

**TRC**  
Customer-Focused Solutions

R0 123

January 20, 2006

Project 41-0236

Mr. Amir Gholani  
Alameda County Health Care Services Agency  
Department of Environmental Health  
Hazardous Materials Program  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

Alameda County  
JAN 24 2006  
Environmental Health

SITE: QUIK STOP MARKET NO. 56  
3132 BEAUMONT AVENUE  
OAKLAND, CALIFORNIA

RE: QUARTERLY GROUNDWATER MONITORING REPORT, FOURTH QUARTER 2005

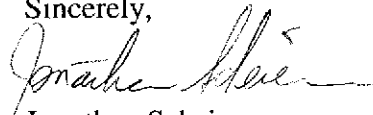
Dear Mr. Gholani:

Enclosed is a copy of the *Fourth Quarter 2005 Quarterly Groundwater Monitoring Report* for the property located at 3132 Beaumont Avenue in Oakland, California. This report is submitted on behalf of our client, Quik Stop Markets, Inc.

Please direct all questions and correspondence to:

Mr. Mike Karvelot  
Quik Stop Markets, Inc.  
4567 Enterprise Street  
Fremont, California 94538  
Phone: (510) 657-8500

Sincerely,



Jonathan Scheiner

Associate

cc: Mr. Mike Karvelot, Quik Stop Markets, Inc.



January 20, 2006

Project 41-0236

Mr. Mike Karvelot  
Quik Stop Markets, Inc.  
4567 Enterprise Street  
Fremont, California 94538

Alameda County  
JAN 24 2006  
Environmental Health

SITE: QUIK STOP MARKET NO. 56  
3132 BEAUMONT AVENUE  
OAKLAND, CALIFORNIA

RE: QUARTERLY GROUNDWATER MONITORING REPORT, FOURTH QUARTER 2005

Dear Mr. Karvelot:

This *Fourth Quarter 2005 Quarterly Groundwater Monitoring Report* presents the results of the Fourth Quarter 2005 fluid level monitoring and groundwater sampling at the above-referenced site (Figure 1). The work at this site was performed in accordance with the requirements of the Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH).

## 1.0 FLUID-LEVEL MONITORING

Fluid levels were measured in onsite monitoring wells MW-1, MW-2, and MW-3 on December 6, 2005. Groundwater elevations averaged 127.92 feet above mean sea level (MSL). Groundwater flow direction was to the west-southwest at a gradient of 0.109 feet per foot. Refer to Table 1 for fluid-level monitoring data. Figure 2 is a groundwater elevation contour map based on the fluid-level measurements. A description of fluid-level monitoring procedures is included in the Appendix.

## 2.0 GROUNDWATER SAMPLING

On December 6, 2005, groundwater samples were collected from onsite wells MW-1, MW-2, and MW-3. Groundwater samples were submitted to a state-certified laboratory for analysis of total petroleum hydrocarbons as gasoline (TPH-G) by EPA Method 8015B, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tert-butyl ether (MTBE) by EPA Method 8260B. Refer to Table 1 and Figure 3 for a summary of analytical results. General Field Procedures, Field Measurement Forms, Official Laboratory Reports, and Chain of Custody Records are included in the Appendix.

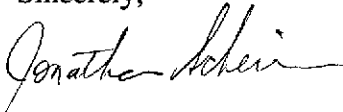
Approximately 55 gallons of purge water and equipment rinsate were generated during groundwater sampling activities conducted on December 6, 2005. The purge water was stored onsite in one Department of Transportation-approved 55-gallon drum pending disposal.

### 3.0 LIST OF ATTACHMENTS

- Figure 1: Vicinity Map
- Figure 2: Groundwater Elevation Contour Map, December 6, 2005
- Figure 3: Dissolved-Phase Hydrocarbon Concentrations, December 6, 2005
- Table 1: Summary of Groundwater Levels and Chemical Analysis
- Appendix: General Field Procedures, Field Measurement Forms, Official Laboratory Reports, and Chain of Custody Records

If you have any questions regarding this report, please call me at (925) 688-2473.

