



1590 Solano Way  
#A  
Concord, CA 94520

925.688.1200 PHONE  
925.688.0388 FAX

www.TRCSolutions.com

July 30, 2008

Project No. 158630

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

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

RE: QUARTERLY GROUNDWATER MONITORING REPORT, SECOND QUARTER  
2008


Dear Mr. Plunkett:

Enclosed is a copy of the *Second Quarter 2008 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.

**RECEIVED**

2:01 pm, Aug 01, 2008

Alameda County  
Environmental Health



1590 Solano Way  
#A  
Concord, CA 94520

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July 30, 2008

Project No. 158630

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

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

RE: QUARTERLY GROUNDWATER MONITORING REPORT, SECOND QUARTER  
2008

Dear Mr. Karvelot:

This *Second Quarter 2008 Quarterly Groundwater Monitoring Report* presents the results of the Second Quarter 2008 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 June 30, 2008. Groundwater elevations averaged 126.96 feet above mean sea level (MSL). Groundwater flow direction was to the southwest at a gradient of 0.124 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 June 30, 2008, 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 SW8015B and for benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tert-butyl ether (MTBE) by EPA Method SW8260B, and ethanol by EPA Method SW8260B-DI. 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 June 30, 2008. 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, June 30, 2008
- Figure 3: Dissolved-Phase Hydrocarbon Concentrations, June 30, 2008
- 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,



