



Customer-Focused Solutions

October 27, 2006

Project 41-0236-10

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, THIRD QUARTER 2006

Alameda County  
NOV 01 2006  
Environmental Health

Dear Mr. Karvelot:

This *Third Quarter 2006 Quarterly Groundwater Monitoring Report* presents the results of the Third Quarter 2006 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 September 21, 2006. Groundwater elevations averaged 127.27 feet above mean sea level (MSL). Groundwater flow direction was to the west at a gradient of 0.106 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 September 21, 2006, 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), methyl tert-butyl ether (MTBE) by EPA Method 8260B, and ethanol by EPA Method 8260B-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 40 gallons of purge water and equipment rinsate were generated during groundwater sampling activities conducted on September 21, 2006. The purge water was stored onsite in one Department of Transportation-approved 55-gallon drum pending disposal.

### 3.0 LIST OF ATTACHMENTS

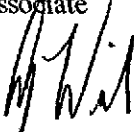
- Figure 1: Vicinity Map
- Figure 2: Groundwater Elevation Contour Map, June 29, 2006
- Figure 3: Dissolved-Phase Hydrocarbon Concentrations, June 29, 2006
- Table 1: Summary of Groundwater Levels and Chemical Analysis
- Appendix: General Field Procedures, Field Measurement Forms, Official Laboratory Reports, and Chain of Custody Records