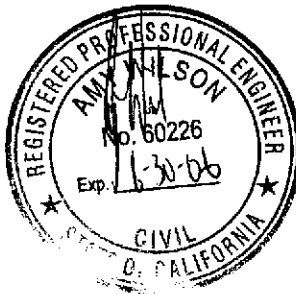
Sincerely,



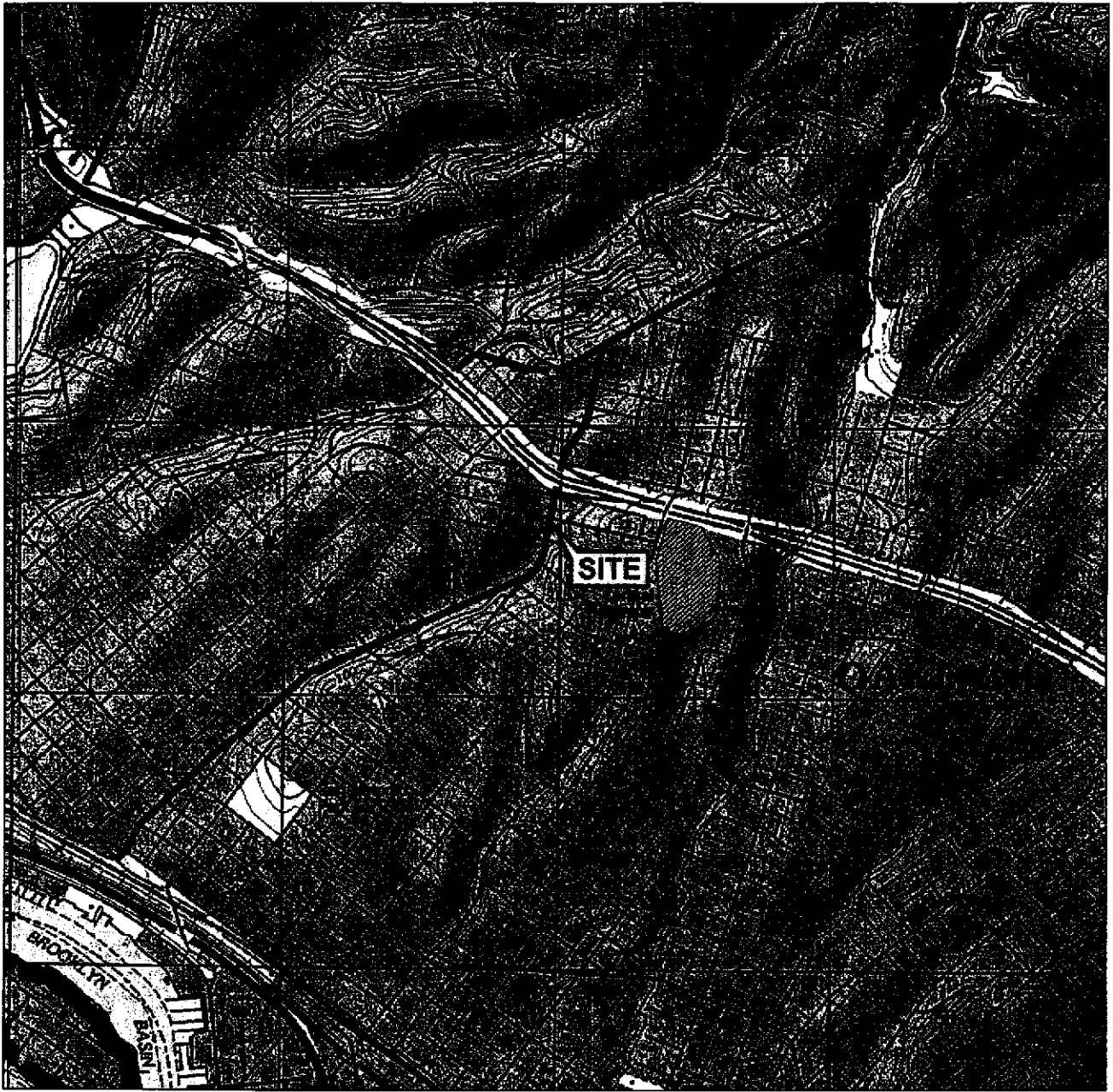
Jonathan Scheiner  
Associate



Amy Wilson, Ph.D., P.E.  
Senior Project Engineer



**FIGURES**



1 MILE    3/4    1/2    1/4    0    1 MILE



SCALE 1 : 24,000



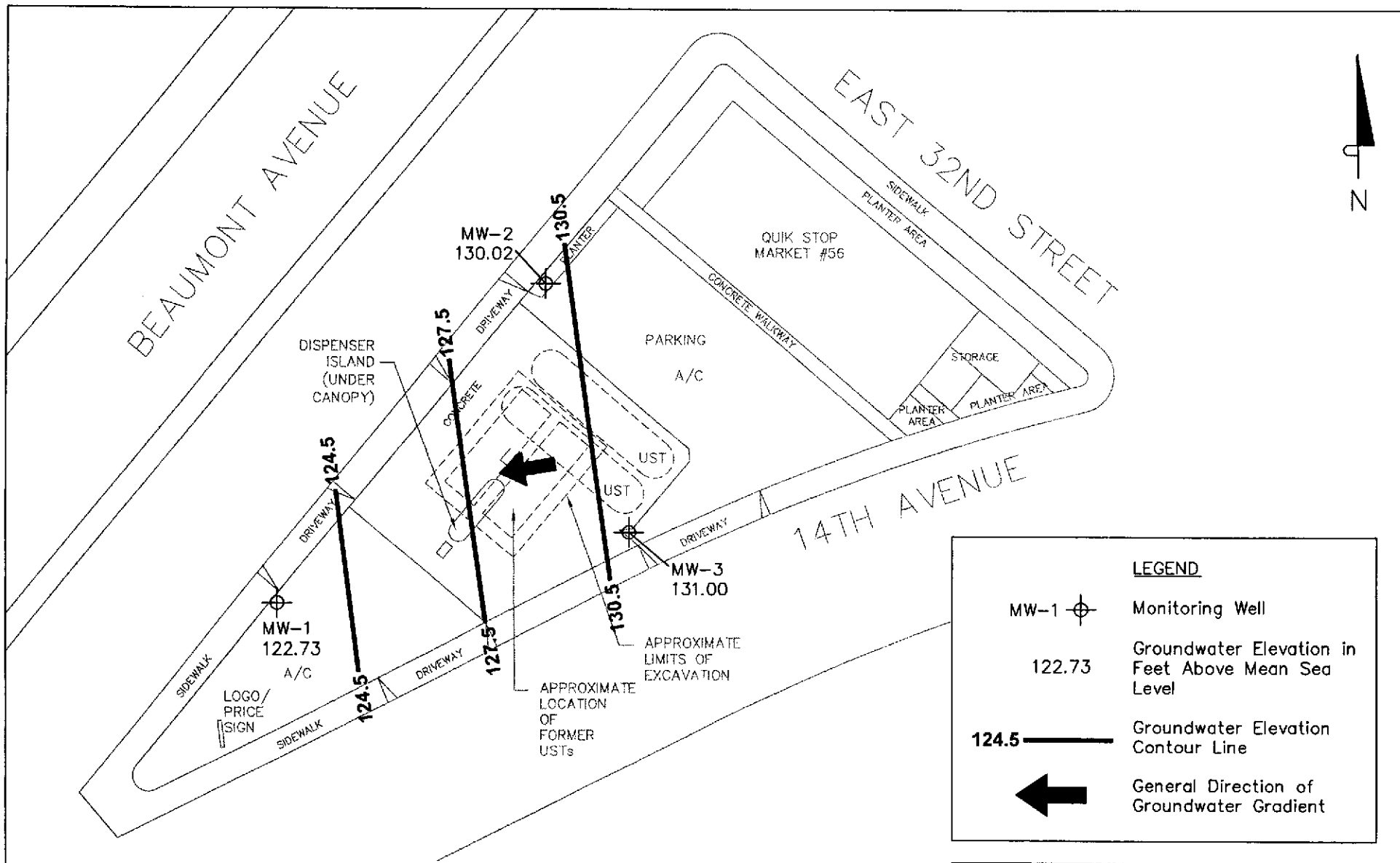
SOURCE:  
 United States Geological Survey  
 7.5 Minute Topographic Maps:  
 Oakland East and  
 Oakland West Quadrangles