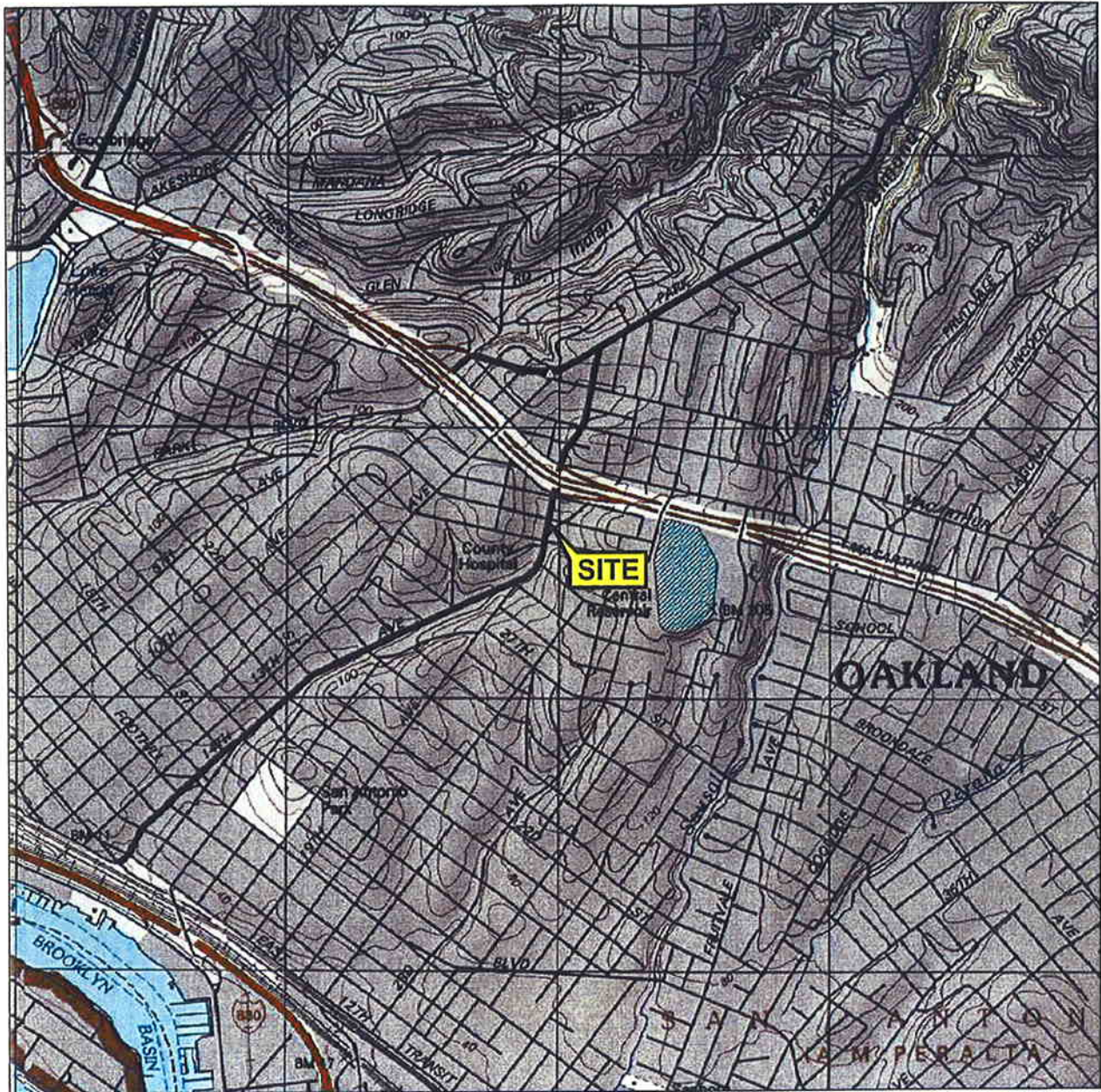
Jonathan Scheiner  
Associate



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



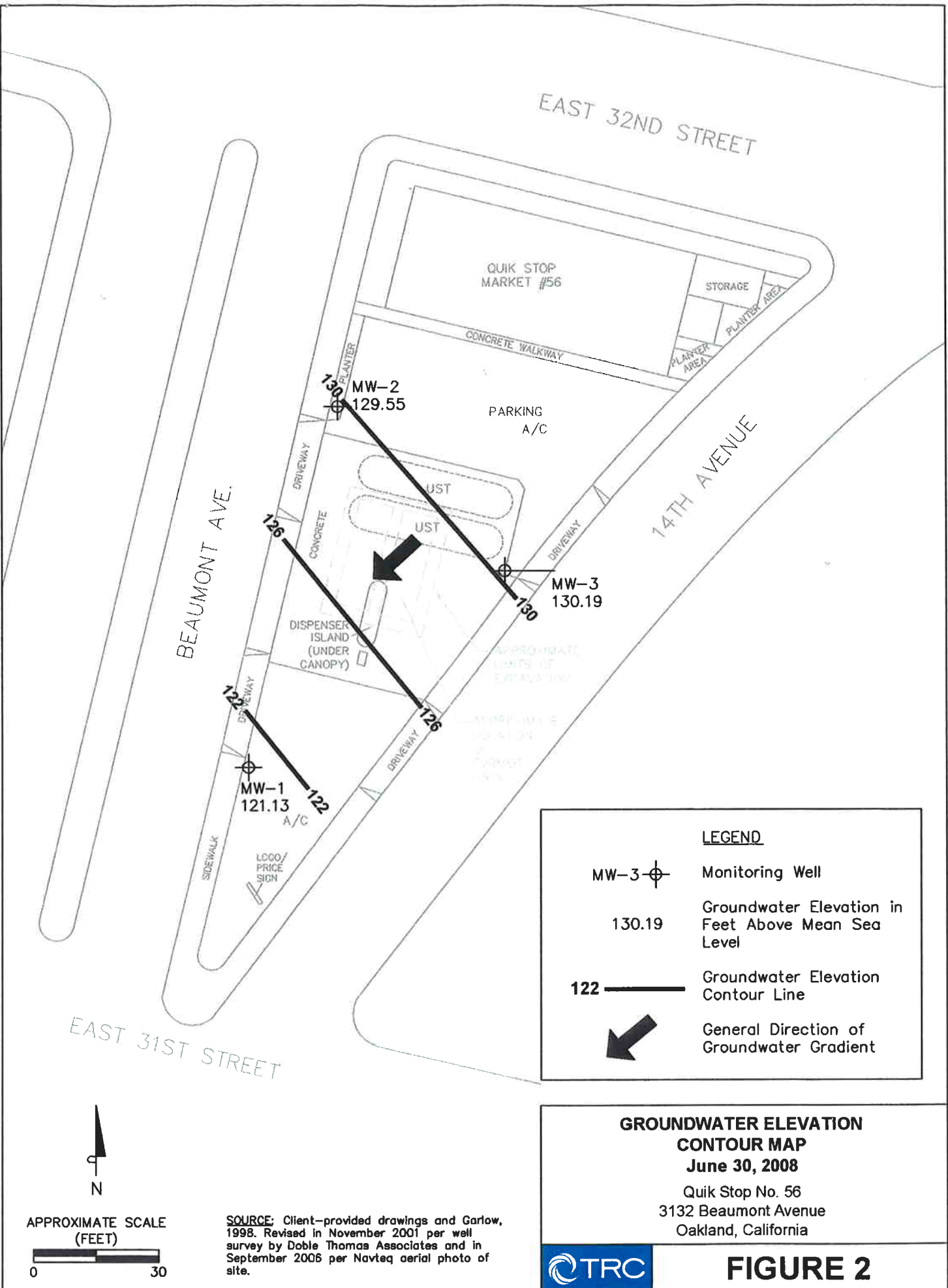
SOURCE:  
 United States Geological Survey  
 7.5 Minute Topographic Maps:  
 Oakland East and  
 Oakland West Quadrangles

