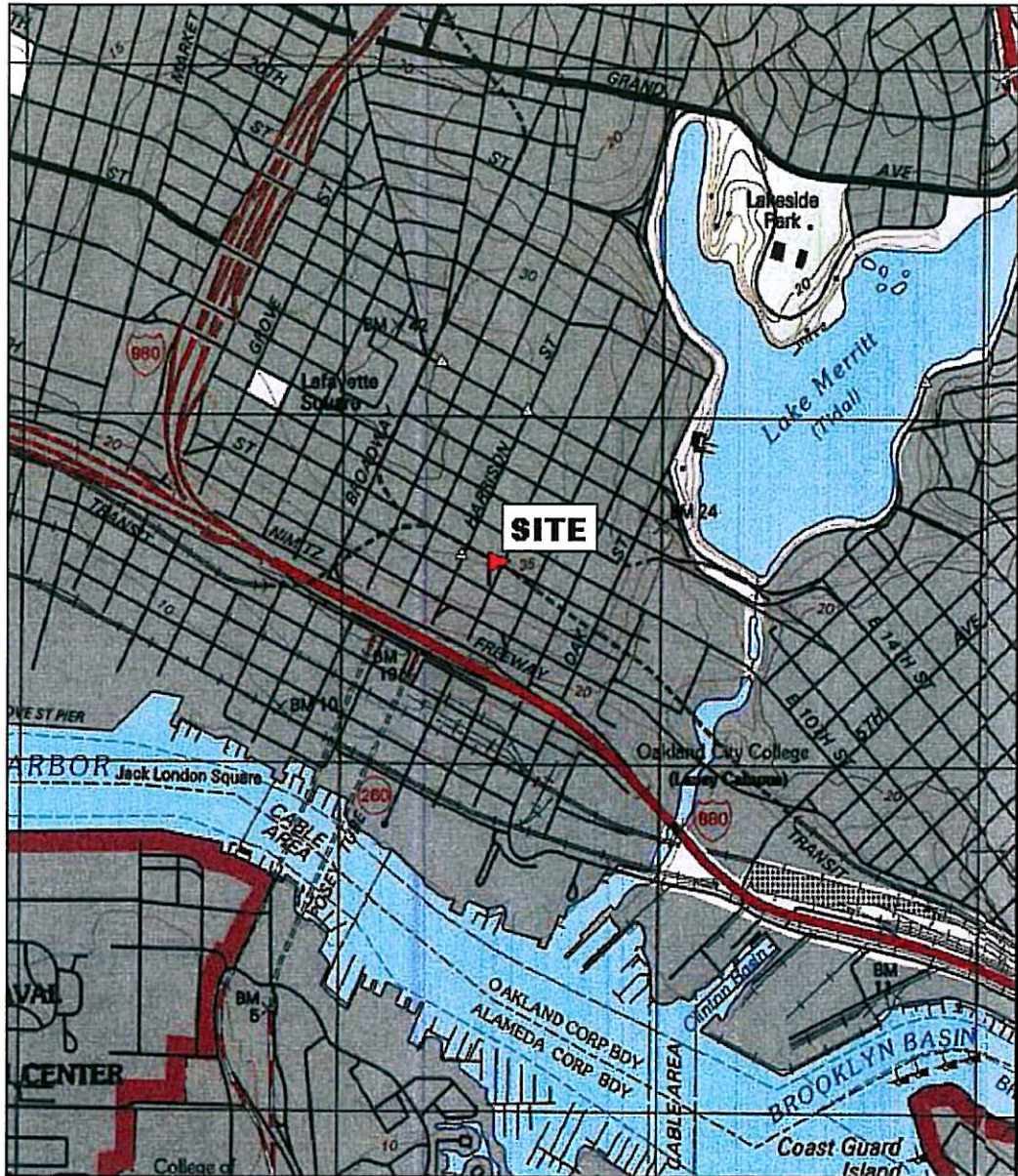
1) Mr. Victor Lum  
Vic's Automotive  
245 8<sup>th</sup> Street  
Oakland, CA 94607

2) Mr. Jerry Wickham (electronic copy)  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

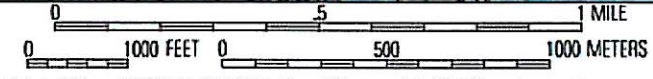
3) Geotracker



## FIGURES

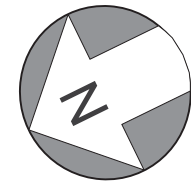


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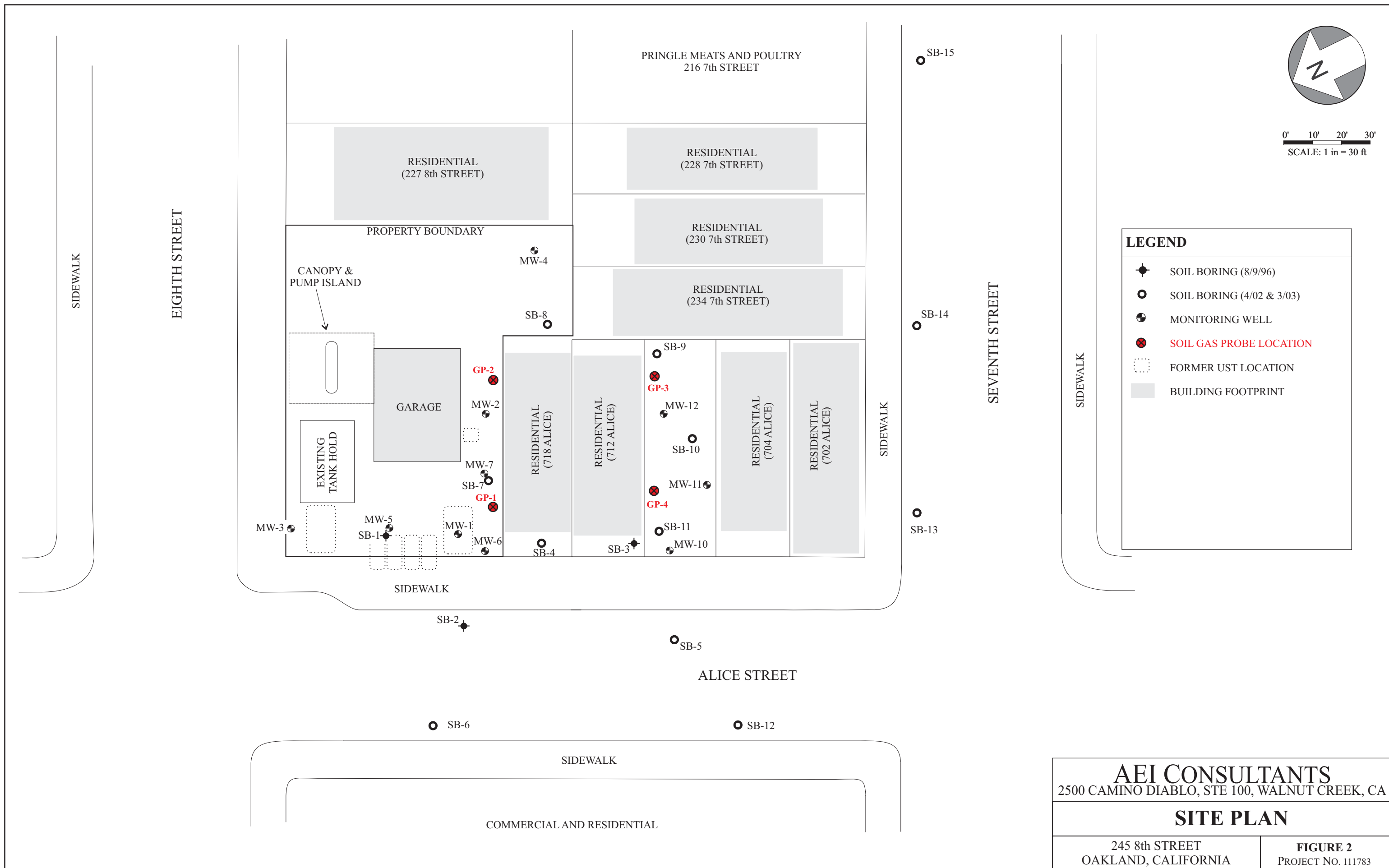
<p><b>AEI CONSULTANTS</b> 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597</p>	
<p><b>SITE LOCATION PLAN</b></p>	
<p>245 8th Street Oakland, California</p>	<p><b>FIGURE 1</b> Job No: 111783</p>