**VICINITY MAP**

Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California

**TRC**

**FIGURE 1**



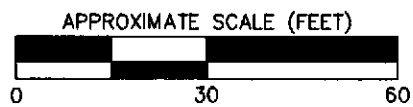
**LEGEND**

MW-1 Monitoring Well

122.73 Groundwater Elevation in Feet Above Mean Sea Level

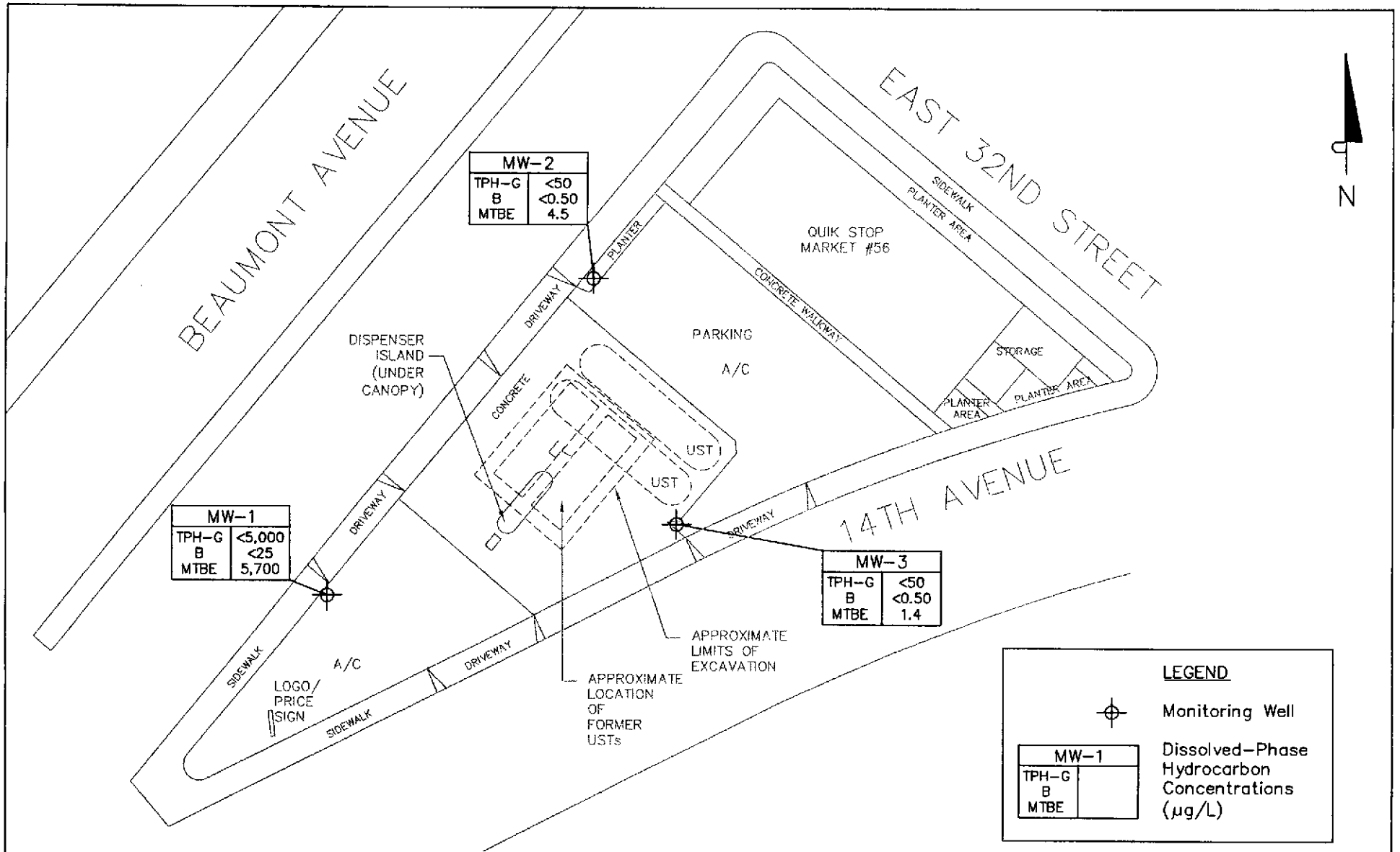
124.5 Groundwater Elevation Contour Line

General Direction of Groundwater Gradient



**NOTES:**  
 Contour lines are interpretive based on fluid level measurements taken on December 6, 2005.  
 Contour interval = 3 feet.  
**SOURCE:** Client-provided drawings and Garlow, 1998. Site plan updated per 11/27/01 well survey by Doble Thomas Associates.