**VICINITY MAP**


Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California




**FIGURE 1**




**LEGEND**

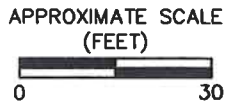
MW-3  Monitoring Well

130.19 Groundwater Elevation in Feet Above Mean Sea Level

122  Groundwater Elevation Contour Line

 General Direction of Groundwater Gradient

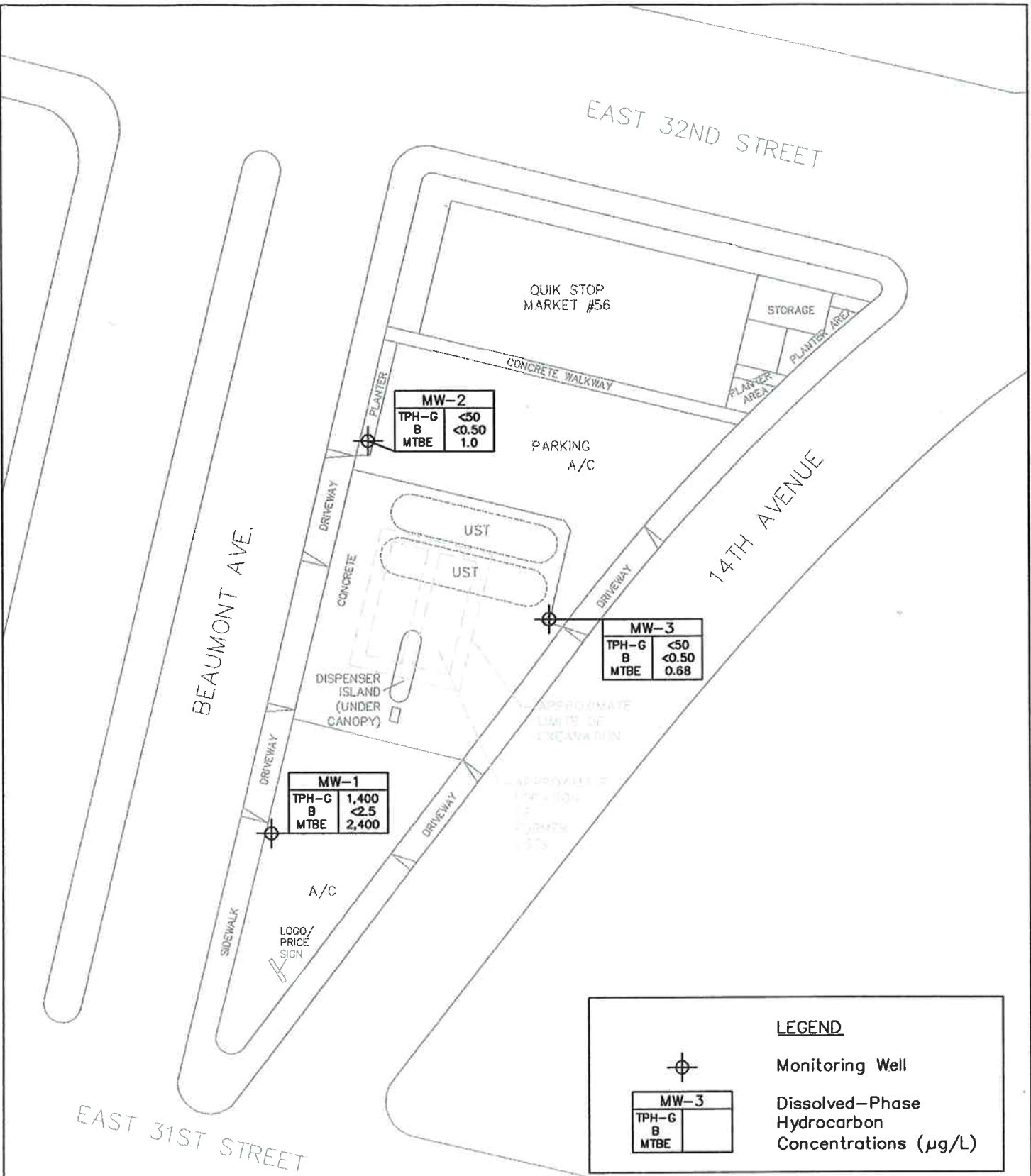
**GROUNDWATER ELEVATION CONTOUR MAP**  
**June 30, 2008**  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California