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

Sincerely,



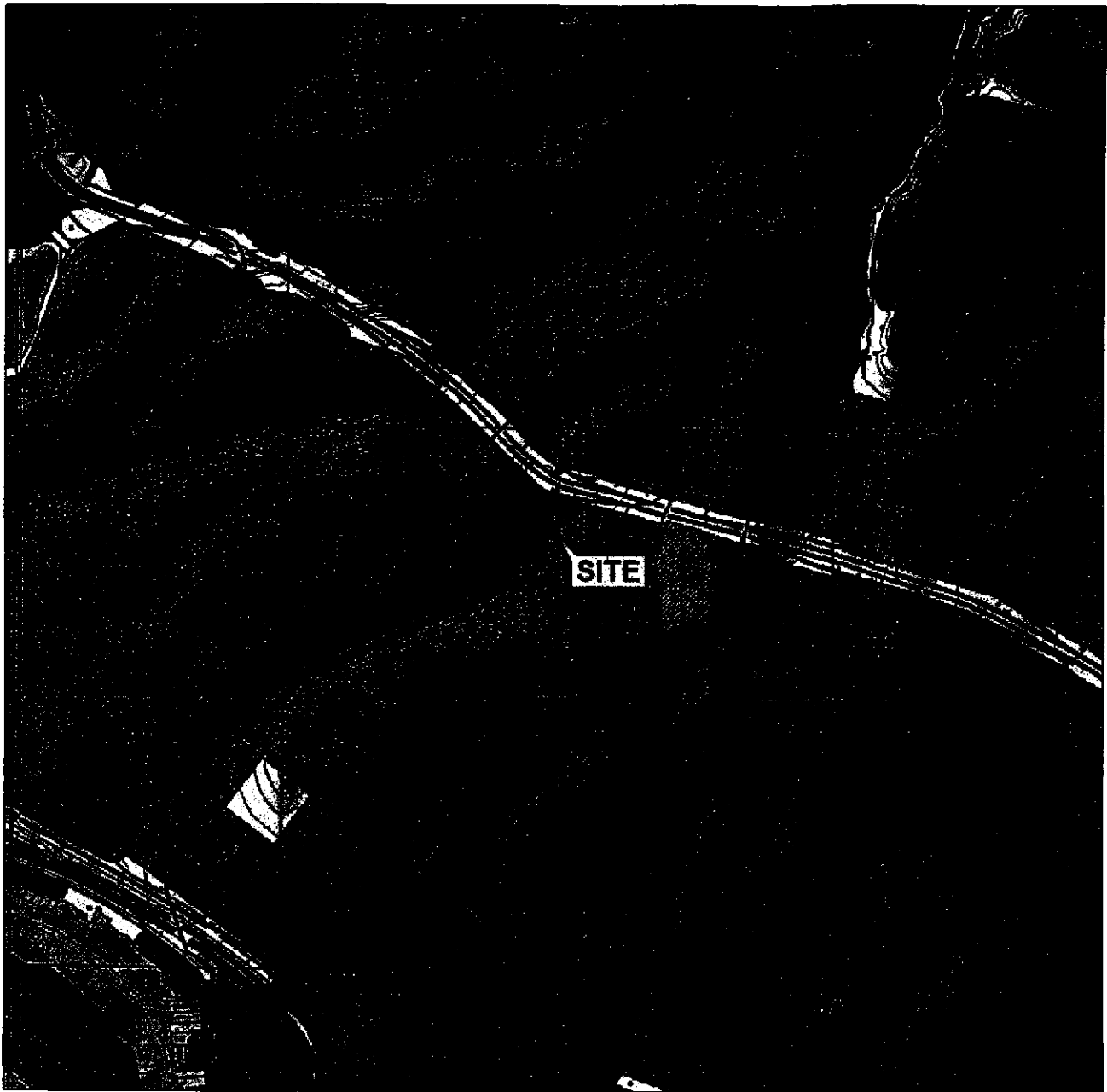
Jonathan Scheiner  
Associate



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



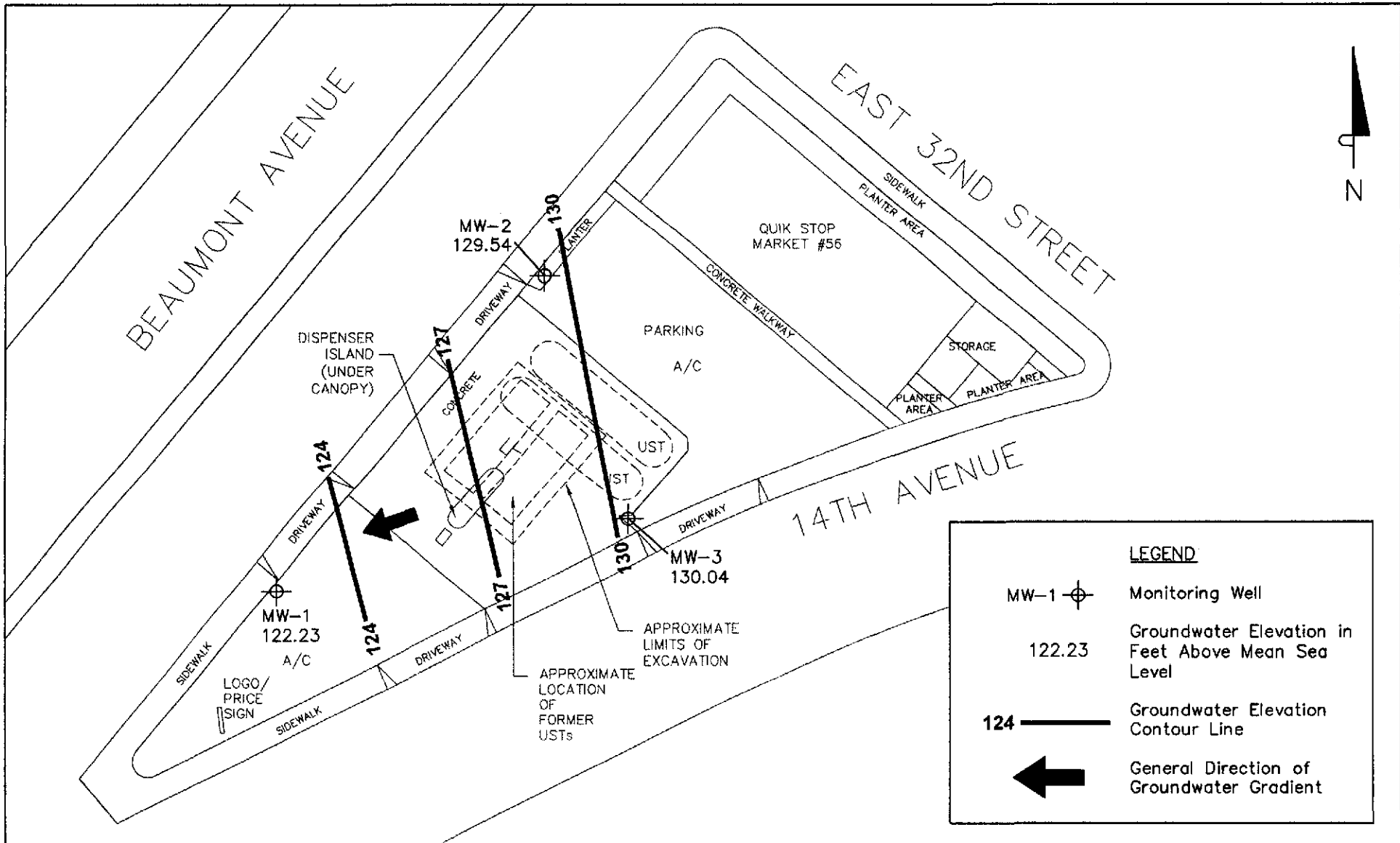
SOURCE:  
United States Geological Survey  
7.5 Minute Topographic Maps:  
Oakland East and  
Oakland West Quadrangles

