



**RECEIVED**

10:14 am, Nov 15, 2010

Alameda County  
Environmental Health

November 12, 2010

**Re:** Final Quarterly MgSO<sub>4</sub> Feasibility Study Report  
Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Dear Mr. Jerry Wickham:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,  
Shell Oil Products US

A handwritten signature in black ink, appearing to read "Denis L. Brown".

Denis L. Brown  
Project Manager

November 12, 2010  
Delta Project No. SCA5251H1D  
SAP No. 135785

Mr. Jerry Wickham, P.G., CHG  
Alameda County Health Care Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6540

**Re: FINAL QUARTERLY MgSO<sub>4</sub> PILOT STUDY REPORT**

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC, *dba* Shell Oil Products US (Shell), Delta Consultants (Delta) has prepared this *Final Quarterly MgSO<sub>4</sub> Feasibility Study Report* for the Shell-branded service station, located at 5251 Hopyard Road in Pleasanton, California (Figure 1). A magnesium sulfate (MgSO<sub>4</sub>) feasibility pilot study was initiated in April 2010 based on the work plan submitted December 11, 2009. Alameda County Environmental Health (ACEH) approved the work plan in a letter dated January 12, 2010; an additional fourth application event was approved in a letter dated September 10, 2010 using a low-flow pump to better facilitate application. An initial evaluation of the MgSO<sub>4</sub> feasibility pilot study was included in the *First Quarter 2010 Semi-Annual Monitoring Report and Quarterly Feasibility Report* dated May 13, 2010, and a 2Q10 quarterly report was submitted on August 11, 2010. The agency approval letter is included as Appendix A and the initial work plan (text, tables and figures only) is included as Appendix B.

**MgSO<sub>4</sub> FEASIBILITY EVALUATION**

The anaerobic sulfate reduction of hydrocarbons uses ferric (insoluble) iron as a co-metabolite. A preliminary evaluation on October 30, 2009 of groundwater at the site indicated that sulfate is utilized and depleted during the degradation of hydrocarbons, with an increase in the concentration of ferrous (soluble) iron in the center of the plume (EW-1). This data point strongly suggested sulfate was being consumed in the process of anaerobic hydrocarbon biodegradation, and that the current low sulfate concentrations may be a limiting factor for continued bioremediation of the plume. Data from the preliminary feasibility study are provided in Table 1 and the correlation between total petroleum hydrocarbons as gasoline (TPH-g) and sulfate concentrations are documented on Graph 1.

November 12, 2010  
Delta Project No. SCA5251H1D  
SAP No. 135785

Mr. Jerry Wickham, P.G., CHG  
Alameda County Health Care Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6540

**Re: FINAL QUARTERLY MgSO<sub>4</sub> PILOT STUDY REPORT**

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC, *dba* Shell Oil Products US (Shell), Delta Consultants (Delta) has prepared this *Final Quarterly MgSO<sub>4</sub> Feasibility Study Report* for the Shell-branded service station, located at 5251 Hopyard Road in Pleasanton, California (Figure 1). A magnesium sulfate (MgSO<sub>4</sub>) feasibility pilot study was initiated in April 2010 based on the work plan submitted December 11, 2009. Alameda County Environmental Health (ACEH) approved the work plan in a letter dated January 12, 2010; an additional fourth application event was approved in a letter dated September 10, 2010 using a low-flow pump to better facilitate application. An initial evaluation of the MgSO<sub>4</sub> feasibility pilot study was included in the *First Quarter 2010 Semi-Annual Monitoring Report and Quarterly Feasibility Report* dated May 13, 2010, and a 2Q10 quarterly report was submitted on August 11, 2010. The agency approval letter is included as Appendix A and the initial work plan (text, tables and figures only) is included as Appendix B.

**MgSO<sub>4</sub> FEASIBILITY EVALUATION**

The anaerobic sulfate reduction of hydrocarbons uses ferric (insoluble) iron as a co-metabolite. A preliminary evaluation on October 30, 2009 of groundwater at the site indicated that sulfate is utilized and depleted during the degradation of hydrocarbons, with an increase in the concentration of ferrous (soluble) iron in the center of the plume (EW-1). This data point strongly suggested sulfate was being consumed in the process of anaerobic hydrocarbon biodegradation, and that the current low sulfate concentrations may be a limiting factor for continued bioremediation of the plume. Data from the preliminary feasibility study are provided in Table 1 and the correlation between total petroleum hydrocarbons as gasoline (TPH-g) and sulfate concentrations are documented on Graph 1.

## MgSO<sub>4</sub> FEASIBILITY PILOT STUDY

To date, the three application events proposed in the original pilot study have been completed at the site, as well as one additional fourth application using a low flow pump to better facilitate insertion of the product. The calculated volume of 55 gallons was applied via gravity feed to each application well during the initial event, but during the two subsequent events Delta was unable to apply the full amount at either application well. Groundwater flow direction is variable at the site, but over the last couple years has been typically trending from the north to the northwest; a groundwater elevation contour map from the third quarter 2010 monitoring event is included on Figure 2 and a rose diagram showing historic flow directions is included on Figure 3. MgSO<sub>4</sub> pilot study data are summarized in Table 2 and historic well data are provided in Table 3. Field data sheets and certified analytical reports with chain-of-custody documentation for field events conducted in August through October 2010 are included as Appendix C and Appendix D, respectively.