**SOURCE:** Client-provided drawings and Garlow, 1998. Revised in November 2001 per well survey by Doble Thomas Associates and in September 2006 per Navteq aerial photo of site.



**FIGURE 2**



**LEGEND**

Monitoring Well

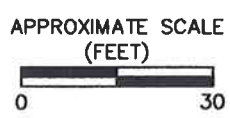
Dissolved-Phase Hydrocarbon Concentrations (µg/L)

MW-3	
TPH-G	
B	
MTBE	

**DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS**  
**June 30, 2008**  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California



**FIGURE 3**



**SOURCE:** Client-provided drawings and Garlow, 1998. Revised in November 2001 per well survey by Doble Thomas Associates and in September 2005 per Navteq aerial photo of site.

**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)	Ethanol (mg/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-1	03/29/06	134.13	10.51	123.62	16,000	<25	<25	<25	<25	23,000	—	—
MW-1	06/29/06	134.13	11.28	122.85	8,200	<15	<15	<15	<15	12,000	<5.0	—
MW-1	09/21/06	134.13	11.90	122.23	4,500	<10	<10	<10	<10	7,900	<5.0	—
MW-1	12/08/06	134.13	11.65	122.48	3,900	<10	<10	<10	<10	4,100	<5.0	—
MW-1	03/28/07	134.13	11.22	122.91	5,000	<10	<10	<10	<10	7,700	<5.0	—
MW-1	06/14/07	134.13	12.18	121.95	3,600	<10	<10	<10	<10	4,300	<5.0	—
MW-1	09/06/07	134.13	12.84	121.29	3,400	<10	<10	<10	<10	4,500	<5.0	—
MW-1	12/31/07	134.13	12.52	121.61	2,900	<5.0	<5.0	<5.0	<5.0	3,300	<5.0	—
MW-1	03/18/08	134.13	12.74	121.39	1,800	<2.5	<2.5	<2.5	<2.5	3,400	<5.0	—
MW-1	06/30/08	134.13	13.00	121.13	1,400	<2.5	<2.5	<2.5	<2.5	2,400	<5.0	—
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