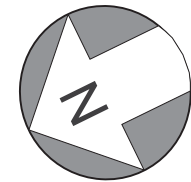
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SCALE: 1 in = 30 ft

### LEGEND

- SOIL BORING (8/9/96)
- SOIL BORING (4/02 & 3/03)
- MONITORING WELL
- SOIL GAS PROBE LOCATION
- FORMER UST LOCATION
- BUILDING FOOTPRINT



<b>AEI CONSULTANTS</b> 2500 CAMINO DIABLO, STE 100, WALNUT CREEK, CA	
<b>SITE PLAN</b>	
245 8th STREET OAKLAND, CALIFORNIA	<b>FIGURE 2</b> PROJECT NO. 111783



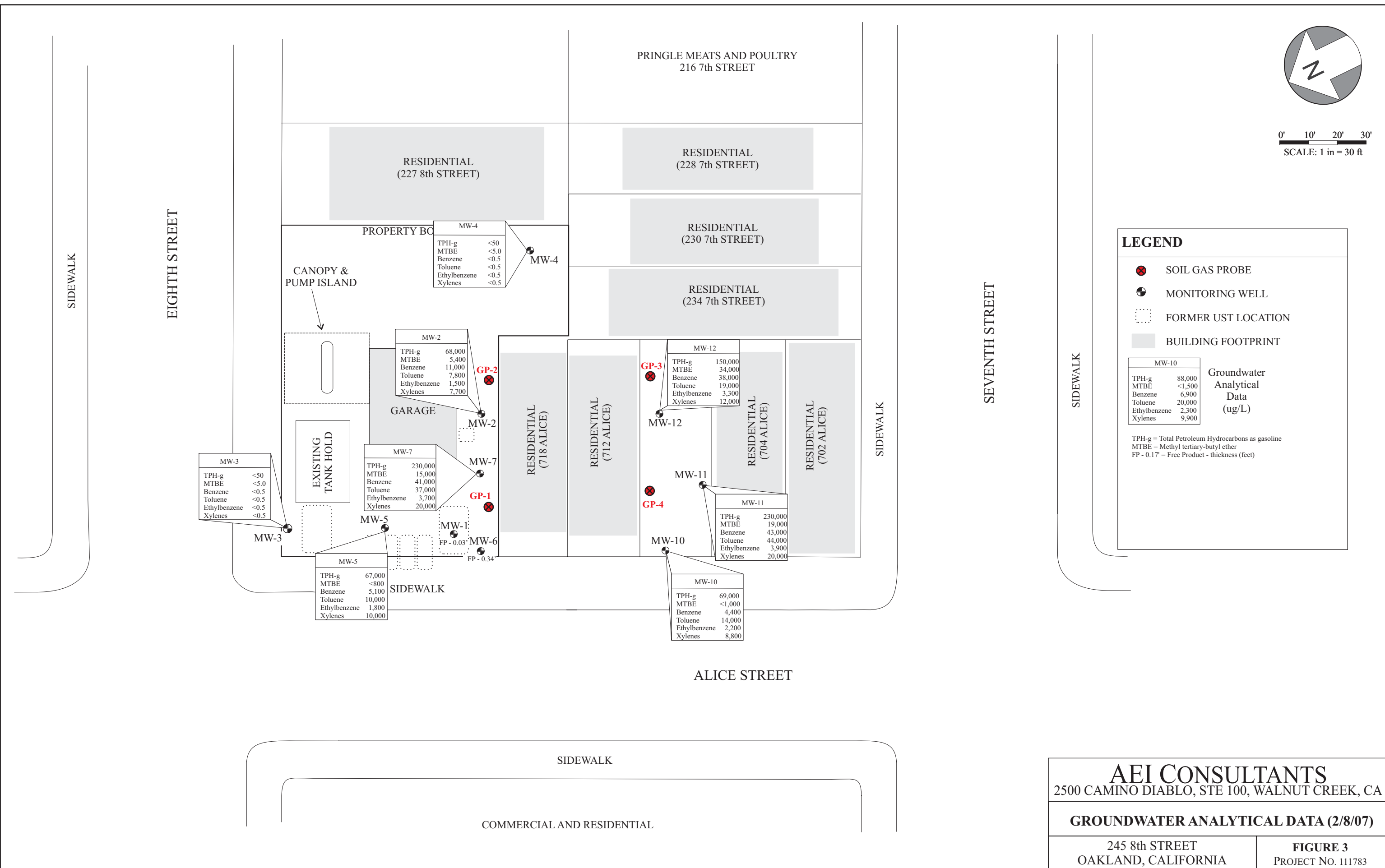
0' 10' 20' 30'  
SCALE: 1 in = 30 ft

**LEGEND**

- SOIL GAS PROBE
- MONITORING WELL
- FORMER UST LOCATION
- BUILDING FOOTPRINT

MW-10		Groundwater Analytical Data (ug/L)
TPH-g	88,000	
MTBE	<1,500	
Benzene	6,900	
Toluene	20,000	
Ethylbenzene	2,300	
Xylenes	9,900	

TPH-g = Total Petroleum Hydrocarbons as gasoline  
MTBE = Methyl tertiary-butyl ether  
FP - 0.17' = Free Product - thickness (feet)



**MW-4**

TPH-g	<50
MTBE	<5.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5

**MW-2**

TPH-g	68,000
MTBE	5,400
Benzene	11,000
Toluene	7,800
Ethylbenzene	1,500
Xylenes	7,700

**MW-7**

TPH-g	230,000
MTBE	15,000
Benzene	41,000
Toluene	37,000
Ethylbenzene	3,700
Xylenes	20,000

**MW-3**

TPH-g	<50
MTBE	<5.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5

**MW-5**

TPH-g	67,000
MTBE	<800
Benzene	5,100
Toluene	10,000
Ethylbenzene	1,800
Xylenes	10,000

**MW-10**

TPH-g	69,000
MTBE	<1,000
Benzene	4,400
Toluene	14,000
Ethylbenzene	2,200
Xylenes	8,800

**MW-12**

TPH-g	150,000
MTBE	34,000
Benzene	38,000
Toluene	19,000
Ethylbenzene	3,300
Xylenes	12,000

**MW-11**

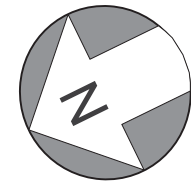
TPH-g	230,000
MTBE	19,000
Benzene	43,000
Toluene	44,000
Ethylbenzene	3,900
Xylenes	20,000