**GROUNDWATER ELEVATION  
 CONTOUR MAP  
 December 6, 2005  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California**

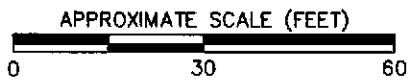


**LEGEND**

Monitoring Well

MW-1	
TPH-G	
B	
MTBE	

Dissolved-Phase Hydrocarbon Concentrations (µg/L)



**NOTES:**  
 Results are based on laboratory analysis of groundwater samples collected on December 6, 2005. µg/L = micrograms per liter; TPH-G = total petroleum hydrocarbons as gasoline; B = benzene; MTBE = methyl tert butyl ether; < = not detected at or above the reported method detection limit.  
**SOURCE:** Client-provided drawings and Garlow, 1998. Site plan updated per 11/27/01 well survey by Doble Thomas Associates.

**DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS**  
**December 6, 2005**  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California

<b>TRC</b>	<b>FIGURE 3</b>
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**TABLE**



**Table 1**  
**Summary of Groundwater Levels and Chemical Analysis**

Quik Stop No. 56 - 3132 Beaumont Avenue, Oakland

Sample ID	Date	Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (feet)	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260 (µg/L)	DO (mg/L)	
MW-1	03/02/00	131.58	10.33	121.25	670	<1.0	<1.0	<1.0	<1.0	2,200	0.62	
MW-1	11/16/00	131.58	11.86	119.72	<500	<0.5	<0.5	<0.5	<0.5	18,000	0.34	
MW-1	01/23/01	131.58	11.05	120.53	6,400	<10	<10	<10	<10	21,000	0.83	
MW-1	04/25/01	131.58	12.06	119.52	12,000	<20	<20	<20	<20	17,000	0.39	
MW-1	07/24/01	131.58	12.42	119.16	8,800	<13	<13	<13	<13	14,000	7.61	
MW-1	11/08/01	131.58	12.00	119.58	18,000	<25	<25	<25	<25	28,000	—	
MW-1	11/27/01	134.13	Well resurveyed to new reference point									
MW-1	02/05/02	134.13	10.99	123.14	28,000	<50	<50	<50	<50	44,000	—	
MW-1	04/29/02	134.13	10.97	123.16	12,000	<25	<25	<25	<25	30,000	—	
MW-1	07/29/02	134.13	10.20	123.93	16,000	<25	<25	<25	<25	22,000	—	
MW-1	10/21/02	134.13	10.48	123.65	17,000	<50	<50	<50	<50	39,000	—	
MW-1	03/05/03	134.13	8.94	125.19	40,000	<100	<100	<100	<100	69,000	—	
MW-1	06/06/03	134.13	8.68	125.45	27,000	<50	<50	<50	<50	63,000	—	
MW-1	09/05/03	134.13	9.21	124.92	28,000	<25	<25	<25	<25	51,000	—	
MW-1	12/24/03	134.13	8.65	125.48	29,000	<50	<50	<50	<50	84,000	—	
MW-1	03/25/04	134.13	8.66	125.47	39,000	<100	<100	<100	<100	72,000	—	
MW-1	06/25/04	134.13	8.66	125.47	50,000	<100	<100	<100	<100	90,000	—	
MW-1	09/16/04	134.13	9.02	125.11	30,000	<50	<50	<50	<50	75,000	—	
MW-1	12/17/04	134.13	7.46	126.67	35,000	<50	<50	<50	<50	59,000	—	
MW-1	03/10/05	134.13	7.17	126.96	14,000	<25	<25	<25	<25	33,000	—	
MW-1	06/09/05	134.13	8.14	125.99	36,000	<50	<50	<50	<50	60,000	—	
MW-1	09/13/05	134.13	12.64	121.49	<20,000	<100	<100	<100	<100	32,000	—	
MW-1	12/06/05	134.13	11.40	122.73	<5,000	<25	<25	<25	<25	5,700	—	
MW-2	03/02/00	132.63	5.88	126.75	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.45	
MW-2	11/16/00	132.63	6.40	126.23	<50	<0.5	<0.5	<0.5	<0.5	<1.0	1.67	
MW-2	01/23/01	132.63	5.67	126.96	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.20	
MW-2	04/25/01	132.63	6.26	126.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.76	
MW-2	07/24/01	132.63	6.38	126.25	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.92	
MW-2	11/08/01	132.63	5.97	126.66	<50	<0.50	<0.50	<0.50	<0.50	2.7	—	
MW-2	11/27/01	135.16	Well resurveyed to new reference point									
MW-2	02/05/02	135.16	4.95	130.21	<50	<0.50	<0.50	<0.50	<0.50	2.7	—	
MW-2	04/29/02	135.16	5.03	130.13	<50	<0.50	<0.50	<0.50	<0.50	2.8	—	
MW-2	07/29/02	135.16	5.46	129.70	<50	<0.50	<0.50	<0.50	<0.50	4.1	—	
MW-2	10/21/02	135.16	5.68	129.48	<50	<0.50	<0.50	<0.50	<0.50	8.1	—	
MW-2	03/05/03	135.16	4.87	130.29	<50	1.4	<0.50	0.61	0.69	5.5	—	