**VICINITY MAP**

Quik Stop No. 56  
3132 Beaumont Avenue  
Oakland, California

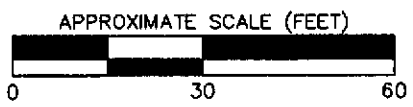
**TRC**

**FIGURE 1**



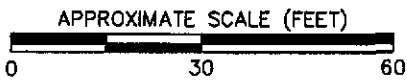
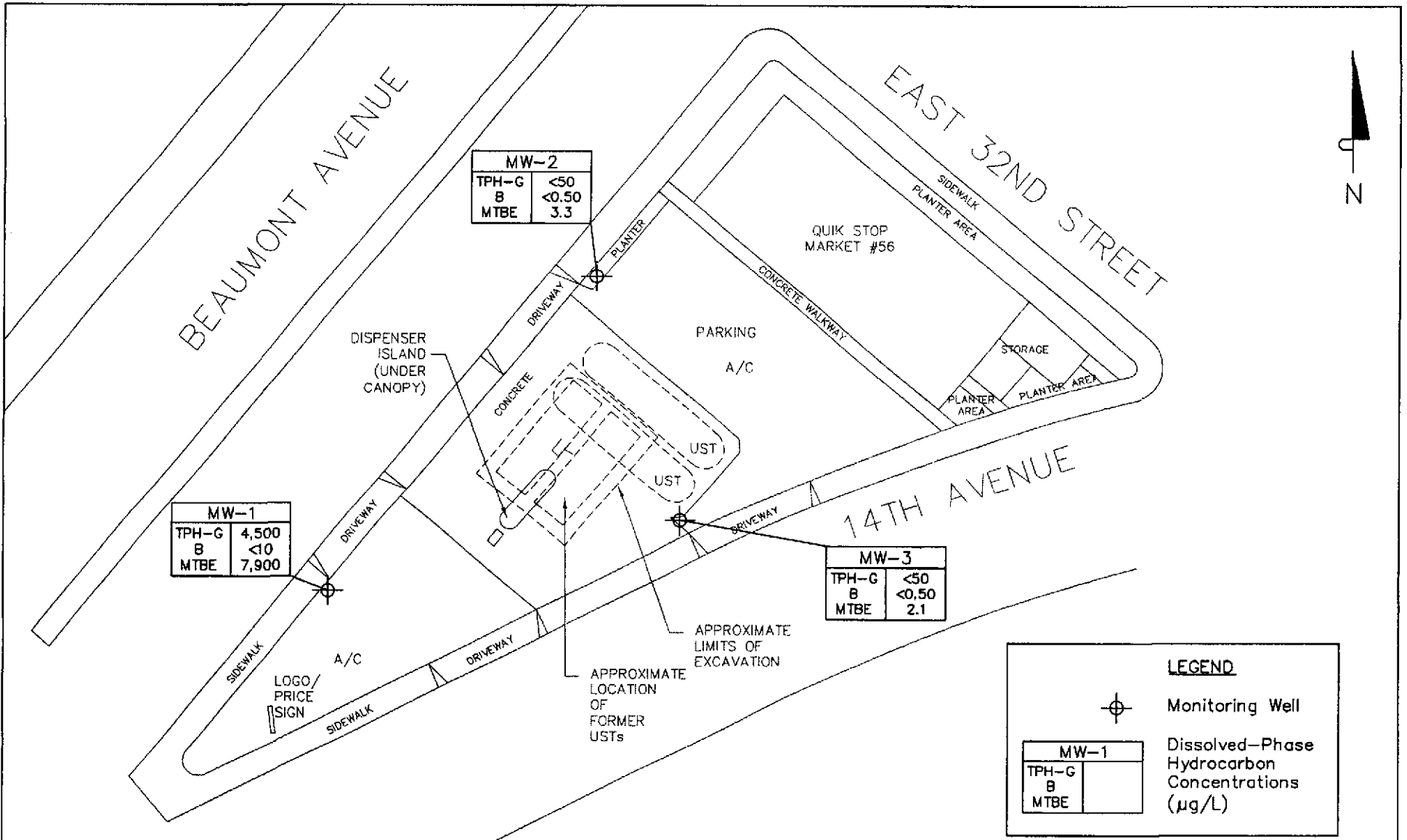
**LEGEND**