**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)	Ethanol (mg/L)	DO (mg/L)
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	—	—
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-2	03/29/06	135.16	4.27	130.89	<50	<0.50	<0.50	<0.50	<0.50	4.4	—	—
MW-2	06/29/06	135.16	5.21	129.95	<50	<0.50	<0.50	<0.50	<0.50	5.1	<5.0	—
MW-2	09/21/06	135.16	5.62	129.54	<50	<0.50	<0.50	<0.50	<0.50	3.3	<5.0	—
MW-2	12/08/06	135.16	5.29	129.87	<50	<0.50	<0.50	<0.50	<0.50	3.1	<5.0	—
MW-2	03/28/07	135.16	5.08	130.08	<50	<0.50	<0.50	<0.50	<0.50	2.5	<5.0	—
MW-2	06/14/07	135.16	5.30	129.86	<50	<0.50	<0.50	<0.50	<0.50	1.5	<5.0	—
MW-2	09/06/07	135.16	5.64	129.52	<50	<0.50	<0.50	<0.50	<0.50	3.2	<5.0	—
MW-2	12/31/07	135.16	5.10	130.06	<50	<0.50	<0.50	<0.50	<0.50	1.8	<5.0	—
MW-2	03/18/08	135.16	5.45	129.71	<50	<0.50	<0.50	<0.50	<0.50	1.8	<5.0	—
MW-2	06/30/08	135.16	5.61	129.55	<50	<0.50	<0.50	<0.50	<0.50	1.0	<5.0	—
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	—	—



**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.



TRC Alton Geoscience, Northern California Operations  
**GROUND WATER SAMPLING FIELD NOTES**

Site: Quik Stop #56 Project No.: 158630 Sampled By: J. Chidester Date: 6/30/08

Well No. MW-2 Purge Method: 2" Sub. Well No. MW-3 Purge Method: 2" Sub.  
 Total Depth (feet) 30.02 Depth to Product (feet): - Total Depth (feet) 30.63 Depth to Product (feet): -  
 Depth to Water (feet): 5.61 Product Recovered (gallons): - Depth to Water (feet): 6.16 Product Recovered (gallons): -  
 Water Column (feet): 24.41 Casing Diameter (Inches): 2" Water Column (feet): 24.47 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 10.49 1 Well Volume (gallons): 3.91 80% Recharge Depth (feet): 11.05 1 Well Volume (gallons): 3.92

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
1210			4	955	22.8	6.22
			8	928	22.4	6.28
	1214		12	921	22.5	6.26
Total Purged			12	Time Sampled		1320

Comments:  
Turbidity=

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
1225			4	712	22.6	6.90
			8	691	22.5	6.54
	1231		12	763	21.8	6.72
Total Purged			12	Time Sampled		1330

Comments:  
Turbidity=

Well No. MW-1 Purge Method: 2" Sub. Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_  
 Total Depth (feet) 30.15 Depth to Product (feet): - Total Depth (feet) \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_  
 Depth to Water (feet): 13.00 Product Recovered (gallons): - Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_  
 Water Column (feet): 17.15 Casing Diameter (Inches): 2" Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_  
 80% Recharge Depth (feet): 16.43 1 Well Volume (gallons): 2.74 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
1242			3	438	24.1	6.73
			6	703	22.6	6.60
	1245		8	718	22.2	6.56
Total Purged			8	Time Sampled		1340

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=

Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_ Well No. \_\_\_\_\_ Purge Method: \_\_\_\_\_  
 Total Depth (feet) \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_ Total Depth (feet) \_\_\_\_\_ Depth to Product (feet): \_\_\_\_\_  
 Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_ Depth to Water (feet): \_\_\_\_\_ Product Recovered (gallons): \_\_\_\_\_  
 Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_ Water Column (feet): \_\_\_\_\_ Casing Diameter (Inches): \_\_\_\_\_  
 80% Recharge Depth (feet): \_\_\_\_\_ 1 Well Volume (gallons): \_\_\_\_\_ 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 : 07/02/08

Job#: 158630-TA06

GC/MSD by Direct Injection  
EPA Method SW8260B-DI

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-2 Lab ID : TRC08070229-01A Ethanol	ND	5.0 µg/L	06/30/08	07/03/08
Client ID : MW-3 Lab ID : TRC08070229-02A Ethanol	ND	5.0 µg/L	06/30/08	07/03/08
Client ID : MW-1 Lab ID : TRC08070229-03A Ethanol	ND	5.0 µg/L	06/30/08	07/03/08