**Table 1**  
**Summary of Groundwater Levels and Chemical Analysis**

Quik Stop No. 56 - 3132 Beaumont Avenue, Oakland

Sample ID	Date	Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (feet)	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8260 (µg/L)	DO (mg/L)
MW-2	06/06/03	135.16	4.88	130.28	<50	<0.50	<0.50	<0.50	<0.50	5.2	—
MW-2	09/05/03	135.16	5.60	129.56	<50	<0.50	<0.50	<0.50	0.66	6.4	—
MW-2	12/24/03	135.16	5.25	129.91	<50	<0.50	<0.50	<0.50	<0.50	5.4	—
MW-2	03/25/04	135.16	5.25	129.91	<50	<0.50	<0.50	<0.50	<0.50	5.3	—
MW-2	06/25/04	135.16	6.89	128.27	<50	<0.50	<0.50	<0.50	<0.50	5.4	—
MW-2	09/16/04	135.16	6.09	129.07	<50	<0.50	<0.50	<0.50	<0.50	5.5	—
MW-2	12/17/04	135.16	5.30	129.86	<50	<0.50	<0.50	<0.50	<0.50	5.4	—
MW-2	03/10/05	135.16	4.49	130.67	<50	<0.50	<0.50	<0.50	<0.50	3.7	—
MW-2	06/09/05	135.16	4.85	130.31	<50	<0.50	<0.50	<0.50	<0.50	4.8	—
MW-2	09/13/05	135.16	5.82	129.34	<50	<0.50	<0.50	<0.50	<0.50	5.6	—
MW-2	12/06/05	135.16	5.14	130.02	<50	<0.50	<0.50	<0.50	<0.50	4.5	—
MW-3	03/02/00	133.78	6.41	127.37	<50	<0.50	<0.50	<0.50	<0.50	0.96	0.90
MW-3	11/16/00	133.78	6.46	127.32	<50	<0.5	<0.5	<0.5	<0.5	24	3.91
MW-3	01/23/01	133.78	5.75	128.03	<50	<0.50	<0.50	<0.50	<0.50	72	1.47
MW-3	04/25/01	133.78	5.90	127.88	<50	<0.50	<0.50	<0.50	<0.50	25	0.56
MW-3	07/24/01	133.78	6.56	127.22	<50	<0.50	0.79	0.73	0.68	5.2	6.67
MW-3	11/08/01	133.78	6.92	126.86	<50	<0.50	<0.50	<0.50	<0.50	14	—
MW-3	11/27/01	136.35	Well resurveyed to new reference point								
MW-3	02/05/02	136.35	5.13	131.22	<50	<0.50	<0.50	<0.50	<0.50	10	—
MW-3	04/29/02	136.35	5.67	130.68	<50	<0.50	<0.50	<0.50	<0.50	5.1	—
MW-3	07/29/02	136.35	6.11	130.24	<50	<0.50	<0.50	<0.50	<0.50	31	—
MW-3	10/21/02	136.35	6.57	129.78	<50	<0.50	<0.50	<0.50	<0.50	5.8	—
MW-3	01/06/04	136.35	5.02	131.33	<50	<0.50	<0.50	<0.50	<0.50	4.9	—
MW-3	06/06/03	136.35	5.12	131.23	<50	<0.50	<0.50	<0.50	<0.50	6.6	—
MW-3	09/05/03	136.35	6.53	129.82	<50	<0.50	<0.50	<0.50	<0.50	4.4	—
MW-3	12/24/03	136.35	5.20	131.15	<50	<0.50	<0.50	<0.50	<0.50	1.2	—
MW-3	03/25/04	136.35	5.42	130.93	<50	<0.50	<0.50	<0.50	<0.50	3.2	—
MW-3	06/25/04	136.35	6.50	129.85	<50	<0.50	<0.50	<0.50	<0.50	13	—
MW-3	09/16/04	136.35	6.79	129.56	<50	<0.50	<0.50	<0.50	<0.50	3.0	—
MW-3	12/17/04	136.35	5.20	131.15	<50	<0.50	<0.50	<0.50	<0.50	1.6	—
MW-3	03/10/05	136.35	4.42	131.93	<50	<0.50	<0.50	<0.50	<0.50	3.8	—
MW-3	06/09/05	136.35	4.98	131.37	<50	<0.50	<0.50	<0.50	<0.50	3.6	—
MW-3	09/13/05	136.35	6.42	129.93	<50	<0.50	<0.50	<0.50	<0.50	11	—
MW-3	12/06/05	136.35	5.35	131.00	<50	<0.50	<0.50	<0.50	<0.50	1.4	—

NOTES: ft-MSL = feet above mean sea level  
µg/L = micrograms per liter  
mg/L = milligrams per liter  
TPH-G = total petroleum hydrocarbons as gasoline  
DO = dissolved oxygen  
< = not detected at or above the stated detection limit  
MTBE = methyl tert butyl ether

**APPENDIX**

**GENERAL FIELD PROCEDURES, FIELD MEASUREMENT FORMS, OFFICIAL  
LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORDS**

## GENERAL FIELD PROCEDURES

General field procedures used during fluid-level monitoring and groundwater sampling activities are described below.