**MW-1**

FP	0.03'
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



**MW-6**

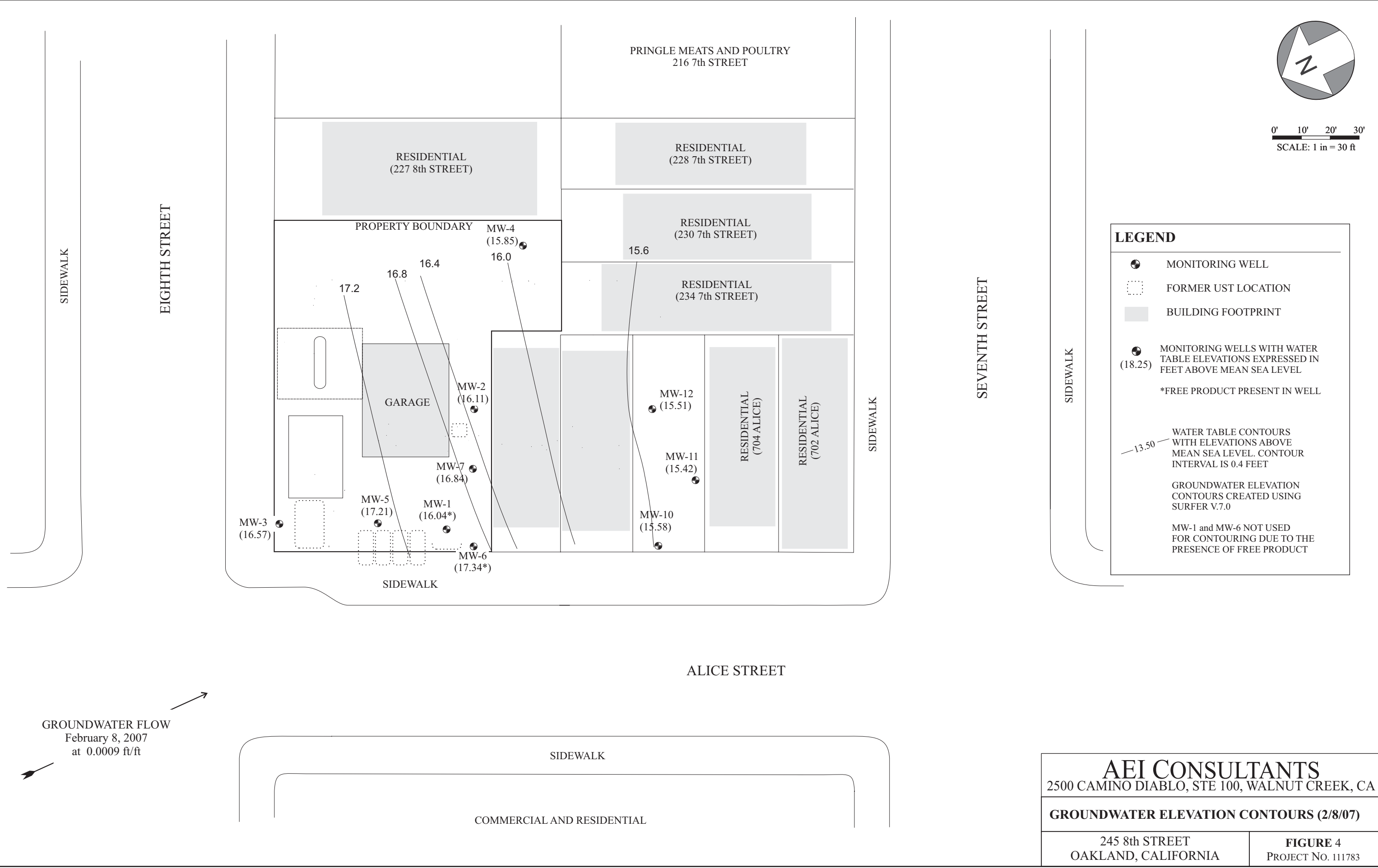
FP	0.34'
----	-------



0' 10' 20' 30'  
SCALE: 1 in = 30 ft

**LEGEND**

-  MONITORING WELL
-  FORMER UST LOCATION
-  BUILDING FOOTPRINT
-  MONITORING WELLS WITH WATER TABLE ELEVATIONS EXPRESSED IN FEET ABOVE MEAN SEA LEVEL  
(18.25)
- \*FREE PRODUCT PRESENT IN WELL
-  WATER TABLE CONTOURS WITH ELEVATIONS ABOVE MEAN SEA LEVEL. CONTOUR INTERVAL IS 0.4 FEET  
-13.50-
- GROUNDWATER ELEVATION CONTOURS CREATED USING SURFER V.7.0
- MW-1 and MW-6 NOT USED FOR CONTOURING DUE TO THE PRESENCE OF FREE PRODUCT



**AEI CONSULTANTS**  
2500 CAMINO DIABLO, STE 100, WALNUT CREEK, CA

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**GROUNDWATER ELEVATION CONTOURS (2/8/07)**

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245 8th STREET OAKLAND, CALIFORNIA	<b>FIGURE 4</b> PROJECT NO. 111783
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## TABLES

**TABLE 1: GROUNDWATER ELEVATION DATA**

**Vic's Automotive  
245 8th Street, Oakland, California**

Well/Sample ID (screen interval)	Date Collected	TOC Well <sup>1,2</sup> Elevation (ft amsl)	Depth to Water (ft)	Groundwater <sup>3</sup> Elevation (ft amsl)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)
MW-1 (8-28)	6/29/2001	27.73	16.52	11.21	14.89	1.63
	10/10/2001	27.73	15.45	12.28	15.37	0.08
	1/9/2002	27.73	12.61	15.12	-	<0.01
	4/24/2002	27.73	13.35	14.38	-	<0.01
	7/24/2002	27.73	14.19	13.54	-	<0.01
	11/5/2002	27.73	14.85	12.88	-	<0.01
	2/4/2003	27.73	14.91	12.82	-	<0.01
	5/2/2003	27.73	14.43	13.30	-	0.08
	8/4/2003	27.73	15.24	12.49	15.01	0.23
	11/3/2003	27.73	16.94	10.79	15.67	1.27
	2/9/2004	27.73	14.61	13.12	14.43	0.18
	5/10/2004	27.73	Inaccessible	-	-	-
	8/9/2004	27.73	15.24	12.49	15.03	0.21
	11/9/2004	27.73	15.95	11.78	15.71	0.24
	2/3/2005	32.55	13.75	18.80	13.58	0.17
	5/9/2005	32.55	13.93	18.62	13.81	0.12
	8/5/2005	32.55	15.40	17.15	15.39	0.01
	11/9/2005	32.55	15.76	16.79	15.75	0.01
	2/9/2006	32.55	13.52	19.03	13.50	0.02
	5/4/2006	32.55	12.47	20.08	12.46	0.01
	8/4/2006	32.55	15.11	17.44	15.09	0.02
	11/8/2006	32.55	16.03	16.52	16.02	0.01
	<b>2/8/2007</b>	<b>32.55</b>	<b>16.51</b>	<b>16.04</b>	<b>16.48</b>	<b>0.03</b>
MW-2 (8-28)	6/29/2001	28.16	16.14	12.02	-	-
	10/10/2001	28.16	16.43	11.73	-	-
	1/9/2002	28.16	13.50	14.66	-	-
	4/24/2002	28.16	14.40	13.76	-	-
	7/24/2002	28.16	14.91	13.25	-	-
	11/5/2002	28.16	16.96	11.20	-	-
	2/4/2003	28.16	15.42	12.74	-	-
	5/2/2003	28.16	15.24	12.92	-	-
	8/4/2003	28.16	15.98	12.18	-	-
	11/3/2003	28.16	16.60	11.56	-	Sheen
	2/9/2004	28.16	15.22	12.94	-	Sheen
	5/10/2004	28.16	15.34	12.82	-	Sheen
	8/9/2004	28.16	15.92	12.24	-	Sheen
	11/9/2004	28.16	16.51	11.65	-	Sheen
	2/3/2005	33.24	14.44	18.80	-	Sheen
	5/9/2005	33.24	14.67	18.57	-	Sheen
	8/5/2005	33.24	16.27	16.97	-	Sheen
	11/9/2005	33.24	16.53	16.71	-	Sheen
	2/9/2006	33.24	14.36	18.88	-	Sheen
	5/4/2006	33.24	13.46	19.78	-	Sheen
	8/4/2006	33.24	15.95	17.29	-	Sheen
	11/8/2006	33.24	16.86	16.38	-	Sheen
	<b>2/8/2007</b>	<b>33.24</b>	<b>17.13</b>	<b>16.11</b>	<b>-</b>	<b>Sheen</b>