### MgSO<sub>4</sub> applications

As noted in the *First Quarter 2010 Semi-Annual Monitoring Report and Quarterly Feasibility Report* dated May 13, 2010 and the *Second Quarter 2010 Quarterly MgSO<sub>4</sub> Feasibility Study Report* issued August 11, 2010, baseline groundwater samples were collected from application wells EW-1 and S-3 and observation wells S-1, S-2, and S-10 prior to the initial MgSO<sub>4</sub> application on April 8, 2010. Subsequent application events were conducted on May 27, 2010, July 15, 2010, and September 9, 2010. Monitoring samples during the third quarter 2010 were collected from the application wells on July 15, August 12, October 1, and final samples were collected on October 19, 2010; third quarter samples were collected from all wells (including observation wells) on July 15, August 18, and October 19, 2010. Table 2 documents depth to water (DTW), pH, sulfate, ferrous iron, ferric iron, methyl tert-butyl ether (MTBE), and petroleum hydrocarbon concentrations, including TPH-g, benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds). All analytical samples were submitted to a California state-certified laboratory with chain-of-custody documentation. The initial ferrous iron results were run out of hold (according to the method analysis should be performed within 24 hours of sample collection), and are therefore not considered representative of actual concentrations at the site. Subsequent measurements for ferrous iron were taken using a field sample kit.

During the initial event, two drums (approximately 55 gallons each) of EAS™ (electron acceptor solution) were obtained from EOS Remediation, LLC and transported to the site. One drum of EAS™ was introduced to each application well (EW-1 and S-3) following completion of baseline sampling, and samples for sulfate were collected several hours following completion of the MgSO<sub>4</sub> introduction. MgSO<sub>4</sub> volumes of 40 gallons and 45 gallons were applied to well S-3 during subsequent events, and a volume of 25 gallons was applied at well EW-1 on each subsequent event. The gravity feed method of application was only partially successful during the second and third applications; it is possible that a sulfate or magnesium precipitate formed following the first application, resulting in reduced pore space availability. Groundwater elevations should not have been interfering with distribution as it was fairly consistent during this period. A fourth application was proposed using a pump to insert the material into the wells at a low flow rate (less than 4 standard cubic feet [scfm]); the additional application was approved in an ACEH letter dated September 10, 2010. A final application was conducted on September 9, 2010 which was successful in inserting the entire calculated volume at each well.

### FINDINGS

Analytical results indicate that sulfate is being utilized and depleted at the two application wells (EW-1 and S-3). Sulfate concentrations decreased dramatically in both application wells after two weeks following the ini-

tial MgSO<sub>4</sub> application, which appeared to be a typical trend. Over the course of the pilot study, ferric iron concentrations were generally decreasing at well EW-1, which is typically the well showing the highest petroleum impacts along with observation well S-1. Wells EW-1 and S-1 typically followed similar trends throughout this study though well values at application well EW-1 were exaggerated. General analytical results for application well S-3, which is closer to the plume edge were inconclusive.

Results from the observation wells (S-1, S-2 and S-10) do not show indications of anaerobic sulfate reduction. None of the observation wells reported an increase in sulfate or corresponding changes in TPH-g concentrations following the MgSO<sub>4</sub> application; TPH-g concentrations in well S-1 actually increased during the pilot study. This was not unexpected, however, based on the apparent low permeability of the site and distance to the observation wells, with the closest well (S-1) being approximately 40 feet from the nearest application well and the farthest being approximately 175 feet from the closest application well.

General results of the pilot study show a definite acceleration of petroleum degradation, especially at application well EW-1 which is in the most highly impacted area of the dissolved-phase plume. A review of the attenuation trends for each application well both pre- and post-pilot study illustrates a favorable response to the MgSO<sub>4</sub> applications, especially in EW-1 where TPH-g concentrations not only took a sharp downward trend but were significantly reduced. It is not known what radius of influence would be expected due to the long distance between existing wells, but no influence was noted at the closest well approximately 40 feet distant. Therefore, while it is clear that the application of MgSO<sub>4</sub> has had a beneficial effect on localized attenuation of TPH-g, the main difficulty is regular and effective distribution of MgSO<sub>4</sub> in adequate volume and coverage to effectively accelerate contaminant removal through the tight formation. A graph showing TPH-g and corresponding sulfate concentrations at both application wells, correlated to the MgSO<sub>4</sub> application events, is included on Graph 2, and TPH-g degradation trends pre-study and post-study (to date) are shown for wells EW-1 and S-3 on Graphs 3 and 4, respectively. Graph 5 illustrates the estimated duration to cleanup goals at the current rate of degradation at well EW-1, as well as the projected trend prior to the MgSO<sub>4</sub> pilot study.

## **RECOMMENDATIONS**

In the presence of significant petroleum concentrations (EW-1), biomass was clearly utilizing the MgSO<sub>4</sub> to convert the petroleum, resulting in significantly reduced concentrations and accelerated degradation. The application well closer to the edge of the plume (S-3) exhibited lower conversion rates due to less available source material. Influence was not noted in observation wells, indicating a limited radius of influence for passive infiltration at the site. Delta recommends monitoring the well concentrations for the next two monitoring cycles; if concentrations at EW-1 remain at generally lower levels, it is possible that a significant portion of contamination was converted during the six-month pilot study.