### FLUID-LEVEL MONITORING

Fluid levels are monitored in the wells using an electronic interface probe with conductance sensors. The presence of liquid-phase hydrocarbons is verified using a hydrocarbon-reactive paste. The depth to liquid-phase hydrocarbons and water is measured relative to the well box top or top of casing. Well box or casing elevations are surveyed to within 0.02 foot relative to a county or city benchmark.

### GROUNDWATER SAMPLING

Groundwater monitoring wells are purged and sampled in accordance with standard regulatory protocol. Typically, monitoring wells that contain no liquid-phase hydrocarbons are purged of groundwater prior to sampling so that fluids sampled are representative of fluids within the formation. Temperature, pH, and specific conductance are typically measured after each well casing volume has been removed. Purging is considered complete when these parameters vary less than 10% from the previous readings, or when four casing volumes of fluid have been removed. Samples are collected without further purging if the well does not recharge within 2 hours to 80% of its volume before purging.

The purged water is stored in labeled drums prior to transport to an appropriate treatment or recycling facility. If an automatic recovery system (ARS) is operating at the site, purged water may be pumped into the ARS for treatment.

Groundwater samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

## FLUID MEASUREMENT FIELD FORM

Project No.: 41023609

TRC Alton Personnel: J. Chidester

Station No.: Quik Stop # 56

Date: 12/6/05

Well Number	Screen Interval	Depth to Water	Depth to Product	Free Product Thickness (ft)	Free Product Recovery	Total Depth	Dissolved O <sub>2</sub> (mg/L)	Comments
MW-2		5.14				29.91		
MW-3		5.35				30.62		
MW-1		11.40				29.84		

# GROUND WATER SAMPLING FIELD NOTES

Site: Quik Stop #56 Project No.: 41023609 Sampled By: J. Chidester Date: 12/6/03

Well No. MW-2 Purge Method: 2" electric  
 Total Depth (feet): 29.91 Depth to Product (feet): —  
 Depth to Water (feet): 5.14 Product Recovered (gallons): —  
 Water Column (feet): 24.77 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 10.09 1 Well Volume (gallons): 3.96

Well No. MW-3 Purge Method: 2" electric  
 Total Depth (feet): 30.62 Depth to Product (feet): —  
 Depth to Water (feet): 5.35 Product Recovered (gallons): —  
 Water Column (feet): 25.27 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 10.40 1 Well Volume (gallons): 4.04

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F/C)	pH
754			4	1032	20.8	6.75
			8	1086	19.9	6.63
	810		12	1130	21.6	6.57
Total Purged			12	Time Sampled		830
Comments:						
Turbidity=						

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F/C)	pH
837			4	746	20.8	7.03
			8	718	21.8	6.74
	854		12	758	21.6	6.85
Total Purged			12	Time Sampled		920
Comments:						
Turbidity=						

Well No. MW-1 Purge Method: 2" electric  
 Total Depth (feet): 29.84 Depth to Product (feet): —  
 Depth to Water (feet): 11.40 Product Recovered (gallons): —  
 Water Column (feet): 18.44 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 15.09 1 Well Volume (gallons): 2.95

Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_  
 Total Depth (feet): \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_  
 Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_  
 Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_  
 80% Recharge Depth (feet): \_\_\_\_\_ 1 Well Volume (gallons): \_\_\_\_\_

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F/C)	pH
926			3	731	20.9	6.80
	938		6	752	21.0	6.72
	946		9	765	19.9	6.83
			8			
Total Purged			9	Time Sampled		1020
Comments: <u>Rain Dry @ 8:30. Finished purge unclogged.</u>						
Turbidity=						

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
Total Purged				Time Sampled		
Comments:						
Turbidity=						

Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_  
 Total Depth (feet): \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_  
 Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_  
 Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_  
 80% Recharge Depth (feet): \_\_\_\_\_ 1 Well Volume (gallons): \_\_\_\_\_

Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_  
 Total Depth (feet): \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_  
 Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_  
 Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_  
 80% Recharge Depth (feet): \_\_\_\_\_ 1 Well Volume (gallons): \_\_\_\_\_

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
Total Purged				Time Sampled		
Comments:						
Turbidity=						

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
Total Purged				Time Sampled		
Comments:						
Turbidity=						



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

TRC-Alton Geoscience  
1590 Solano Way Suite A  
Concord, CA 94520

Attn: James Chidester  
Phone: (925) 688-2485  
Fax: (925) 688-0388  
Date Received : 12/08/05

Job#: 41023609-TA08

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B/DHS LUFT Manual  
Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed	
Client ID :	TPH Purgeable	ND	0.050 mg/L	12/06/05	12/12/05	
MW-2	Methyl tert-butyl ether (MTBE)	4.5	0.50 µg/L	12/06/05	12/12/05	
Lab ID :	Benzene	ND	0.50 µg/L	12/06/05	12/12/05	
TRC05120821-01A	Toluene	ND	0.50 µg/L	12/06/05	12/12/05	
	Ethylbenzene	ND	0.50 µg/L	12/06/05	12/12/05	
	Xylenes, Total	ND	0.50 µg/L	12/06/05	12/12/05	
Client ID :	TPH Purgeable	ND	0.050 mg/L	12/06/05	12/12/05	
MW-3	Methyl tert-butyl ether (MTBE)	1.4	0.50 µg/L	12/06/05	12/12/05	
Lab ID :	Benzene	ND	0.50 µg/L	12/06/05	12/12/05	
TRC05120821-02A	Toluene	ND	0.50 µg/L	12/06/05	12/12/05	
	Ethylbenzene	ND	0.50 µg/L	12/06/05	12/12/05	
	Xylenes, Total	ND	0.50 µg/L	12/06/05	12/12/05	
Client ID :	TPH Purgeable	ND	D	5.0 mg/L	12/06/05	12/14/05
MW-1	Methyl tert-butyl ether (MTBE)	5,700	D	25 µg/L	12/06/05	12/14/05
Lab ID :	Benzene	ND	D	25 µg/L	12/06/05	12/14/05
TRC05120821-03A	Toluene	ND	D	25 µg/L	12/06/05	12/14/05
	Ethylbenzene	ND	D	25 µg/L	12/06/05	12/14/05
	Xylenes, Total	ND	D	25 µg/L	12/06/05	12/14/05