**TABLE 1: GROUNDWATER ELEVATION DATA**

**Vic's Automotive  
245 8th Street, Oakland, California**

Well/Sample ID (screen interval)	Date Collected	TOC Well <sup>1,2</sup> Elevation (ft amsl)	Depth to Water (ft)	Groundwater <sup>3</sup> Elevation (ft amsl)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)
MW-3 (10-25)	6/29/2001	29.21	16.60	12.61	-	-
	10/10/2001	29.21	16.92	12.29	-	-
	1/9/2002	29.21	14.20	15.01	-	-
	4/24/2002	29.21	15.07	14.14	-	-
	7/24/2002	29.21	16.40	12.81	-	-
	11/5/2002	29.21	16.47	12.74	-	-
	2/4/2003	29.21	16.92	12.29	-	-
	5/2/2003	29.21	15.45	13.76	-	-
	8/4/2003	29.21	16.46	12.75	-	-
	11/3/2003	29.21	17.15	12.06	-	-
	2/9/2004	29.21	15.78	13.43	-	-
	5/10/2004	29.21	15.77	13.44	-	-
	8/9/2004	29.21	16.45	12.76	-	-
	11/9/2004	29.21	17.26	11.95	-	-
	2/3/2005	34.25	15.92	18.33	-	-
	5/9/2005	34.25	15.03	19.22	-	-
	8/5/2005	34.25	16.59	17.66	-	-
	11/9/2005	34.25	16.82	17.43	-	-
	2/9/2006	34.25	14.65	19.60	-	-
	5/4/2006	34.25	13.61	20.64	-	-
	8/4/2006	34.25	16.28	17.97	-	-
	11/8/2006	34.25	17.28	16.97	-	-
	2/8/2007	34.25	17.68	16.57	-	-
MW-4 (10-25)	6/29/2001	29.38	17.71	11.67	-	-
	10/10/2001	29.38	18.00	11.38	-	-
	1/9/2002	29.38	15.02	14.36	-	-
	4/24/2002	29.38	15.74	13.64	-	-
	7/24/2002	29.38	16.69	12.69	-	-
	11/5/2002	29.38	17.64	11.74	-	-
	2/4/2003	29.38	16.02	13.36	-	-
	5/2/2003	29.38	16.72	12.66	-	-
	8/4/2003	29.38	17.51	11.87	-	-
	11/3/2003	29.38	18.09	11.29	-	-
	2/9/2004	29.38	16.67	12.71	-	-
	5/10/2004	29.38	16.89	12.49	-	-
	8/9/2004	29.38	17.44	11.94	-	-
	11/9/2004	29.38	17.89	11.49	-	-
	2/3/2005	34.42	14.98	19.44	-	-
	5/9/2005	34.42	16.20	18.22	-	-
	8/5/2005	34.42	17.73	16.69	-	-
	11/9/2005	34.42	17.91	16.51	-	-
	2/9/2006	34.42	15.62	18.80	-	-
	5/4/2006	34.42	15.12	19.30	-	-
	8/4/2006	34.42	17.39	17.03	-	-
	11/8/2006	34.42	18.30	16.12	-	-
	2/8/2007	34.42	18.57	15.85	-	-



**TABLE 1: GROUNDWATER ELEVATION DATA**

**Vic's Automotive  
245 8th Street, Oakland, California**

Well/Sample ID (screen interval)	Date Collected	TOC Well <sup>1,2</sup> Elevation (ft amsl)	Depth to Water (ft)	Groundwater <sup>3</sup> Elevation (ft amsl)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)
MW-5 (12-22)	2/3/2005	33.33	14.23	19.10	-	-
	5/9/2005	33.33	14.33	19.00	-	-
	8/5/2005	33.33	15.89	17.44	-	-
	11/9/2005	33.33	16.18	17.15	-	-
	2/9/2006	33.33	14.02	19.31	-	-
	5/4/2006	33.33	12.97	20.36	-	-
	8/4/2006	33.33	15.63	17.70	-	-
	11/8/2006	33.33	16.55	16.78	-	-
	<b>2/8/2007</b>	<b>33.33</b>	<b>16.12</b>	<b>17.21</b>	-	-
MW-6 (12-22)	2/3/2005	32.82	13.99	18.83	-	Sheen
	5/9/2005	32.82	13.61	19.21	-	Sheen
	8/5/2005	32.82	15.50	17.32	15.13	0.37
	11/9/2005	32.82	15.87	16.95	15.50	0.37
	2/9/2006	32.82	13.93	18.89	13.22	0.71
	5/4/2006	32.82	12.88	19.94	12.13	0.75
	8/4/2006	32.82	15.22	17.60	14.81	0.41
	11/8/2006	32.82	16.16	16.66	15.78	0.38
	<b>2/8/2007</b>	<b>32.82</b>	<b>15.48</b>	<b>17.34</b>	<b>15.14</b>	<b>0.34</b>
MW-7 (12-22)	2/3/2005	33.07	14.17	18.90	-	Sheen
	5/9/2005	33.07	14.47	18.60	14.44	0.03
	8/5/2005	33.07	16.07	17.00	16.02	0.05
	11/9/2005	33.07	16.47	16.60	16.35	0.12
	2/9/2006	33.07	14.18	18.89	14.11	0.07
	5/4/2006	33.07	13.12	19.95	13.11	0.01
	8/4/2006	33.07	15.74	17.33	-	Sheen
	11/8/2006	33.07	16.59	16.48	-	Sheen
	<b>2/8/2007</b>	<b>33.07</b>	<b>16.23</b>	<b>16.84</b>	-	<b>Sheen</b>
MW-10 (12-22)	2/3/2005	31.17	12.65	18.52	-	-
	5/9/2005	31.17	13.09	18.08	-	-
	8/5/2005	31.17	14.68	16.49	-	-
	11/9/2005	31.17	14.94	16.23	-	-
	2/9/2006	31.17	12.82	18.35	-	-
	5/4/2006	31.17	12.11	19.06	-	-
	8/4/2006	31.17	14.38	16.79	-	-
	11/8/2006	31.17	15.32	15.85	-	-
	<b>2/8/2007</b>	<b>31.17</b>	<b>15.59</b>	<b>15.58</b>	-	-
MW-11 (12-22)	2/3/2005	31.78	13.39	18.39	-	Sheen
	5/9/2005	31.78	13.89	17.89	-	Sheen
	8/5/2005	31.78	15.47	16.31	-	Sheen
	11/9/2005	31.78	15.73	16.05	-	Sheen
	2/9/2006	31.78	13.53	18.25	-	Sheen
	5/4/2006	31.78	12.73	19.05	-	Sheen
	8/4/2006	31.78	15.17	16.61	-	Sheen

**TABLE 1: GROUNDWATER ELEVATION DATA**

**Vic's Automotive  
245 8th Street, Oakland, California**

Well/Sample ID (screen interval)	Date Collected	TOC Well <sup>1,2</sup> Elevation (ft amsl)	Depth to Water (ft)	Groundwater <sup>3</sup> Elevation (ft amsl)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)
<i>Continued</i>						
	11/8/2006	31.78	16.15	15.63	-	-
	<b>2/8/2007</b>	<b>31.78</b>	<b>16.36</b>	<b>15.42</b>	-	<b>Sheen</b>
<b>MW-12</b> (12-22)	2/3/2005	32.05	13.70	18.35	-	Sheen
	5/9/2005	32.05	14.17	17.88	-	Sheen
	8/5/2005	32.05	15.69	16.36	-	Sheen
	11/9/2005	32.05	15.93	16.12	-	Sheen
	2/9/2006	32.05	13.78	18.27	-	Sheen
	5/4/2006	32.05	12.98	19.07	-	Sheen
	8/4/2006	32.05	15.39	16.66	-	Sheen
	11/8/2006	32.05	16.29	15.76	-	-
	<b>2/8/2007</b>	<b>32.05</b>	<b>16.54</b>	<b>15.51</b>	-	-

1) Monitoring well top of casing (TOC) elevations were resurveyed by Morrow Surveying on January 10, 2006 and February 7, 2006

2) Groudwater elevations for the February 3, 2005 and subsequent monitoring episodes use the new well survey data

3) When LNAPL is present at >0.10 ft, the groundwater elevations are assumed to be affected by the LNAPL

All well elevations are measured from the top of the casing (TOC)

- = not applicable

LNAPL = light non-aqueous phase liquid (floating free product)

ft amsl = feet above mean sea level

**TABLE 2: GROUNDWATER FLOW SUMMARY**

**Vic's Automotive  
245 8th Street, Oakland, California**

Episode #	Date	Average Groundwater Elevation <sup>1</sup> (ft amsl)	Change from Previous Episode (ft)	Flow direction (gradient)
1	6/29/2001	12.10	-	SSE (0.0074)
2	10/10/2001	11.80	-0.30	SSE (0.0071)
3	1/9/2002	14.68	2.88	SE (0.0054)
4	4/24/2002	13.85	-0.83	SSW (0.005)
5	7/24/2002	12.92	-0.93	NE (0.021)
6	11/5/2002	11.89	-1.02	SW (0.019)
7	2/4/2003	12.80	0.90	NNW (0.01)
8	5/2/2003	13.11	0.32	SSE (0.01)
9	8/4/2003	12.27	-0.85	SSE(0.007)
10	11/3/2003	11.64	-0.63	SSE (0.006)
11	2/9/2004	13.03	1.39	SSE (0.006)
12	5/10/2004	12.92	-0.11	SSE (0.008)
13	8/9/2004	12.31	-0.60	SSE (0.006)
14	11/9/2004	11.70	-0.62	SSE (0.004)
15	2/3/2005	18.75	-	W (0.007)
16	5/9/2005	18.53	-0.22	S (0.010)
17	8/5/2005	16.94	-1.59	S (0.010)
18	11/9/2005	16.65	-0.28	S (0.010)
19	2/9/2006	18.83	2.17	SSW (0.010)
20	5/4/2006	19.72	0.90	SSW (0.012)
21	8/4/2006	17.24	-2.48	SSW (0.010)
22	11/8/2006	16.32	-0.93	SSW(0.0007)
23	2/8/2007	16.25	-0.07	SSE (0.0009)