## **REMARKS**

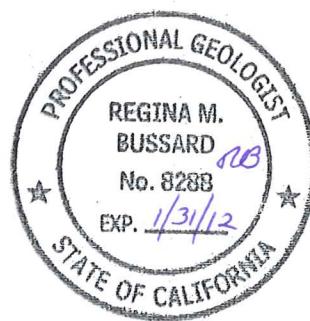
This report represents Delta's professional opinions based upon currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

This site is part of a portfolio of sites which have been transitioned to a new consultant, Conestoga-Rovers & Associates (CRA). The CRA project manager for this site is Peter Schaefer; he can be contacted directly at (510) 420-3319. If you have any questions regarding this report, please contact Suzanne McClurkin-Nelson (Delta Project Manager) at (408) 826-1875 or Denis Brown (Shell Project Manager) at (707) 865-0251.

Sincerely,  
**Delta Consultants**

*Suzanne McClurkin*  
Suzanne McClurkin-Nelson  
Senior Project Manager

*Regina Bussard*  
Regina Bussard, P.G.  
Project Geologist

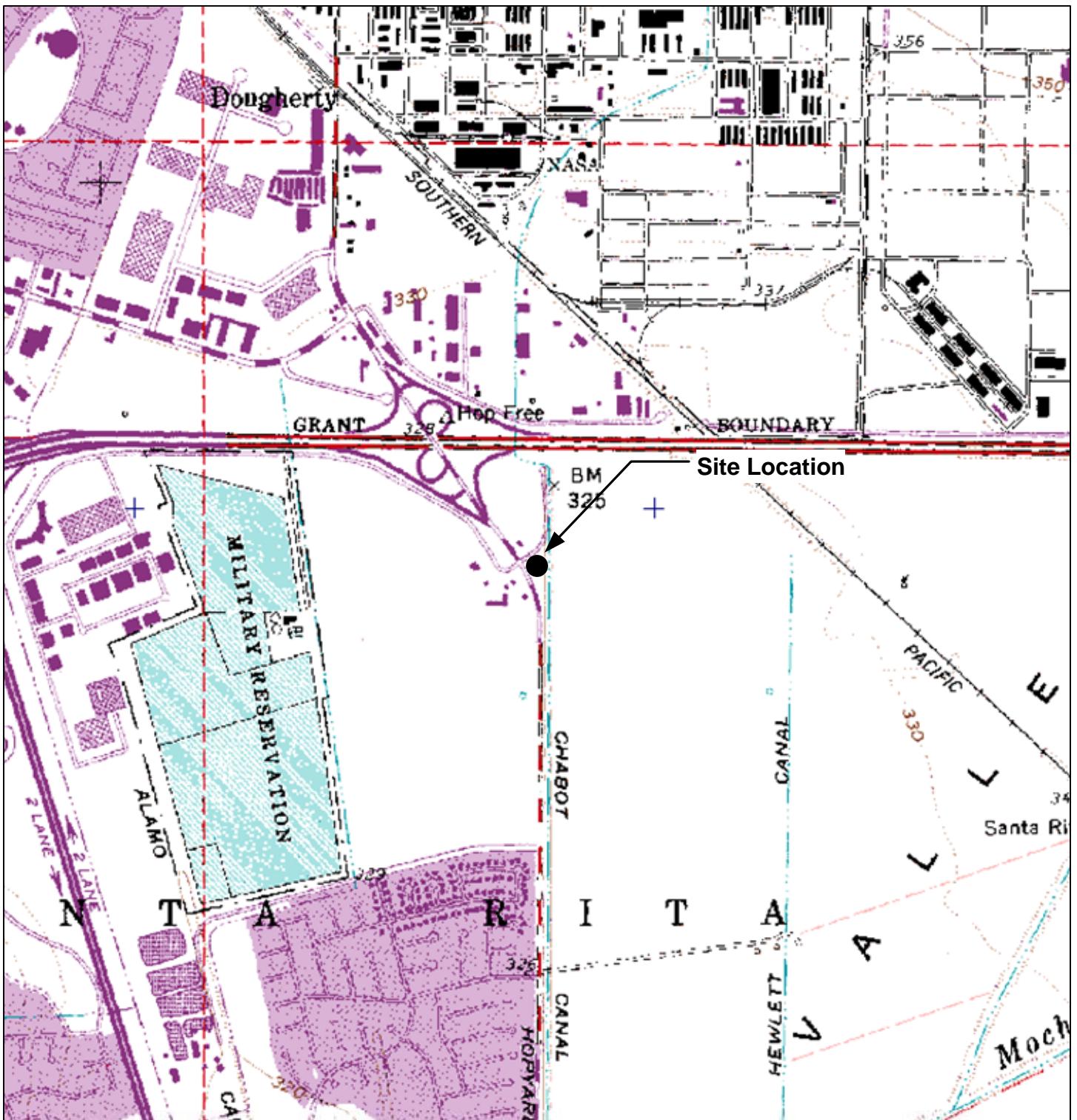


cc: Denis Brown, Shell Oil Products US  
Denis Brown, Shell Oil Products US, Carson (via electronic)  
Carl Cox, C and J Cox Corporation, Pleasanton  
Colleen Winey, Zone 7 Water Agency, Livermore  
Danielle Stefani, Livermore-Pleasanton Fire Department, Pleasanton