- MW-1 Monitoring Well
- 122.23 Groundwater Elevation in Feet Above Mean Sea Level
- 124 Groundwater Elevation Contour Line
- General Direction of Groundwater Gradient



**NOTES:**  
 Contour lines are interpretive based on fluid level measurements taken on September 21, 2006.  
 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**  
 September 21, 2006  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California



**NOTES:**  
 Results are based on laboratory analysis of groundwater samples collected on September 21, 2006. 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**  
**September 21, 2006**  
 Quik Stop No. 56  
 3132 Beaumont Avenue  
 Oakland, California

**TRC** **FIGURE 3**

**TABLE**

**Table 1**  
**Summary of Groundwater Levels and Chemical Analysis**  
 Quik Stop No. 56 - 3132 Beaumont Avenue, Oakland

Sample ID	Date	Top of	Depth to	Groundwater		TPH-G	Benzene	Toluene	Ethyl-	Total	MTBE	Ethanol	DO
		Casing		Elevation	Elevation								
		Elevation	Water	(feet)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)
MW-1	03/02/00	131.58	10.33	121.25	670	<1.0	<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	<0.5	18,000	—	0.34
MW-1	01/23/01	131.58	11.05	120.53	6,400	<10	<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	<20	17,000	—	0.39
MW-1	07/24/01	131.58	12.42	119.16	8,800	<13	<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	<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	<50	44,000	—	—
MW-1	04/29/02	134.13	10.97	123.16	12,000	<25	<25	<25	<25	<25	30,000	—	—
MW-1	07/29/02	134.13	10.20	123.93	16,000	<25	<25	<25	<25	<25	22,000	—	—
MW-1	10/21/02	134.13	10.48	123.65	17,000	<50	<50	<50	<50	<50	39,000	—	—
MW-1	03/05/03	134.13	8.94	125.19	40,000	<100	<100	<100	<100	<100	69,000	—	—
MW-1	06/06/03	134.13	8.68	125.45	27,000	<50	<50	<50	<50	<50	63,000	—	—
MW-1	09/05/03	134.13	9.21	124.92	28,000	<25	<25	<25	<25	<25	51,000	—	—
MW-1	12/24/03	134.13	8.65	125.48	29,000	<50	<50	<50	<50	<50	84,000	—	—
MW-1	03/25/04	134.13	8.66	125.47	39,000	<100	<100	<100	<100	<100	72,000	—	—
MW-1	06/25/04	134.13	8.66	125.47	50,000	<100	<100	<100	<100	<100	90,000	—	—
MW-1	09/16/04	134.13	9.02	125.11	30,000	<50	<50	<50	<50	<50	75,000	—	—
MW-1	12/17/04	134.13	7.46	126.67	35,000	<50	<50	<50	<50	<50	59,000	—	—
MW-1	03/10/05	134.13	7.17	126.96	14,000	<25	<25	<25	<25	<25	33,000	—	—
MW-1	06/09/05	134.13	8.14	125.99	36,000	<50	<50	<50	<50	<50	60,000	—	—
MW-1	09/13/05	134.13	12.64	121.49	<20,000	<100	<100	<100	<100	<100	32,000	—	—
MW-1	12/06/05	134.13	11.40	122.73	<5,000	<25	<25	<25	<25	<25	5,700	—	—
MW-1	03/29/06	134.13	10.51	123.62	16,000	<25	<25	<25	<25	<25	23,000	—	—
MW-1	06/29/06	134.13	11.28	122.85	8,200	<15	<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	<10	7,900	<5.0	—
MW-2	03/02/00	132.63	5.88	126.75	<50	<0.50	<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	<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	<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	<0.50	—	0.76
MW-2	07/24/01	132.63	6.38	126.25	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	—	2.92
MW-2	11/08/01	132.63	5.97	126.66	<50	<0.50	<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	<0.50	2.7	—	—
MW-2	04/29/02	135.16	5.03	130.13	<50	<0.50	<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	<0.50	4.1	—	—
MW-2	10/21/02	135.16	5.68	129.48	<50	<0.50	<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)	Ethanol (mg/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-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-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	—	—
MW-3	03/29/06	136.35	4.01	132.34	<50	<0.50	<0.50	<0.50	<0.50	3.2	—	—
MW-3	06/29/06	136.35	5.41	130.94	<50	<0.50	<0.50	<0.50	<0.50	3.5	<5.0	—