ND = Not Detected

*Roger Scholl*      *Randy Gardner*      *Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

*PS*  
7/16/08

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

## 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 : 07/02/08

Job#: 158630-TA06

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

	Parameter	Concentration	Reporting	Date	Date
			Limit	Sampled	Analyzed
Client ID :	TPH-P (GRO)	ND	0.050 mg/L	06/30/08	07/10/08
MW-2	Methyl tert-butyl ether (MTBE)	1.0	0.50 µg/L	06/30/08	07/10/08
Lab ID :	Benzene	ND	0.50 µg/L	06/30/08	07/10/08
TRC08070229-01A	Toluene	ND	0.50 µg/L	06/30/08	07/10/08
	Ethylbenzene	ND	0.50 µg/L	06/30/08	07/10/08
	Xylenes, Total	ND	0.50 µg/L	06/30/08	07/10/08
Client ID :	TPH-P (GRO)	ND	0.050 mg/L	06/30/08	07/10/08
MW-3	Methyl tert-butyl ether (MTBE)	0.68	0.50 µg/L	06/30/08	07/10/08
Lab ID :	Benzene	ND	0.50 µg/L	06/30/08	07/10/08
TRC08070229-02A	Toluene	ND	0.50 µg/L	06/30/08	07/10/08
	Ethylbenzene	ND	0.50 µg/L	06/30/08	07/10/08
	Xylenes, Total	ND	0.50 µg/L	06/30/08	07/10/08
Client ID :	TPH-P (GRO)	1.4	0.50 mg/L	06/30/08	07/10/08
MW-1	Methyl tert-butyl ether (MTBE)	2,400	2.5 µg/L	06/30/08	07/10/08
Lab ID :	Benzene	ND	V	2.5 µg/L	06/30/08
TRC08070229-03A	Toluene	ND	V	2.5 µg/L	06/30/08
	Ethylbenzene	ND	V	2.5 µg/L	06/30/08
	Xylenes, Total	ND	V	2.5 µg/L	06/30/08

### Gasoline Range Organics (GRO) C4-C13

V = Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

7/16/08

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

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## VOC Sample Preservation Report

**Work Order:** TRC08070229

**Project:** 158630-TA06

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Alpha's Sample ID	Client's Sample ID	Matrix	pH
08070229-01A	MW-2	Aqueous	2
08070229-02A	MW-3	Aqueous	2
08070229-03A	MW-1	Aqueous	2

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7/16/08  
**Report Date**



# Alpha Analytical, Inc.

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

Date:  
13-Jul-08

## QC Summary Report

Work Order:  
08070229

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B-DI**

File ID: C:\HPCHEM\MS11\DATA\080703\08070309.D

Batch ID: **20186**

Analysis Date: **07/03/2008 09:34**

Sample ID: **MBLK-20186**

Units : **µg/L**

Run ID: **MSD\_11\_080703A**

Prep Date: **07/03/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Ethanol	ND	5								
Surr: Hexafluoro-2-propanol	461		500		92	70	130			

### Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B-DI**

File ID: C:\HPCHEM\MS11\DATA\080703\08070305.D

Batch ID: **20186**

Analysis Date: **07/03/2008 08:10**

Sample ID: **LCS-20186**

Units : **µg/L**

Run ID: **MSD\_11\_080703A**

Prep Date: **07/03/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Ethanol	290	5	250		116	68	132			
Surr: Hexafluoro-2-propanol	480		500		96	70	130			

### Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8260B-DI**

File ID: C:\HPCHEM\MS11\DATA\080703\08070307.D

Batch ID: **20186**

Analysis Date: **07/03/2008 08:53**

Sample ID: **08070229-02AMS**

Units : **µg/L**

Run ID: **MSD\_11\_080703A**

Prep Date: **07/03/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Ethanol	292	5	250	0	117	67	133			
Surr: Hexafluoro-2-propanol	455		500		91	70	130			

### Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B-DI**

File ID: C:\HPCHEM\MS11\DATA\080703\08070308.D

Batch ID: **20186**

Analysis Date: **07/03/2008 09:13**

Sample ID: **08070229-02AMSD**

Units : **µg/L**

Run ID: **MSD\_11\_080703A**

Prep Date: **07/03/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Ethanol	298	5	250	0	119	67	133	292.1	2.0(20)	
Surr: Hexafluoro-2-propanol	464		500		93	70	130			

### 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.

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Date:  
13-Jul-08

## QC Summary Report

Work Order:  
08070229

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8015B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071004.D

Batch ID: **MS09W0710B**

Analysis Date: **07/10/2008 10:20**

Sample ID: **MBLK MS09W0710B**

Units : mg/L

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.00968		0.01		97	75	128			
Surr: Toluene-d8	0.0105		0.01		105	80	120			
Surr: 4-Bromofluorobenzene	0.0101		0.01		101	80	120			

### Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8015B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071005.D

Batch ID: **MS09W0710B**

Analysis Date: **07/10/2008 10:43**

Sample ID: **GLCS MS09W0710B**

Units : mg/L

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.402	0.05	0.4		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.0095		0.01		95	75	128			
Surr: Toluene-d8	0.0102		0.01		102	80	120			
Surr: 4-Bromofluorobenzene	0.0102		0.01		102	80	120			

### Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8015B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071020.D

Batch ID: **MS09W0710B**

Analysis Date: **07/10/2008 17:00**

Sample ID: **08070941-02AGS**

Units : mg/L

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.14	0.25	2	0	107	60	131			
Surr: 1,2-Dichloroethane-d4	0.0455		0.05		91	75	128			
Surr: Toluene-d8	0.0531		0.05		106	80	120			
Surr: 4-Bromofluorobenzene	0.0516		0.05		103	80	120			

### Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8015B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071021.D

Batch ID: **MS09W0710B**

Analysis Date: **07/10/2008 17:23**

Sample ID: **08070941-02AGSD**

Units : mg/L

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.13	0.25	2	0	107	60	131	2.144	0.5(20)	
Surr: 1,2-Dichloroethane-d4	0.0431		0.05		86	75	128			
Surr: Toluene-d8	0.054		0.05		108	80	120			
Surr: 4-Bromofluorobenzene	0.0519		0.05		104	80	120			

### Comments:

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# Alpha Analytical, Inc.

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Date:  
13-Jul-08

## QC Summary Report

Work Order:  
08070229

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071004.D

Batch ID: **MS09W0710A**

Analysis Date: **07/10/2008 10:20**

Sample ID: **MBLK MS09W0710A**

Units : **µg/L**

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	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	9.68		10		97	75	128			
Surr: Toluene-d8	10.5		10		105	80	120			
Surr: 4-Bromofluorobenzene	10.1		10		101	80	120			

### Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071002.D

Batch ID: **MS09W0710A**

Analysis Date: **07/10/2008 09:37**

Sample ID: **LCS MS09W0710A**

Units : **µg/L**

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	8.2	0.5	10		82	70	130			
Benzene	9.12	0.5	10		91	70	130			
Toluene	8.43	0.5	10		84	80	120			
Ethylbenzene	9.54	0.5	10		95	80	120			
Xylenes, Total	19.3	0.5	20		96	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	75	128			
Surr: Toluene-d8	10.3		10		103	80	120			
Surr: 4-Bromofluorobenzene	10.1		10		101	80	120			

### Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8260B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071018.D

Batch ID: **MS09W0710A**

Analysis Date: **07/10/2008 16:14**

Sample ID: **08070941-02AMS**

Units : **µg/L**

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	37.6	1.3	50	0	75	62	139			
Benzene	42	1.3	50	0	84	70	130			
Toluene	39.8	1.3	50	0	80	67	130			
Ethylbenzene	43.4	1.3	50	0	87	70	130			
Xylenes, Total	90.7	1.3	100	0	91	70	130			
Surr: 1,2-Dichloroethane-d4	50.3		50		101	75	128			
Surr: Toluene-d8	52.5		50		105	80	120			
Surr: 4-Bromofluorobenzene	50.7		50		101	80	120			

### Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: D:\HPCHEM\MS09\DATA\080710\08071019.D