1) MW-2 to MW-4 only used for episodes 1 through 14; all wells used for episodes 15 and later

- = not applicable

ft amsl = feet above mean sea level

TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

Vic's Automotive  
245 8th Street, Oakland, California

Well/Sample ID	Date Collected	Apparent LNAPL Thickness (ft)	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	HVOC
			µg/L <i>Method SW8015Cm</i>	µg/L	µg/L	µg/L	µg/L	µg/L	Method 8260
MW-1	6/29/2001	1.63	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	10/10/2001	0.08	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	1/9/2002	<0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	4/24/2002	<0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	7/24/2002	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/5/2002	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/4/2003	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/2/2003	0.08	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	8/4/2003	0.23	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/3/2003	1.27	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/9/2004	0.18	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/10/2004	Inaccessible	-	-	-	-	-	-	-
	8/9/2004	0.21	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/9/2004	0.24	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/3/2005	0.17	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/9/2005	0.12	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	8/5/2005	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/9/2005	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/9/2006	0.02	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/4/2006	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
8/4/2006	0.02	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-	
11/8/2006	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	
2/8/2007	0.03	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-	
MW-2	6/29/2001	0.0	69,000	4100/4400*	7,200	6,100	1,500	7,000	-
	10/10/2001	0.0	87,000	14,000	22,000	12,000	2,700	9,100	-
	1/9/2002	0.0	130,000	11,000	30,000	19,000	3,800	14,000	-
	4/24/2002	Sheen	210,000	32,000	38,000	23,000	4,600	19,000	-
	7/24/2002	Sheen	170,000	36,000	48,000	12,000	3,700	8,600	-
	11/5/2002	Sheen	190,000	36,000	45,000	25,000	4,600	16,000	-
	2/4/2003	Sheen	150,000	27,000	51,000	24,000	4,200	14,000	-
	5/2/2003	Sheen	150,000	35,000	39,000	11,000	3,800	9,900	-
	8/4/2003	Sheen	120,000	29,000	32,000	5,000	3,200	7,200	-
	11/3/2003	Sheen	120,000	24,000	33,000	4,300	3,200	5,400	-
	2/9/2004	Sheen	130,000	19,000	27,000	7,700	3,100	7,600	-
	5/10/2004	Sheen	67,000	13,000	20,000	3,000	2,300	4,100	-
	8/9/2004	Sheen	100,000	22,000	27,000	7,100	2,800	6,600	-
	11/9/2004	Sheen	100,000	23,000	27,000	6,100	3,000	5,600	-
	2/3/2005	Sheen	84,000	11,000	23,000	5,000	3,000	5,500	-
	5/9/2005	Sheen	74,000	14,000	21,000	4,200	2,300	3,300	-
	7/27/2005	Sheen	9,500	910	1,400	1,000	180	960	-
	8/5/2005	Sheen	74,000	4,000	8,800	11,000	1,300	7,600	-
	11/9/2005	Sheen	120,000	16,000	21,000	14,000	2,300	13,000	-
	2/9/2006	Sheen	120,000	10,000	18,000	16,000	2,200	13,000	-
5/4/2006	Sheen	71,000	8,300	14,000	11,000	1,500	7,600	-	
8/4/2006	Sheen	160,000	14,000	22,000	14,000	2,400	11,000	-	
11/8/2006	Sheen	110,000	6,400	17,000	9,200	1,600	6,800	<MDL	
2/8/2007*	sheen	68,000	5,400	11,000	7,800	1,500	7,700	-	
MW-3	6/29/2001	0.00	550	<5.0	<0.5	3.1	3.2	1.2	-
	10/10/2001	0.00	470	<5.0	0.77	5.3	3.3	5.9	-
	1/9/2002	0.00	1,000	<5.0	0.90	7.6	7.8	25	-

Continued

TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

Vic's Automotive  
245 8th Street, Oakland, California

Well/Sample ID	Date Collected	Apparent LNAPL Thickness (ft)	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	HVOC
			<i>Method SW8015Cm</i> µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	<i>Method 8260</i>
	4/24/2002	0.00	1,500	<5.0	0.64	7.2	12	14	-
	7/24/2002	0.00	1,200	<5.0	10	17.0	11	25	-
	11/5/2002	0.00	1,800	<25	33	43.0	18	31	-
	2/4/2003	0.00	450	<5.0	<0.5	5.0	<0.5	0.77	-
	5/2/2003	0.00	340	<5.0	7.3	10.0	2.5	7.3	-
	8/4/2003	0.00	170	<5.0	5.8	5.9	1.5	4.9	-
	11/3/2003	0.00	54	<5.0	<0.5	<0.5	<0.5	<0.5	-
	2/9/2004	0.00	190	<5.0	<0.5	3.6	<0.5	<0.5	-
	5/10/2004	0.00	280	<5.0	<0.5	3.4	<0.5	<0.5	-
	8/9/2004	0.00	290	<5.0	<0.5	3.8	<0.5	<0.5	-
	11/9/2004	0.00	220	<5.0	<0.5	4.0	<0.5	<0.5	-
	2/3/2005	0.00	160	<5.0	13	30	3	21	-
	5/9/2005	0.00	200	<5.0	<0.5	3.9	<0.5	<0.5	-
	8/5/2005	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	11/9/2005	0.00	130	<5.0	<0.5	2.3	<0.5	<0.5	-
	2/9/2006	0.00	270	<5.0	<0.5	5.6	<0.5	<0.5	-
	5/4/2006	0.00	220	<5.0	<0.5	4.3	<0.5	<0.5	-
	8/4/2006	0.00	93	<5.0	<0.5	1.5	<0.5	<0.5	-
	11/8/2006	0.00	160	<5.0	<0.5	2.9	<0.5	<0.5	<MDL
	2/8/2007*	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
MW-4	6/29/2001	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	10/10/2001	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	1/9/2002	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	4/24/2002	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	7/24/2002	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	11/5/2002	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	2/4/2003	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	5/2/2003	0.00	500	10	68	71	18	65	-
	8/4/2003	0.00	270	<5.0	30	29	9.2	32	-
	11/3/2003	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	2/9/2004	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	5/10/2004	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	8/9/2004	0.00	130	<5.0	14	13	5.3	17	-
	11/9/2004	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	2/3/2005	0.00	370	<5.0	<0.5	4.1	<0.5	0.64	-
	5/9/2005	0.00	840	<5.0	50	180	21	110	-
	7/27/2005	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
	8/5/2005	0.00	310	<5.0	7.5	57	10	53	-
	11/9/2005	0.00	290	<5.0	12	61	8.8	49	-
	2/9/2006	0.00	250	<5.0	9.9	42	7.5	45	-
	5/4/2006	0.00	300	<5.0	37	76	7.8	42	-
	8/4/2006	0.00	270	<5.0	7.3	33	5.6	32	-
	11/8/2006	0.00	1,300	<5.0	75	230	31	160	<MDL
	2/8/2007	0.00	<50	<5.0	<0.5	<0.5	<0.5	<0.5	-
MW-5	2/3/2005	0.00	78,000	<1,000	7,600	13,000	2,200	9,600	-
	5/9/2005	0.00	60,000	<900	6,100	9,900	1,600	6,600	-
	7/27/2005	nm	120,000	1,100	10,000	19,000	2,100	13,000	-
	8/5/2005	0.00	59,000	<500	4,100	10,000	1,200	6,600	-
	11/9/2005	0.00	44,000	<500	3,300	7,400	1,100	4,900	-
	2/9/2006	0.00	110,000	<500	10,000	22,000	2,400	13,000	-
	5/4/2006	0.00	110,000	<250	11,000	22,000	2,900	15,000	-
	8/4/2006	0.00	73,000	<500	4,700	8,600	1,700	7,600	-
	11/8/2006	0.00	51,000	<500	3,700	7,200	1,400	6,700	<MDL
	2/8/2007	0.00	67,000	<800	5,100	10,000	1,800	10,000	-

TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

Vic's Automotive  
245 8th Street, Oakland, California

Well/Sample ID	Date Collected	Apparent LNAPL Thickness (ft)	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	HVOC
			µg/L <i>Method SW8015Cm</i>	µg/L	µg/L	µg/L	µg/L	µg/L	Method 8260
MW-6	2/3/2005	Sheen	130,000	<1,000	2,400	33,000	2,400	15,000	-
	5/9/2005	Sheen	170,000	<4,000	11,000	43,000	3,100	16,000	-
	8/5/2005	0.37	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/9/2005	0.37	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/9/2006	0.71	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/4/2006	0.75	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	8/4/2006	0.41	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/8/2006	0.38	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
2/8/2007	0.34	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-	
MW-7	2/3/2005	Sheen	220,000	18,000	45,000	44,000	3,500	18,000	-
	5/9/2005	0.03	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	8/5/2005	0.05	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	11/9/2005	0.12	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	2/9/2006	0.07	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	5/4/2006	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	-
	8/4/2006	Sheen	230,000	19,000	37,000	37,000	3,100	14,000	-
	11/8/2006	Sheen	240,000	13,000	41,000	39,000	3,000	14,000	<MDL
2/8/2007	Sheen	230,000	15,000	41,000	37,000	3,700	20,000	-	
MW-10	2/3/2005	0.00	36,000	<500	4,700	7,200	660	3,400	-
	5/9/2005	0.00	88,000	<1,500	6,900	20,000	2,300	9,900	-
	8/5/2005	0.00	88,000	<1,100	10,000	21,000	1,900	9,800	-
	11/9/2005	0.00	63,000	<1,100	5,400	13,000	1,900	7,900	-
	2/9/2006	0.00	100,000	<500	6,600	19,000	2,900	13,000	-
	5/4/2006	0.00	100,000	<500	8,500	25,000	3,000	13,000	-
	8/4/2006	0.00	190,000	<2,200	17,000	35,000	2,800	13,000	-
	11/8/2006	0.00	57,000	<500	2,500	7,600	1,600	5,700	<MDL
2/8/2007	0.00	69,000	<1,000	4,400	14,000	2,200	8,800	-	
MW-11	2/3/2005	Sheen	170,000	<3,000	23,000	35,000	3,100	16,000	-
	5/9/2005	Sheen	210,000	3,500	29,000	40,000	3,400	16,000	-
	7/27/2005	Sheen	220,000	2,500	26,000	37,000	3,200	18,000	-
	8/5/2005	Sheen	210,000	<2,500	35,000	42,000	3,300	16,000	-
	11/9/2005	Sheen	180,000	9,100	32,000	47,000	3,600	18,000	-
	2/9/2006	Sheen	210,000	10,000	33,000	39,000	3,800	20,000	-
	5/4/2006	Sheen	190,000	12,000	34,000	41,000	3,500	17,000	-
	8/4/2006	Sheen	290,000	11,000	33,000	43,000	3,300	15,000	-
11/8/2006	0.00	240,000	14,000	34,000	44,000	3,300	16,000	<MDL	
2/8/2007	0.00	230,000	19,000	43,000	44,000	3,900	20,000	-	
MW-12	2/3/2005	Sheen	250,000	100,000	52,000	41,000	3,400	15,000	-
	5/9/2005	Sheen	210,000	91,000	44,000	28,000	3,300	13,000	-
	8/5/2005	Sheen	170,000	52,000	38,000	28,000	3,000	12,000	-
	11/9/2005	Sheen	180,000	52,000	39,000	25,000	2,900	12,000	-
	2/9/2006	Sheen	170,000	34,000	40,000	23,000	3,500	15,000	-
	5/4/2006	Sheen	160,000	47,000	33,000	28,000	2,800	10,000	-
	8/4/2006	Sheen	240,000	55,000	40,000	24,000	3,200	12,000	-
	11/8/2006	0.00	190,000	33,000	40,000	23,000	2,700	13,000	<MDL
2/8/2007	0.00	150,000	34,000	38,000	19,000	3,300	12,000	-	

µg/L = micrograms per liter (ppb)

ns/fp = not sampled / free product

TPH-g = total petroleum hydrocarbons as gasoline

HVOC = Halogenated Volatile Organic Compounds

MTBE = methyl tertiary-butyl ether

\* samples re-analyzed by Method SW8260B (expressed as SW8021B / SW8260B)

MDL = Method Detection Limit

Refer to Appendix B: Lab Analytical Reports w/ Chain of Custody Documentation for detailed analytical reports including dilution factors and reporting limits

\* = Analytical results for MW-2 and MW-3 reversed from lab data based on historical concentration trends observed

**TABLE 4: SOIL GAS SAMPLE ANALYTICAL DATA**  
**Vic's Automotive**  
**245 8th Street, Oakland, California**

Probe/Sample ID	Date Collected	Sample Depth (ft bgs)	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Ethanol	PCE	CD	MEK	Acetone	2-Propanol <sup>1</sup>
			µg/m <sup>3</sup> <i>EPA Method Modified TO-3</i>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
GP-1-5	8/4/2006	5	331	<8.0	<7.1	<8.4	<9.7	<9.7	<17	17	72	<6.6	82	23
GP-1-5D <sub>1</sub>	8/4/2006	5	-	<8.0	<7.1	<8.4	<9.7	<9.7	<17	18	71	<6.6	78	23
GP-1-5	11/8/2006	5	1,100	<4.6	<4.0	<4.8	<5.5	<5.5	<9.5	12	-	-	-	<12
GP-1-5	3/6//2007*	5	-	-	-	-	-	-	-	-	-	-	-	-
GP-1-10	8/4/2006	10	493	<4.1	<3.6	<4.3	<5.0	<5.0	<8.6	20	71	11	120	<11
GP-1-10	11/8/2006	10	950	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	-	-	-	<11
GP-1-10	3/6//2007*	10	-	-	-	-	-	-	-	-	-	-	-	-
GP-2-5	8/4/2006	5	493	<4.4	<3.9	6.9	<5.4	10	<9.3	600	120	4.1	110	<12
GP-2-5	11/8/2006	5	1,100	<4.0	<3.6	<4.2	<4.9	<4.9	<8.4	240	-	-	-	<11
GP-2-5	3/6/2007*	5	-	-	-	-	-	-	-	-	-	-	-	-
GP-2-10	8/4/2006	10	352	<10	<9.0	18	<12	<12	<21	270	18	<8.4	62	<28
GP-2-10	11/8/2006	10	910	<3.9	<3.4	<4.1	<4.7	<4.7	<8.1	450	-	-	-	<11
GP-2-10	3/6/2007*	10	-	-	-	-	-	-	-	-	-	-	-	-
GP-3-5	8/4/2006	5	<240	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	<3.6	4.8	110	<11
GP-3-5	11/8/2006	5	930	<4.4	<3.9	<4.6	<5.2	<5.2	<9.1	<8.2	-	-	-	<12
GP-3-5	3/6/2007*	5	-	-	-	-	-	-	-	-	-	-	-	-
GP-3-10	8/4/2006	10	564	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	9.0	5.6	240	<11
GP-3-10	11/8/2006	10	1,800	<4.0	<3.6	<4.2	<4.9	<4.9	<8.4	<7.6	-	-	-	<11
GP-3-10	3/6/2007*	10	-	-	-	-	-	-	-	-	-	-	-	-
GP-4-5	8/4/2006	5	705	<4.4	5.4	<4.6	<5.4	<5.4	<9.3	<8.4	270	4.3	100	<12
GP-4-5 <sub>1</sub>	8/4/2006	5	599	-	-	-	-	-	-	-	-	-	-	-
GP-4-5	11/8/2006	5	540	<4.0	<3.5	<4.1	<4.8	<4.8	<8.3	<7.5	-	-	-	<11
GP-4-5 <sub>1</sub>	11/8/2006	5	610	<7.7	<6.8	<8.0	<9.2	<9.2	<16	<14	-	-	-	<21
GP-4-5	3/6/2007*	5	-	-	-	-	-	-	-	-	-	-	-	-
GP-4-10	8/4/2006	10	564	<4.1	6.1	17	5.7	16	12	<7.8	250	9.4	130	<11
GP-4-10D <sub>1</sub>	8/5/2006	10	529	<3.8	4.2	18	<4.6	17	18	<7.2	130	9.4	130	<10
GP-4-10	11/8/2006	10	900	<4.0	<3.5	4.1	<4.8	5.2	<8.3	<7.5	-	-	-	<11
GP-4-10 <sub>1</sub>	11/8/2006	10	880	<1.8	<1.6	<1.9	<2.2	<2.2	<3.8	<3.4	-	-	-	<4.9
GP-4-10	3/6/2007*	10	-	-	-	-	-	-	-	-	-	-	-	-
ESLs			26,000	9,400	85	63,000	420,000	150,000	19,000,000	410	-	210,000	660,000	-
CHHSLs			-	4,000	36.2	135,000	postponed	315,000	-	180	-	-	-	-