**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.: 41023610 Sampled By: J. Chidester Date: 9/21/06

Well No. MW-2 Purge Method: 2" Sub.  
 Total Depth (feet) 29.91 Depth to Product (feet): —  
 Depth to Water (feet): 5.62 Product Recovered (gallons): —  
 Water Column (feet): 24.29 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 10.48 1 Well Volume (gallons): 3.89

Well No. MW-3 Purge Method: 2" Sub.  
 Total Depth (feet) 30.62 Depth to Product (feet): —  
 Depth to Water (feet): 6.31 Product Recovered (gallons): —  
 Water Column (feet): 24.31 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 11.17 1 Well Volume (gallons): 3.89

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temper-ature (F. C)	pH
1033			4	814	22.3	6.31
			8	869	23.4	6.45
	1039		12	961	24.0	6.50
Total Purged			12	Time Sampled		1150

Comments:  
Turbidity=

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temper-ature (F. C)	pH
1050			4	756	22.6	6.85
			8	707	23.8	6.63
	1057		12	766	23.8	6.77
Total Purged			12	Time Sampled		1210

Comments:  
Turbidity=

Well No. MW-1 Purge Method: 2" Sub.  
 Total Depth (feet) 29.84 Depth to Product (feet): —  
 Depth to Water (feet): 11.90 Product Recovered (gallons): —  
 Water Column (feet): 17.94 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 15.49 1 Well Volume (gallons): 2.87

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)	Conduc-tivity (uS/cm)	Temper-ature (F. C)	pH
1111			3	786	22.8	6.63
			6	789	23.2	6.56
	1115		9	819	23.5	6.57
Total Purged			9	Time Sampled		1230

Comments:  
Turbidity=

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temper-ature (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)	Conduc-tivity (uS/cm)	Temper-ature (F. C)	pH
Total Purged				Time Sampled		

Comments:  
Turbidity=

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temper-ature (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 : 09/22/06

Job#: 41023610-TAO6

GC/MSD by Direct Injection  
EPA Method SW8260B-DI

	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	MW-2				
Lab ID :	TRC06092262-01A	Ethanol	ND	5.0 µg/L	09/21/06 09/25/06
Client ID :	MW-3				
Lab ID :	TRC06092262-02A	Ethanol	ND	5.0 µg/L	09/21/06 09/25/06
Client ID :	MW-1				
Lab ID :	TRC06092262-03A	Ethanol	ND	5.0 µg/L	09/21/06 09/25/06

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) 281-4848 / info@alpha-analytical.com