D = Reporting Limits were increased due to high concentrations of non-target analytes.

ND = Not Detected

*Roger Schell*

*Randy Gardner*

*Walter Hinchman*

Roger L. Schell, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

*128*

12/21/05

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## VOC Sample Preservation Report

Work Order: TRC05120821

Project: 41023609-TA08

Alpha's Sample ID	Client's Sample ID	Matrix	pH
05120821-01A	MW-2	Aqueous	2
05120821-02A	MW-3	Aqueous	2
05120821-03A	MW-1	Aqueous	2

12/21/05  
Report Date





# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
23-Dec-05

## OC Summary Report

Work Order:  
05120821

### Method Blank

Type: MBLK Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS06\DATA\051212\05121207.D

Batch ID: MS06W1212A

Analysis Date: 12/12/2005 10:01

Sample ID: MBLK MS06W1212A

Units: µg/L

Run ID: MSD\_06\_051212A

Prep Date: 12/12/2005

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	ND	0.5								
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene	ND	0.5								
Xylenes, Total	ND	0.5								
Surr: 1,2-Dichloroethane-d4	9.23		10		92	76	127			
Surr: Toluene-d8	10.2		10		102	84	113			
Surr: 4-Bromofluorobenzene	10.2		10		102	79	119			

### Laboratory Control Spike

Type: LCS Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS06\DATA\051212\05121204.D

Batch ID: MS06W1212A

Analysis Date: 12/12/2005 08:55

Sample ID: LCS MS06W1212A

Units: µg/L

Run ID: MSD\_06\_051212A

Prep Date: 12/12/2005

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	9.19	0.5	10		92	81	122			
Toluene	10.5	0.5	10		105	80	120			
Ethylbenzene	10.6	0.5	10		106	80	120			
Xylenes, Total	21.9	0.5	20		109	81	128			
Surr: 1,2-Dichloroethane-d4	9.02		10		90	76	127			
Surr: Toluene-d8	10.2		10		102	84	113			
Surr: 4-Bromofluorobenzene	10.1		10		101	79	119			

### Sample Matrix Spike

Type: MS Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS06\DATA\051212\05121209.D

Batch ID: MS06W1212A

Analysis Date: 12/12/2005 10:58

Sample ID: 05120951-03AMS

Units: µg/L

Run ID: MSD\_06\_051212A

Prep Date: 12/12/2005

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	40.2	1.3	50	0	80	74	125			
Toluene	44.1	1.3	50	0	88	76	120			
Ethylbenzene	44.6	1.3	50	0	89	77	124			
Xylenes, Total	91.3	1.3	100	0	91	75	130			
Surr: 1,2-Dichloroethane-d4	47.6		50		95	76	127			
Surr: Toluene-d8	49.3		50		99	84	113			
Surr: 4-Bromofluorobenzene	49.5		50		99	79	119			

### Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS06\DATA\051212\05121210.D

Batch ID: MS06W1212A

Analysis Date: 12/12/2005 11:20

Sample ID: 05120951-03AMSD

Units: µg/L

Run ID: MSD\_06\_051212A

Prep Date: 12/12/2005

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	40.2	1.3	50	0	80	74	124	40.21	0.0(13)	
Toluene	44.4	1.3	50	0	89	76	119	44.12	0.7(13)	
Ethylbenzene	44.6	1.3	50	0	89	77	124	44.63	0.2(13)	
Xylenes, Total	92.9	1.3	100	0	93	75	130	91.27	1.7(13)	
Surr: 1,2-Dichloroethane-d4	46.9		50		94	76	127			
Surr: Toluene-d8	49.3		50		99	84	113			
Surr: 4-Bromofluorobenzene	50.6		50		101	79	119			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
23-Dec-05

## OC Summary Report

Work Order:  
05120821

### Method Blank

Type: **MBLK** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: C:\HPCHEM\MS06\DATA\051212\05121207.D

Batch ID: **MS06W1212B**

Analysis Date: **12/12/2005 10:01**

Sample ID: **MBLK MS06W1212B**

Units : **mg/L**

Run ID: **MSD\_06\_051212A**

Prep Date: **12/12/2005**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.00923		0.01		92	76	127			
Surr: Toluene-d8	0.0102		0.01		102	84	113			
Surr: 4-Bromofluorobenzene	0.0102		0.01		102	79	119			

### Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: C:\HPCHEM\MS06\DATA\051212\05121205.D

Batch ID: **MS06W1212B**

Analysis Date: **12/12/2005 09:17**

Sample ID: **GLCS MS06W1212B**

Units : **mg/L**

Run ID: **MSD\_06\_051212A**

Prep Date: **12/12/2005**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	0.394	0.05	0.4		99	78	127			
Surr: 1,2-Dichloroethane-d4	0.00929		0.01		93	76	127			
Surr: Toluene-d8	0.0103		0.01		103	84	113			
Surr: 4-Bromofluorobenzene	0.0104		0.01		104	79	119			