1) 2-Propanol (i.e., isopropyl alcohol) is the tracer/leak check compound  
ft bgs = feet below ground surface  
µg/m<sup>3</sup> = micrograms per cubic meter  
TPH-g = total petroleum hydrocarbons as gasoline  
MTBE = methyl tertiary-butyl ether  
PCE = tetrachloroethene  
CD = carbon disulfide  
MEK = methyl ethyl ketone (i.e., 2-Butanone)  
D<sub>1</sub> = after the probe/sample ID indicates a duplicate sample collected in the field  
D<sub>1</sub> = after the probe/sample ID indicates a duplicate sample prepared and analyzed by the lab  
Please refer to Appendix B: Lab Analytical Reports w/ Chain of Custody Documentation for detailed analytical data, including dilution factors and reporting limits  
\*Sampling not possible due to seasonal wet climate conditions

ESLs = Environmental Screening Levels - for residential land use  
CHHSLs = California Human Health Screening Levels

## APPENDICES



**AEI CONSULTANTS**  
**GROUNDWATER MONITORING WELL FIELD SAMPLING FORM**

**Monitoring Well Number: MW-1**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	32.55		
Depth of Well	28.00		
Depth to Water (from top of casing)	15.61		
Depth to Free Product (from top of casing)	15.58		
Water Elevation (feet above msl)	16.94		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	N/A		
Actual Volume Purged (gallons)	N/A		
Appearance of Purge Water	N/A		
Free Product Present?	Yes	Thickness (ft):	0.03

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				Not sampled due to presence of free product.			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Well was neither purged nor sampled due to the presence of free product.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-2**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	33.24		
Depth of Well	28.00		
Depth to Water (from top of casing)	17.13		
Water Elevation (feet above msl)	16.11		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	5.2		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Slightly dark, clears by 0.5 gallons		
Free Product Present?	No	Thickness (ft):	Sheen

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.13	6.61	1243	1.15	-95.1	
	2	18.20	6.62	995	0.79	-95.5	
	3	18.25	6.61	877	0.56	-94.6	
	4	18.29	6.61	821	0.45	-94.1	
	6	18.35	6.61	763	0.32	-93.7	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum hydrocarbon odors noted with sheen in purge water.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	34.25		
Depth of Well	25.00		
Depth to Water (from top of casing)	17.68		
Water Elevation (feet above msl)	16.57		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	14.3		
Actual Volume Purged (gallons)	15		
Appearance of Purge Water	Brown, clears by 2.0 gallons		
Free Product Present?	No	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.35	6.61	307	4.32	37.9	
	4	19.47	6.59	310	3.73	44.0	
	6	19.54	6.52	335	2.60	9.1	
	8	19.58	6.51	350	1.53	-28.5	
	10	19.61	6.51	357	1.15	-39.4	
	12	19.62	6.51	360	0.92	-42.1	
	14	19.64	6.50	366	0.74	-44.5	
	15	19.65	6.50	367	0.65	-45.6	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

No petroleum odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-4**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	34.42		
Depth of Well	25.00		
Depth to Water (from top of casing)	18.57		
Water Elevation (feet above msl)	15.85		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	12.5		
Actual Volume Purged (gallons)	13.0		
Appearance of Purge Water	Milky brown, clears by 2.5 gallons.		
Free Product Present?	No	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.33	6.66	280	4.55	-10.1	
	2	18.00	6.52	278	4.47	12.9	
	3	18.39	6.46	280	4.35	24.4	
	5	18.41	6.44	281	4.28	28.6	
	7	18.45	6.39	290	4.09	39.3	
	9	18.51	6.38	295	4.07	43.2	
	11	18.53	6.38	298	3.85	47.7	
	13	18.55	6.39	299	3.71	51.5	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Water was light brown at 6.5 gallons, no petroleum odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-5**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	33.33		
Depth of Well	22.00		
Depth to Water (from top of casing)	16.12		
Water Elevation (feet above msl)	17.21		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	11.5		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	Light gray, clears by 0.5 gallon		
Free Product Present?	No	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.66	6.36	600	1.76	-51.8	
	2	18.77	6.36	601	0.99	-59.2	
	4	18.80	6.36	615	0.71	-63.8	
	6	18.85	6.37	608	0.59	-68.5	
	8	18.95	6.41	567	0.49	-75.1	
	10	19.00	6.44	535	0.39	-79.2	
	12	19.03	6.45	491	0.32	-81.7	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted with slight sheen in purge water.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-6**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK <input type="button" value="v"/>		
Elevation of Top of Casing (feet above msl)	32.82		
Depth of Well	22.00		
Depth to Water (from top of casing)	15.48		
Depth to Free Product (from top of casing)	15.14		
Water Elevation (feet above msl)	17.34		
Well Volumes Purged	N/A		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	N/A		
Actual Volume Purged (gallons)	N/A		
Appearance of Purge Water	N/A		
Free Product Present?	yes	Thickness (ft):	0.34

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Well was neither purged nor sampled due to the presence of free product.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-7**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	9482	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	33.07		
Depth of Well	22.00		
Depth to Water (from top of casing)	16.23		
Depth to Free Product (from top of casing)	None		
Water Elevation (feet above msl)	16.84		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	11.3		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	Light brown with thick sheen, clears by 1.0 gallon		
Free Product Present?	Yes	Thickness (ft):	Sheen

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.88	6.51	947	1.18	-86.3	
	2	17.89	6.49	911	0.94	-85.0	
	4	17.83	6.44	804	0.65	-81.1	
	6	17.88	6.43	882	0.30	-86.7	
	8	18.06	6.57	951	0.20	-94.4	
	10	18.14	6.60	955	0.19	-95.9	
	12	18.17	6.60	949	0.19	-96.8	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted with sheen noted on sampling equipment.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-10**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK <span style="float: right;">▼</span>		
Elevation of Top of Casing (feet above msl)	31.17		
Depth of Well	22.00		
Depth to Water (from top of casing)	15.59		
Water Elevation (feet above msl)	15.58		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	13		
Actual Volume Purged (gallons)	13		
Appearance of Purge Water	Milky gray, clears by 1.5 gallons		
Free Product Present?	No	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.33	6.57	343	3.09	-51.7	
	2	18.45	6.43	343	1.96	-42.0	
	3	18.50	6.38	338	1.18	-37.7	
	5	18.53	6.38	336	0.97	-37.7	
	7	18.57	6.37	331	0.69	-37.9	
	9	18.60	6.37	330	0.50	-38.5	
	11	18.63	6.38	327	0.41	-39.3	
	13	18.66	6.38	325	0.33	-40.5	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.