*JES*  
10/5/06

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 : 09/22/06

Job#: 41023610-TAO6

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	09/21/06	09/27/06
MW-2	Methyl tert-butyl ether (MTBE)	3.3	0.50 µg/L	09/21/06	09/27/06
Lab ID :	Benzene	ND	0.50 µg/L	09/21/06	09/27/06
TRC06092262-01A	Toluene	ND	0.50 µg/L	09/21/06	09/27/06
	Ethylbenzene	ND	0.50 µg/L	09/21/06	09/27/06
	Xylenes, Total	ND	0.50 µg/L	09/21/06	09/27/06
Client ID :	TPH-P (GRO)	ND	0.050 mg/L	09/21/06	09/27/06
MW-3	Methyl tert-butyl ether (MTBE)	2.1	0.50 µg/L	09/21/06	09/27/06
Lab ID :	Benzene	ND	0.50 µg/L	09/21/06	09/27/06
TRC06092262-02A	Toluene	ND	0.50 µg/L	09/21/06	09/27/06
	Ethylbenzene	ND	0.50 µg/L	09/21/06	09/27/06
	Xylenes, Total	ND	0.50 µg/L	09/21/06	09/27/06
Client ID :	TPH-P (GRO)	4.5	2.0 mg/L	09/21/06	09/27/06
MW-1	Methyl tert-butyl ether (MTBE)	7,900	10 µg/L	09/21/06	09/27/06
Lab ID :	Benzene	ND	V	10 µg/L	09/21/06
TRC06092262-03A	Toluene	ND	V	10 µg/L	09/21/06
	Ethylbenzene	ND	V	10 µg/L	09/21/06
	Xylenes, Total	ND	V	10 µg/L	09/21/06

Gasoline Range Organics (GRO) C4-C13

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

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) 281-4848 / info@alpha-analytical.com

10/5/06

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:** TRC06092262

**Project:** 41023610-TAO6

Alpha's Sample ID	Client's Sample ID	Matrix	pH
06092262-01A	MW-2	Aqueous	2
06092262-02A	MW-3	Aqueous	2
06092262-03A	MW-1	Aqueous	2

10/5/06

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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Date:  
06-Oct-06

## QC Summary Report

Work Order:  
06092262

### Method Blank

File ID: 06092637.D

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

Batch ID: MS15W0926C

Analysis Date: 09/26/2006 22:35

Sample ID: **MBLK MS15W0926C**

Units : µg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

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	9.92		10		99	76	127			
Surr: Toluene-d8	10.3		10		103	84	113			
Surr: 4-Bromofluorobenzene	9.63		10		96	79	119			

### Laboratory Control Spike

File ID: 06092632.D

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

Batch ID: MS15W0926C

Analysis Date: 09/26/2006 20:42

Sample ID: **LCS MS15W0926C**

Units : µg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	10.9	0.5	10		109	81	122			
Toluene	10.6	0.5	10		106	80	120			
Ethylbenzene	10.5	0.5	10		105	80	120			
Xylenes, Total	22.4	0.5	20		112	81	128			
Surr: 1,2-Dichloroethane-d4	10.6		10		106	76	127			
Surr: Toluene-d8	9.81		10		98	84	113			
Surr: 4-Bromofluorobenzene	9.85		10		99	79	119			

### Sample Matrix Spike

File ID: 06092638.D

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

Batch ID: MS15W0926C

Analysis Date: 09/26/2006 22:57

Sample ID: **06092262-01AMS**

Units : µg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	53.3	1.3	50	0	107	74	125			
Toluene	52	1.3	50	0	104	76	120			
Ethylbenzene	50.5	1.3	50	0	101	77	124			
Xylenes, Total	110	1.3	100	0	110	75	130			
Surr: 1,2-Dichloroethane-d4	52.4		50		105	76	127			
Surr: Toluene-d8	48.9		50		98	84	113			
Surr: 4-Bromofluorobenzene	49.9		50		99.8	79	119			

### Sample Matrix Spike Duplicate

File ID: 06092639.D

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

Batch ID: MS15W0926C

Analysis Date: 09/26/2006 23:19

Sample ID: **06092262-01AMSD**

Units : µg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	50	1.3	50	0	100	74	125	53.28	6.3(13)	
Toluene	48.9	1.3	50	0	98	76	120	52.01	6.1(13)	
Ethylbenzene	47.7	1.3	50	0	95	77	124	50.53	5.9(13)	
Xylenes, Total	102	1.3	100	0	102	75	130	109.9	7.3(13)	
Surr: 1,2-Dichloroethane-d4	51.8		50		104	76	127			
Surr: Toluene-d8	49.1		50		98	84	113			
Surr: 4-Bromofluorobenzene	48		50		96	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  
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Date:  
06-Oct-06

## QC Summary Report

Work Order:  
06092262

### Method Blank

File ID: 06092637.D

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

Batch ID: MS15W0926D

Analysis Date: 09/26/2006 22:35

Sample ID: MBLK MS15W0926D

Units : mg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.00992		0.01		99	76	127			
Surr: Toluene-d8	0.0103		0.01		103	84	113			
Surr: 4-Bromofluorobenzene	0.00963		0.01		96	79	119			