#### ATTACHMENTS:

- Figure 1 – Site Location Map
- Figure 2 – Groundwater Elevation Contour Map – 8/12/2010 & 8/18/2010
- Figure 3 – Groundwater Flow Direction Rose Diagram
- Graph 1 – 2009 MgSO<sub>4</sub> Feasibility Study
- Graph 2 – 2010 MgSO<sub>4</sub> Pilot Study
- Graph 3 – TPH-g Trends Pre- and During MgSO<sub>4</sub> Applications (Well EW-1)
- Graph 4 – TPH-g Trends Pre- and During MgSO<sub>4</sub> Applications (Well S-3)
- Graph 5 – Projected Attenuation Trend for Well EW-1 with Continued MgSO<sub>4</sub> Applications
- Table 1 – MgSO<sub>4</sub> Application Feasibility Groundwater Testing Data
- Table 2 – 2010 MgSO<sub>4</sub> Pilot Study
- Table 3 – Historic Well Concentrations
- Appendix A – Regulatory Correspondence
- Appendix B – December 11, 2009 Magnesium Sulfate Feasibility Study and Work Plan
- Appendix C – Field Data Sheets
- Appendix D – Certified Analytical Reports with Chain-of-Custody Documentation

## **FIGURES**



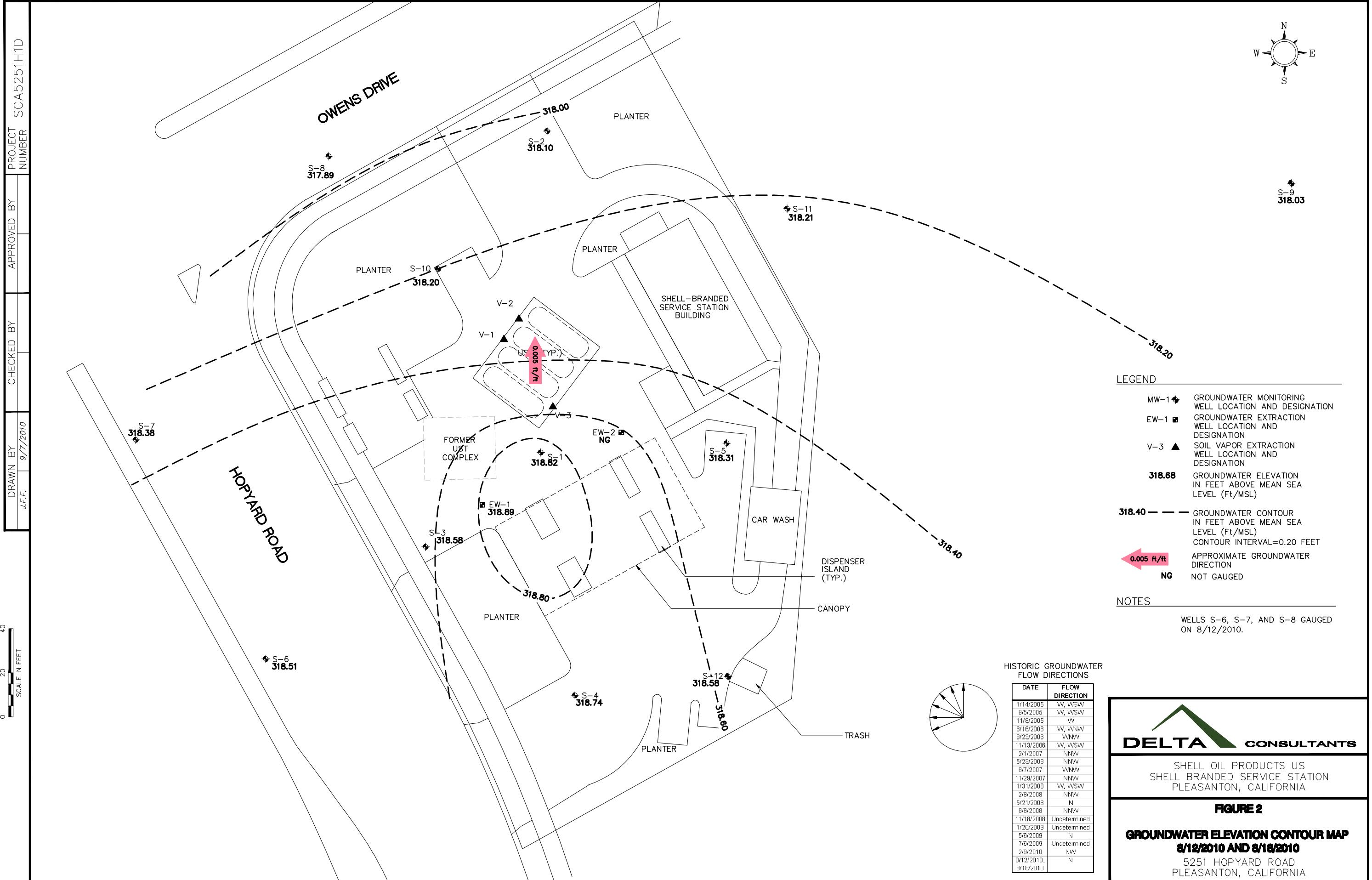
**GENERAL NOTES:**  
 Base Map from: DeLorme Yarmouth, ME 04096  
 Source Data: USGS