Batch ID: **MS09W0710A**

Analysis Date: **07/10/2008 16:37**

Sample ID: **08070941-02AMSD**

Units : **µg/L**

Run ID: **MSD\_09\_080710A**

Prep Date: **07/10/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	38.6	1.3	50	0	77	62	139	37.55	2.9(20)	
Benzene	44	1.3	50	0	88	70	130	42	4.6(20)	
Toluene	41.7	1.3	50	0	83	67	130	39.76	4.7(20)	
Ethylbenzene	45.1	1.3	50	0	90	70	130	43.35	4.1(20)	
Xylenes, Total	94	1.3	100	0	94	70	130	90.74	3.5(20)	
Surr: 1,2-Dichloroethane-d4	49.9		50		99.7	75	128			
Surr: Toluene-d8	52.7		50		105	80	120			
Surr: 4-Bromofluorobenzene	50.7		50		101	80	120			

### Comments:

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Billing Information :

# CHAIN-OF-CUSTODY RECORD

**Alpha Analytical, Inc.**  
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
 TEL: (775) 355-1044 FAX: (775) 355-0406

# CA

**WorkOrder : TRC08070229**  
**Report Due By : 5:00 PM On : 17-Jul-08**

**Client:**

TRC-Alton Geoscience  
 1590 Solano Way Suite A

**Report Attention Phone Number EMail Address**

James Chidester (925) 688-2485 x 238 jchidester@trcsolutions.com

EDD Required : Yes

Concord, CA 94520

Sampled by : James Chidester

**PO :**

Client's COC # : 024050 Job : 158630-TA06

Cooler Temp      Samples Received      Date Printed  
 4 °C                      02-Jul-08                      02-Jul-08

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			Requested Tests							Sample Remarks		
				Alpha	Sub	TAT	ALCOHOL_W	TPHP_W	VOC_W							
TRC08070229-01A	MW-2	AQ	06/30/08 13:20	6	0	10	Low Level EtOH	GAS-C	BTXE/M_C							
TRC08070229-02A	MW-3	AQ	06/30/08 13:30	6	0	10	Low Level EtOH	GAS-C	BTXE/M_C							
TRC08070229-03A	MW-1	AQ	06/30/08 13:40	6	0	10	Low Level EtOH	GAS-C	BTXE/M_C							

Comments: Security seals intact. Frozen ice. Total Xylenes. :

	Signature	Print Name	Company	Date/Time
Logged in by:	<i>K Murray</i>	K Murray	Alpha Analytical, Inc.	7/2/08 1240

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 \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone Number \_\_\_\_\_ Fax \_\_\_\_\_



**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 \_\_\_\_\_

024000

Page # 1 of 1

Client Name		P.O. #		Job #		Analyses Required				Required QC Level?							
TRC				158630 - TA06						I II III IV							
Address		E-Mail Address		Phone #		Fax						EDD / EDF? YES <input checked="" type="checkbox"/> NO					
1590 Solano Way, Ste. A		jchidester@trcsolutions.com		(925) 688-1200		(925) 688-0388						T06019774175					
City, State, Zip		Report Attention		TAT		Field Filtered						Global ID #					
Concord CA 94552		James Chidester										REMARKS					
Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number	Office (Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	TPH-P	BTEX	MTBE	ETOH				
1320	6/30/08	AQ	James Chidester	TRC08070229-01		MW-2	STD		6Vw/HCl	X	X	X	X				
1330	↓	↓		02		MW-3	↓		↓	↓	↓	↓	↓				
1340	↓	↓		03		MW-1	↓		↓	↓	↓	↓	↓				

**ADDITIONAL INSTRUCTIONS:** Site @ Quik Stop #56 Oakland, CA

Signature	Print Name	Company	Date	Time
<i>James Chidester</i>	James Chidester	TRC	7/1/08	10:10
<i>Lisa de Silva</i>	LISA DE SILVA	ALPHA	7-1-08	10:10
<i>Lisa de Silva</i>	LISA DE SILVA	ALPHA	7-1-08	1600
<i>K Murray</i>	K Murray	AM	7/2/08	1235
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air \*\*: L-Liter V-Voa 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.