### Laboratory Control Spike

File ID: 06092634.D

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

Batch ID: MS15W0926D

Analysis Date: 09/26/2006 21:27

Sample ID: GLCS MS15W0926D

Units : mg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.356	0.05	0.4		89	78	127			
Surr: 1,2-Dichloroethane-d4	0.0102		0.01		102	76	127			
Surr: Toluene-d8	0.01		0.01		100	84	113			
Surr: 4-Bromofluorobenzene	0.00984		0.01		98	79	119			

### Sample Matrix Spike

File ID: 06092640.D

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

Batch ID: MS15W0926D

Analysis Date: 09/26/2006 23:42

Sample ID: 06092262-01AGS

Units : mg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/26/2006

Analyte

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	1.79	0.25	2	0	89	70	139			
Surr: 1,2-Dichloroethane-d4	0.0513		0.05		103	76	127			
Surr: Toluene-d8	0.0498		0.05		99.7	84	113			
Surr: 4-Bromofluorobenzene	0.0479		0.05		96	79	119			

### Sample Matrix Spike Duplicate

File ID: 06092641.D

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

Batch ID: MS15W0926D

Analysis Date: 09/27/2006 00:04

Sample ID: 06092262-01AGSD

Units : mg/L

Run ID: MSD\_15\_060926B

Prep Date: 09/27/2006

Analyte

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	1.68	0.25	2	0	84	70	139	1.789	6.5(12)	
Surr: 1,2-Dichloroethane-d4	0.0504		0.05		101	76	127			
Surr: Toluene-d8	0.0499		0.05		99.7	84	113			
Surr: 4-Bromofluorobenzene	0.0491		0.05		98	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.

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Date:  
06-Oct-06

## QC Summary Report

Work Order:  
06092262

### Method Blank

Method Blank		Type	MBLK	Test Code: EPA Method SW8260B-DI						
File ID: C:\HPCHEM\MS11\DATA\060925\06092503.D		Batch ID: 15672		Analysis Date: 09/25/2006 11:15						
Sample ID: MBLK-15672	Units: µg/L	Run ID: MSD_11_060925A		Prep Date: 09/25/2006						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Ethanol	ND	5								
Surr: Hexafluoro-2-propanol	515		500		103	63	137			

### Laboratory Control Spike

Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8260B-DI						
File ID: C:\HPCHEM\MS11\DATA\060925\06092504.D		Batch ID: 15672		Analysis Date: 09/25/2006 11:36						
Sample ID: LCS-15672	Units: µg/L	Run ID: MSD_11_060925A		Prep Date: 09/25/2006						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Ethanol	243	5	250		97	51	144			
Surr: Hexafluoro-2-propanol	511		500		102	63	137			

### Sample Matrix Spike

Sample Matrix Spike		Type	MS	Test Code: EPA Method SW8260B-DI						
File ID: C:\HPCHEM\MS11\DATA\060925\06092506.D		Batch ID: 15672		Analysis Date: 09/25/2006 12:17						
Sample ID: 06092262-02AMS	Units: µg/L	Run ID: MSD_11_060925A		Prep Date: 09/25/2006						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Ethanol	247	5	250	0	99	50	149			
Surr: Hexafluoro-2-propanol	445		500		89	63	137			

### Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method SW8260B-DI						
File ID: C:\HPCHEM\MS11\DATA\060925\06092507.D		Batch ID: 15672		Analysis Date: 09/25/2006 12:38						
Sample ID: 06092262-02AMSD	Units: µg/L	Run ID: MSD_11_060925A		Prep Date: 09/25/2006						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Ethanol	255	5	250	0	102	50	149	246.5	3.5(15)	
Surr: Hexafluoro-2-propanol	437		500		87	63	137			

### 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.

Billing Information :

*Irvine*

**CHAIN-OF-CUSTODY RECORD**

**AMENDED  
CA**

WorkOrder : TRC06092262

Report Due By : 5:00 PM On : 06-Oct-06

Client:

TRC-Alton Geoscience  
1590 Solano Way Suite A

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

James Chidester  
TEL : (925) 688-2485 x 238  
FAX : (925) 688-0388  
EMail : jchidester@trcsolutions.com