**FIGURE 1**  
**SITE LOCATION MAP**

**SHELL-BRANDED SERVICE STATION**  
 5251 Hopyard Road  
 Pleasanton, California

PROJECT NO. SCA5251H1D	DRAWN BY V. F. 3/31/05	 <b>DELTA</b> CONSULTANTS
FILE NO.	PREPARED BY VF	
REVISION NO.	REVIEWED BY	

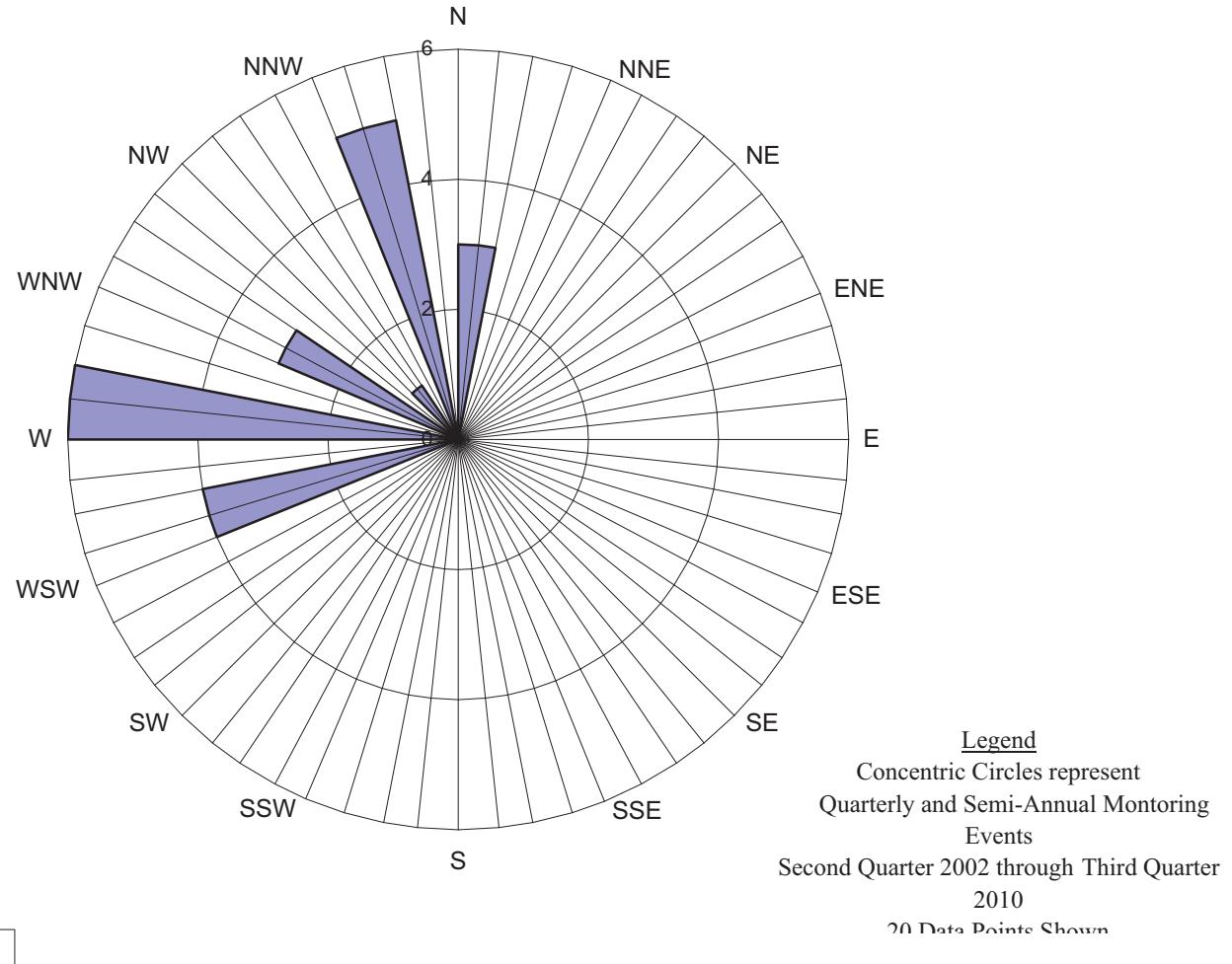


**FIGURE 3**  
**GROUNDWATER FLOW DIRECTION ROSE DIAGRAM**

Shell-Branded Service Station

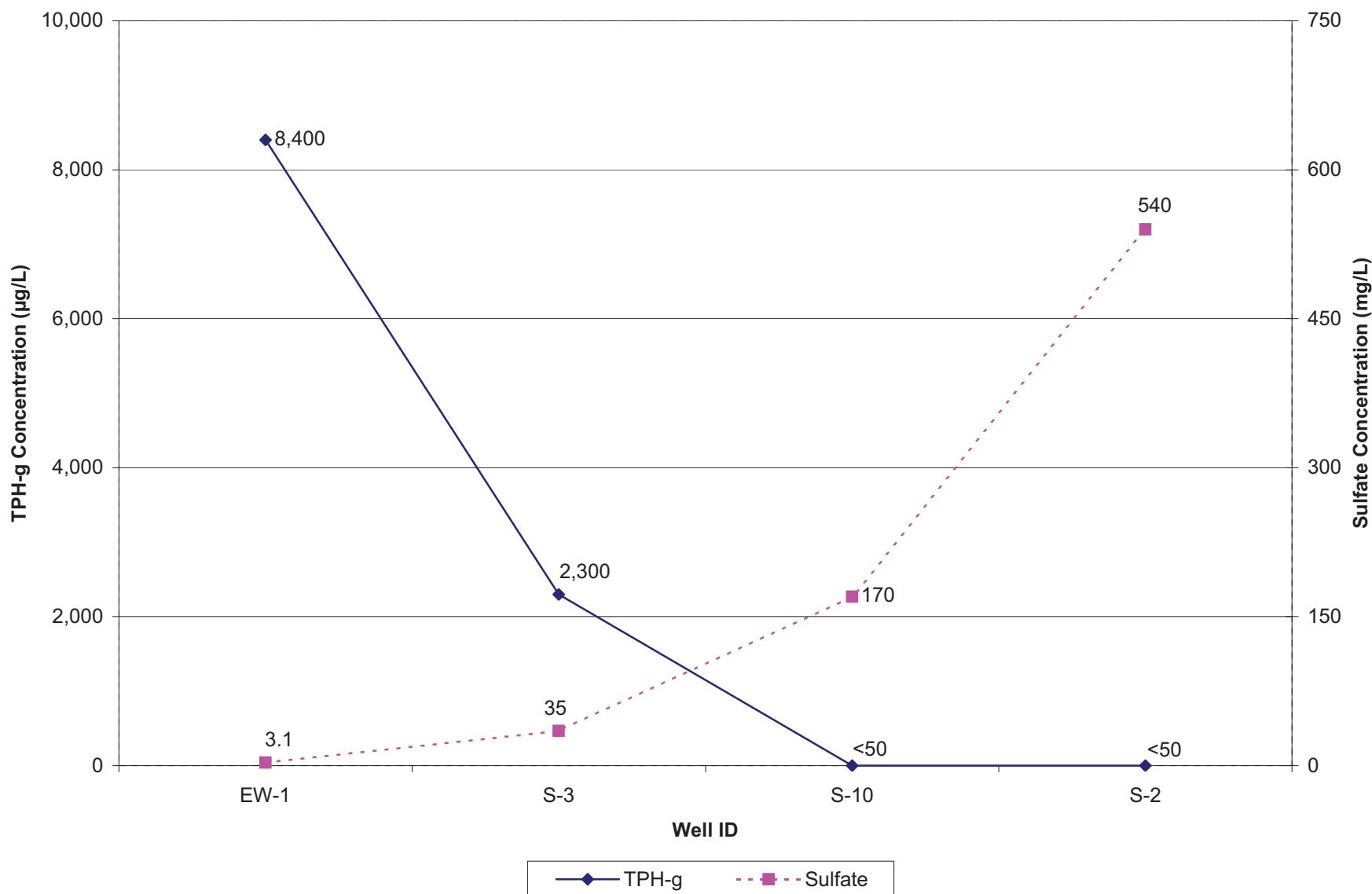
5251 Hopyard Road

Pleasanton, California