### Sample Matrix Spike

Type: **MS** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: C:\HPCHEM\MS06\DATA\051212\05121211.D

Batch ID: **MS06W1212B**

Analysis Date: **12/12/2005 11:42**

Sample ID: **05120951-03AGS**

Units : **mg/L**

Run ID: **MSD\_06\_051212A**

Prep Date: **12/12/2005**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	1.61	0.25	2	0	81	70	139			
Surr: 1,2-Dichloroethane-d4	0.046		0.05		92	76	127			
Surr: Toluene-d8	0.0509		0.05		102	84	113			
Surr: 4-Bromofluorobenzene	0.0522		0.05		104	79	119			

### Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: C:\HPCHEM\MS06\DATA\051212\05121212.D

Batch ID: **MS06W1212B**

Analysis Date: **12/12/2005 12:04**

Sample ID: **05120951-03AGSD**

Units : **mg/L**

Run ID: **MSD\_06\_051212A**

Prep Date: **12/12/2005**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	1.78	0.25	2	0	89	70	139	1.612	10.1(12)	
Surr: 1,2-Dichloroethane-d4	0.0454		0.05		91	76	127			
Surr: Toluene-d8	0.0511		0.05		102	84	113			
Surr: 4-Bromofluorobenzene	0.0518		0.05		104	79	119			

### Comments:

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Billing Information :

# CHAIN-OF-CUSTODY RECORD

Page: 1 of 1

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

# CA

## WorkOrder : TRC05120821

### Report Due By : 5:00 PM On : 22-Dec-05

**Client:**

TRC-Alton Geoscience  
1590 Solano Way Suite A

Concord, CA 94520

Report Attention : James Chidester

CC Report :

James Chidester

TEL : (925) 688-2485 x 238

FAX : (925) 688-0388

E-Mail : jchidester@trcsolutions.com

EDD Required : Yes

Sampled by : James Chidester

Job : 41023609-TA08

PO :

Client's COC # : 05012

Cooler Temp : 4°C

Date Printed:

08-Dec-05

QC Level : 1 = Final Rpt Only

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles				Requested Tests				Sample Remarks		
				ORG	SUB	TAT	PWS #	TPHP_W	VOC_W					
TRC05120821-01A	MW-2	AQ	12/06/05 08:30	3	0	10		GAS-C	BTXE/ Mtb_C					
TRC05120821-02A	MW-3	AQ	12/06/05 09:20	3	0	10		GAS-C	BTXE/ Mtb_C					
TRC05120821-03A	MW-1	AQ	12/06/05 10:20	3	0	10		GAS-C	BTXE/ Mtb_C					

**Comments:**

Security seals intact, ice frozen. Ca samples. Site @ Quik Stop #56 Oakland, Ca. 3-voas received frozen, samples were not compromised as no air bubbles formed. :

	Signature	Print Name	Company	Date/Time
Logged in by:		G. Navarrete	Alpha Analytical, Inc.	12-7-05 1:00

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. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)      Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information:**

Name TRC  
 Address 21 Technology Dr.  
 City, State, Zip Irvine CA 92618  
 Phone Number (949) 753-0101 Fax (949) 753-0111



**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21  
 Sparks, Nevada 89431-5778  
 Phone (775) 355-1044  
 Fax (775) 355-0406

**Samples Collected From Which State?**

AZ  CA  NV  WA   
 ID  OR  OTHER  Page # 1 of 1

Client Name <u>TRC</u>		P.O. #	Job # <u>41023609-TA08</u>	Analyses Required		05012			
Address <u>1590 Solano Way, Ste. A</u>		E-Mail Address <u>jchidester@trcsolutions.com</u>		TPH-G BTEX MTBE		Required QC Level?			
City, State, Zip <u>Concord, CA 94520</u>		Phone # <u>(925) 688-1200</u>	Fax # <u>(925) 688-0388</u>			I	II	III	IV
Time Sampled	Date Sampled	Matrix* See Key Below	Office Use Only			Sampled by <u>James Chidester</u>	Report Attention <u>James Chidester</u>	EDD / EDF? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Global ID # <u>990</u>
		Lab ID Number	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	REMARKS		
<u>830</u>	<u>12/6/05</u>	<u>AQ</u>	<u>05120821-01</u>	<u>STD</u>		<u>3 V</u>	<u>2 vials acid frozen</u>		
<u>920</u>	<u>12/6/05</u>	<u>AQ</u>	<u>-02</u>	<u>STD</u>		<u>3 V</u>	<u>1 vial acid frozen</u>		
<u>1020</u>	<u>12/6/05</u>	<u>AQ</u>	<u>-03</u>	<u>STD</u>		<u>3 V</u>			

**Alpha Analytical Sample Receipt**

Security Seals? YES NO

Frozen Ice? YES NO

Temperature 4 °C

**ADDITIONAL INSTRUCTIONS:**

Site @ Quik Stop #56 Oakland, CA

Signature	Print Name	Company	Date	Time
<u>[Signature]</u>	<u>James Chidester</u>	<u>TRC</u>	<u>12/6/05</u>	<u>1200</u>
<u>[Signature]</u>	<u>G. Navarrete</u>	<u>Alpha</u>	<u>12/6/05</u>	<u>1:00</u>
Relinquished by				
Received by				
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other \*\* L-Liter V-Vial S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**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. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.