**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-11**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4	
Wellhead Condition	OK <span style="float: right;">▼</span>	
Elevation of Top of Casing (feet above msl)	31.78	
Depth of Well	22.00	
Depth to Water (from top of casing)	16.36	
Water Elevation (feet above msl)	15.42	
Well Volumes Purged	3	
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	10.9	
Actual Volume Purged (gallons)	11.0	
Appearance of Purge Water	Black, clears by 1.5 gallons	
Free Product Present?	No	Thickness (ft):

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO(mg/L)	ORP (meV)	Comments
	1	17.64	6.32	311	1.44	-57.6	
	2	17.75	6.32	311	1.09	-59.9	
	3	18.07	6.29	306	0.50	-65.5	
	5	18.07	6.29	305	0.46	-64.6	
	7	18.12	6.26	311	0.39	-60.0	
	9	18.17	6.28	320	0.36	-59.7	
	11	18.22	6.32	333	0.29	-63.1	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted with sheen in purge water.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-12**

Project Name:	Vic's Automotive	Date of Sampling:	2/8/2007
Job Number:	111783	Name of Sampler:	Adrian Nieto
Project Address:	245 8th Street, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	OK <span style="float: right;">▼</span>
Elevation of Top of Casing (feet above msl)	32.05
Depth of Well	22.00
Depth to Water (from top of casing)	16.54
Water Elevation (feet above msl)	15.51
Well Volumes Purged	11
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>10.6</b>
Actual Volume Purged (gallons)	11.0
Appearance of Purge Water	Almost clear, clears quickly
Free Product Present?	No <span style="margin-left: 100px;">Thickness (ft):</span>

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.57	6.46	352	1.21	-50.2	
	2	17.72	6.43	348	0.67	-49.4	
	3	17.74	6.42	360	0.47	-50.1	
	5	17.77	6.41	381	0.40	-52.3	
	7	17.85	6.41	415	0.31	-53.9	
	9	17.87	6.41	428	0.29	-54.3	
	11	17.87	6.42	449	0.28	-55.9	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

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

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #111783; Vic's Automotive	Date Sampled: 02/08/07
		Date Received: 02/08/07
	Client Contact: Ricky Bradford	Date Reported: 02/14/07
	Client P.O.:	Date Completed: 02/14/07

**WorkOrder: 0702186**

February 14, 2007

Dear Ricky:

Enclosed are:

- 1). the results of 8 analyzed samples from your #111783; Vic's Automotive 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

**McCAMPBELL ANALYTICAL INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

0702186

AEI

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

EDF Required?  YES

PDF Required?  YES

Report To: Ricky Bradford  
Company: AEI Consultants  
2500 Camino Diablo, Suite 200  
Walnut Creek, CA 94597  
Tele: (925) 283-6000 ext. 148  
Project #: 111783  
Project Location: 245 8<sup>th</sup> Street, Oakland  
Sampler Signature: *Adrian Nieto*

Bill To:

E-Mail: rbradford@aeiconsultants.com

Fax: (925) 944-2895

Project Name: Vic's Automotive

Analysis Request										Other		Comments	
MTBE & TPH as Gas by EPA 602.8020 - 8015													
TPH as Diesel (8015)													
Total Petroleum Oil & Grease (5520 E&F/B&F)													
Total Petroleum Hydrocarbons (418.1)													
EPA 601 / 8010													
BTEX ONLY (EPA 602 / 8020)													
EPA 608 / 8080													
EPA 608 / 8080 PCB's ONLY													
EPA 624 / 8240 / 8260													
EPA 625 / 8270													
HVOCs by EPA 8260 (8010 Target List)													
CAM-17 Metals													
LUFT 5 Metals													
Lead (7240/7421/239.2/6010)													
RCI													

(+)  
(+)  
(+)  
(+)  
(+)  
(+)  
(+)  
(+)

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other				
<del>MW-1</del>		6/26/07		4	VOCS	X					X	X						
MW-2			10:08			X					X	X						Not Sample Collected
MW-3			11:44p			X					X	X						
MW-4			9:53p			X					X	X						
MW-5			10:00p			X					X	X						
<del>MW-6</del>						X					X	X						Not Sample
MW-7			10:15			X					X	X						
MW-10			12:10p			X					X	X						
MW-11			12:15p			X					X	X						
MW-12			12:26			X					X	X						

Relinquished By: <i>Adrian Nieto</i>	Date: 6/26/07	Time: 3:00p	Received By: <i>Mike Vall</i>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/264	VOAS	O&G	METALS	OTHER
GOOD CONDITION	PRESERVATION APPROPRIATE			
HEAD SPACE ABSENT	CONTAINERS			
DECHLORINATED IN LAB	PRESERVED IN LAB			

**McC Campbell Analytical, Inc.**



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

**CHAIN-OF-CUSTODY RECORD**

WorkOrder: 0702186

ClientID: AEL

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

Ricky Bradford  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597

Email: rbradford@aeiconsultants.com  
TEL: (925) 283-600 FAX: (925) 944-289  
ProjectNo: #111783; Vic's Automotive  
PO:

**Bill to**

Denise Mockel  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597  
dmockel@aeiconsultants.com

**Requested TAT: 5 days**

*Date Received: 02/08/2007*

*Date Printed: 02/14/2007*

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0702186-001	MW-2	Water	02/08/07 10:08:00	<input type="checkbox"/>	A	A											
0702186-002	MW-3	Water	02/08/07 9:44:00	<input type="checkbox"/>	A												
0702186-003	MW-4	Water	02/08/07 9:53:00	<input type="checkbox"/>	A												
0702186-004	MW-5	Water	02/08/07 10:00:00	<input type="checkbox"/>	A												
0702186-005	MW-7	Water	02/08/07 10:15:00	<input type="checkbox"/>	A												
0702186-006	MW-10	Water	02/08/07 12:10:00	<input type="checkbox"/>	A												
0702186-007	MW-11	Water	02/08/07 12:18:00	<input type="checkbox"/>	A												
0702186-008	MW-12	Water	02/08/07 12:26:00	<input type="checkbox"/>	A												

**Test Legend:**

1	G-MBTEX W
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

Prepared by: Nickole White

**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.



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #111783; Vic's Automotive	Date Sampled: 02/08/07
		Date Received: 02/08/07
	Client Contact: Ricky Bradford	Date Extracted: 02/09/07-02/13/07
	Client P.O.:	Date Analyzed 02/09/07-02/13/07

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0702186

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-2	W	ND	ND	ND	ND	ND	ND	1	99
002A	MW-3	W	68,000,a	5400	11,000	7800	1500	7700	100	102
003A	MW-4	W	ND	ND	ND	ND	ND	ND	1	101
004A	MW-5	W	67,000,a	ND<800	5100	10,000	1800	10,000	100	104
005A	MW-7	W	230,000,a,h	15,000	41,000	37,000	3700	20,000	200	98
006A	MW-10	W	69,000,a	ND<1000	4400	14,000	2200	8800	200	109
007A	MW-11	W	230,000,a	19,000	43,000	44,000	3900	20,000	200	100
008A	MW-12	W	150,000,a	34,000	38,000	19,000	3300	12,000	200	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	NA	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0702186

Analyte	EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 26174			Spiked Sample ID: 0702181-013A			
	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 <sub>f</sub> )	ND	60	98	101	3.48	101	97.7	3.24	70 - 130	30	70 - 130	30
MTBE	ND	10	103	104	1.69	110	100	8.99	70 - 130	30	70 - 130	30
Benzene	ND	10	99.1	102	2.53	99.4	100	0.817	70 - 130	30	70 - 130	30
Toluene	ND	10	95.7	99.1	3.45	96.6	97.7	1.08	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	95.3	100	4.94	94.5	98.4	4.07	70 - 130	30	70 - 130	30
Xylenes	ND	30	91.3	95.3	4.29	91	95	4.30	70 - 130	30	70 - 130	30
%SS:	103	10	106	107	0.784	106	106	0	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 26174 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0702186-001	2/08/07 10:08 AM	2/13/07	2/13/07 1:07 AM	0702186-002	2/08/07 9:44 AM	2/09/07	2/09/07 6:35 PM
0702186-003	2/08/07 9:53 AM	2/12/07	2/12/07 7:38 PM	0702186-004	2/08/07 10:00 AM	2/09/07	2/09/07 8:35 PM
0702186-005	2/08/07 10:15 AM	2/09/07	2/09/07 9:35 PM	0702186-006	2/08/07 12:10 PM	2/09/07	2/09/07 6:13 PM
0702186-007	2/08/07 12:18 PM	2/09/07	2/09/07 6:47 PM	0702186-008	2/08/07 12:26 PM	2/09/07	2/09/07 7:21 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.

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.