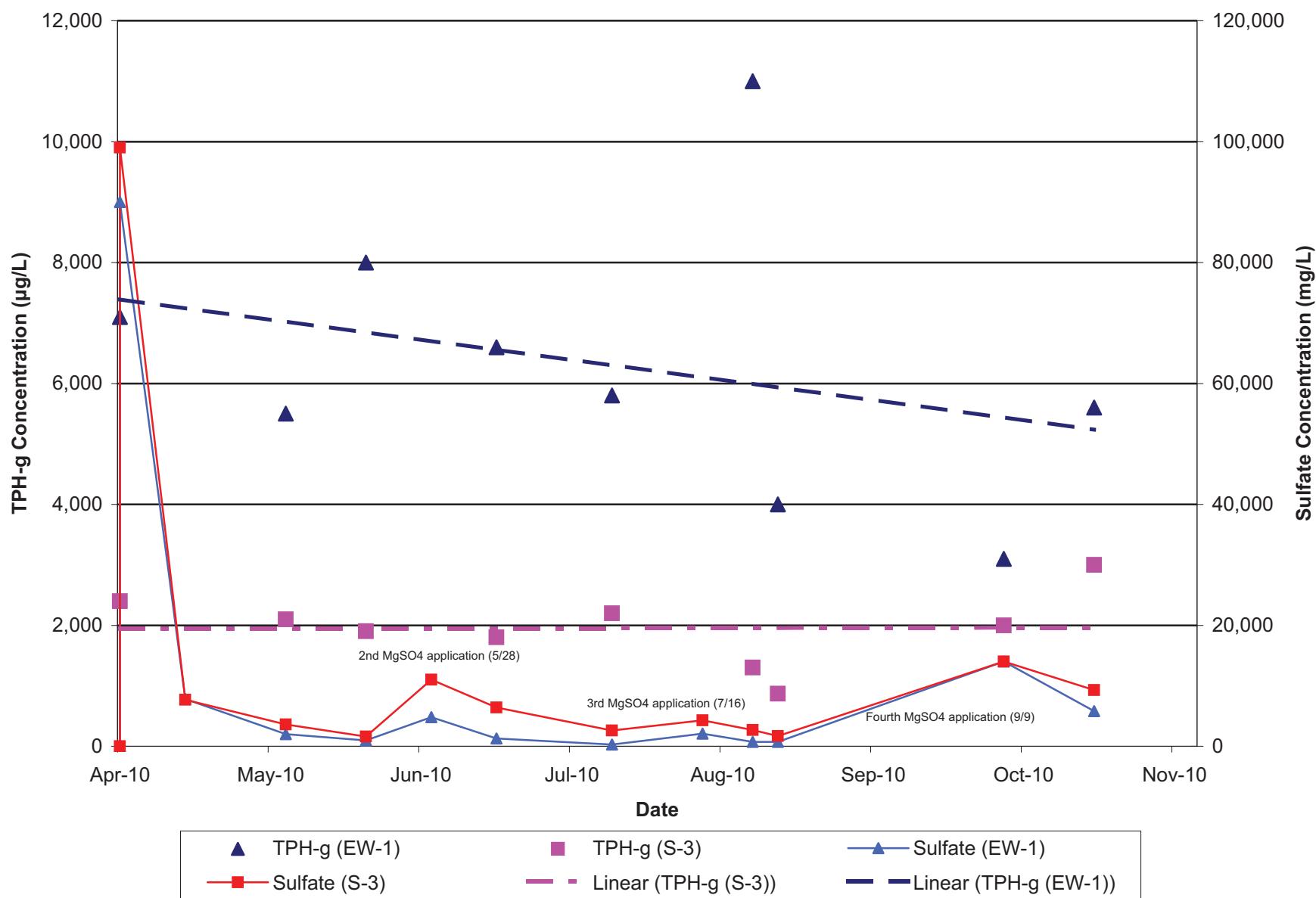


## **GRAPHS**

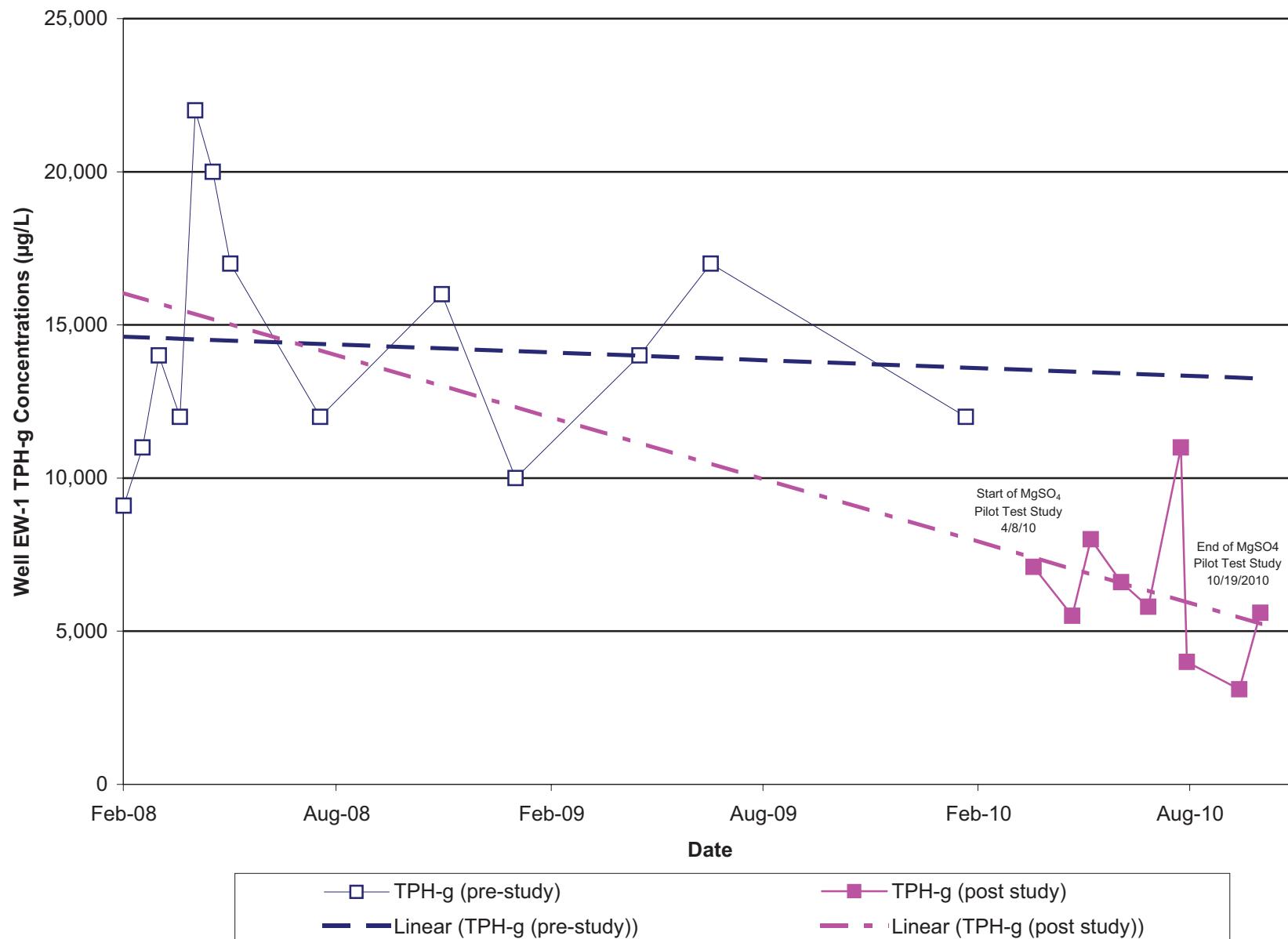
**GRAPH 1**  
**2009 MgSO<sub>4</sub> FEASIBILITY STUDY**  
Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California