EDD Required : Yes

Sampled by : J. Chidester

Report Attention : James Chidester

Job : 41023610-TAO6

Cooler Temp    Samples Received    Date Printed  
4 °C                      22-Sep-06                      27-Sep-06

CC Report :

PO :

Client's COC # : 05084

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

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles				Requested Tests						Sample Remarks			
				ORG	SUB	TAT	PWS #	ALCOHOL W	TPHP_W	VOC_W							
TRC06092262-01A	MW-2	AQ	09/21/06 11:50	6	0	10		Low Level EtOH	GAS-C	BTXEM_C							
TRC06092262-02A	MW-3	AQ	09/21/06 12:10	6	0	10		Low Level EtOH	GAS-C	BTXEM_C							
TRC06092262-03A	MW-1	AQ	09/21/06 12:30	6	0	10		Low Level EtOH	GAS-C	BTXEM_C							

Comments: Security seals intact. Frozen ice. Total Xylenes. Site @ Quik Stop #56 Oakland, CA. Amended 9/27/06 to correct job name, due to login error. TD. :

Signature	Print Name	Company	Date/Time
<i>Tara Dickerson</i>	Tara Dickerson	Alpha Analytical, Inc.	9/27/06 11:32

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 :

# CHAIN-OF-CUSTODY RECORD

# CA

## WorkOrder : TRC06092262

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

Report Due By : 5:00 PM On : 06-Oct-06

**Client:**  
 TRC-Alton Geoscience  
 1590 Solano Way Suite A

**James Chidester**  
 TEL : (925) 688-2485 x 238  
 FAX : (925) 688-0388  
 EMail : jchidester@trcsolutions.com

EDD Required : Yes

Sampled by : J. Chidester

Concord, CA 94520

Report Attention : James Chidester

Job : 41023610-TAOG

Cooler Temp    Samples Received    Date Printed  
 4 °C                      22-Sep-06                      22-Sep-06

CC Report :


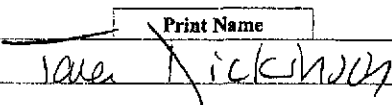
PO :

Client's COC # : 05084

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

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles				Requested Tests						Sample Remarks		
				ORG	SUB	TAT	PWS #	ALCOHOL W	TPHP_W	VOC_W						
TRC06092262-01A	MW-2	AQ	09/21/06 11:50	6	0	10		Low Level EtOH	GAS-C	BTXE/M_C						
TRC06092262-02A	MW-3	AQ	09/21/06 12:10	6	0	10		Low Level EtOH	GAS-C	BTXE/M_C						
TRC06092262-03A	MW-1	AQ	09/21/06 12:30	6	0	10		Low Level EtOH	GAS-C	BTXE/M_C						

Comments: Security seals intact. Frozen ice. Total Xylenes. Site @ Quik Stop #56 Oakland, CA. :


Logged in by:			Company	Date/Time
			Alpha Analytical, Inc.	9/22/06 1436

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 Irvin, CA 92618  
 Phone Number (949) 753-1100 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>41023610-TA06</u>		Analyses Required				05084	
Address <u>1590 Solano Way, Ste. A</u>			E-Mail Address <u>jchidester@trcsolutions.com</u>		Phone # <u>(925) 688-1200</u> Fax # <u>(925) 688-0388</u>		TPH-P BTEX MTBE ETOH				Required QC Level? I II III IV EDD / EDF? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Global ID # <u>990</u>	
City, State, Zip <u>Concord, CA 97520</u>			Report Attention <u>James Chidester</u>		Total and type of containers ** See below						REMARKS	
Time Sampled	Date Sampled	Matrix See Key Below	Office Use Only Lab ID Number	Sampled by	Sample Description	TAT	Field Filtered					
1150	9/21/06	AQ	TRC.DC.09226201	J. Chidester	MW-2	STD		GV	X	X	X	
1210	↓	↓	-02		MW-3	↓		↓	↓	↓	↓	
1230	↓	↓	-03		MW-1	↓		↓	↓	↓	↓	

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>9/21/06</u>	<u>1500</u>
<u>[Signature]</u>	<u>Jana Dickinson</u>	<u>Alvina</u>	<u>9/22/06</u>	<u>1430</u>
Relinquished by				
Received by				
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other \*\* 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.