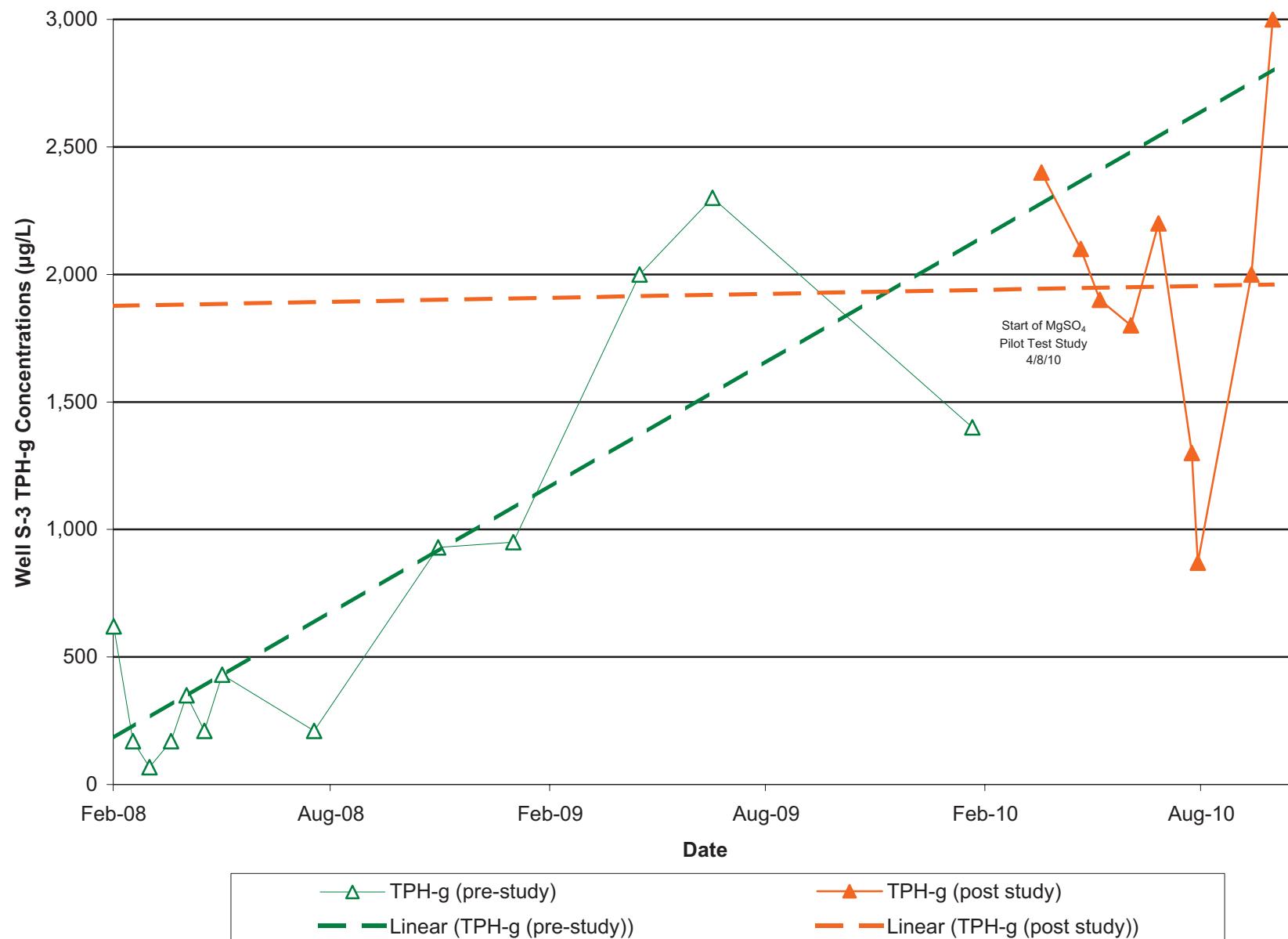
**GRAPH 2**  
**2010 MgSO<sub>4</sub> PILOT STUDY**  
 5251 Hopyard Road  
 Pleasanton, California



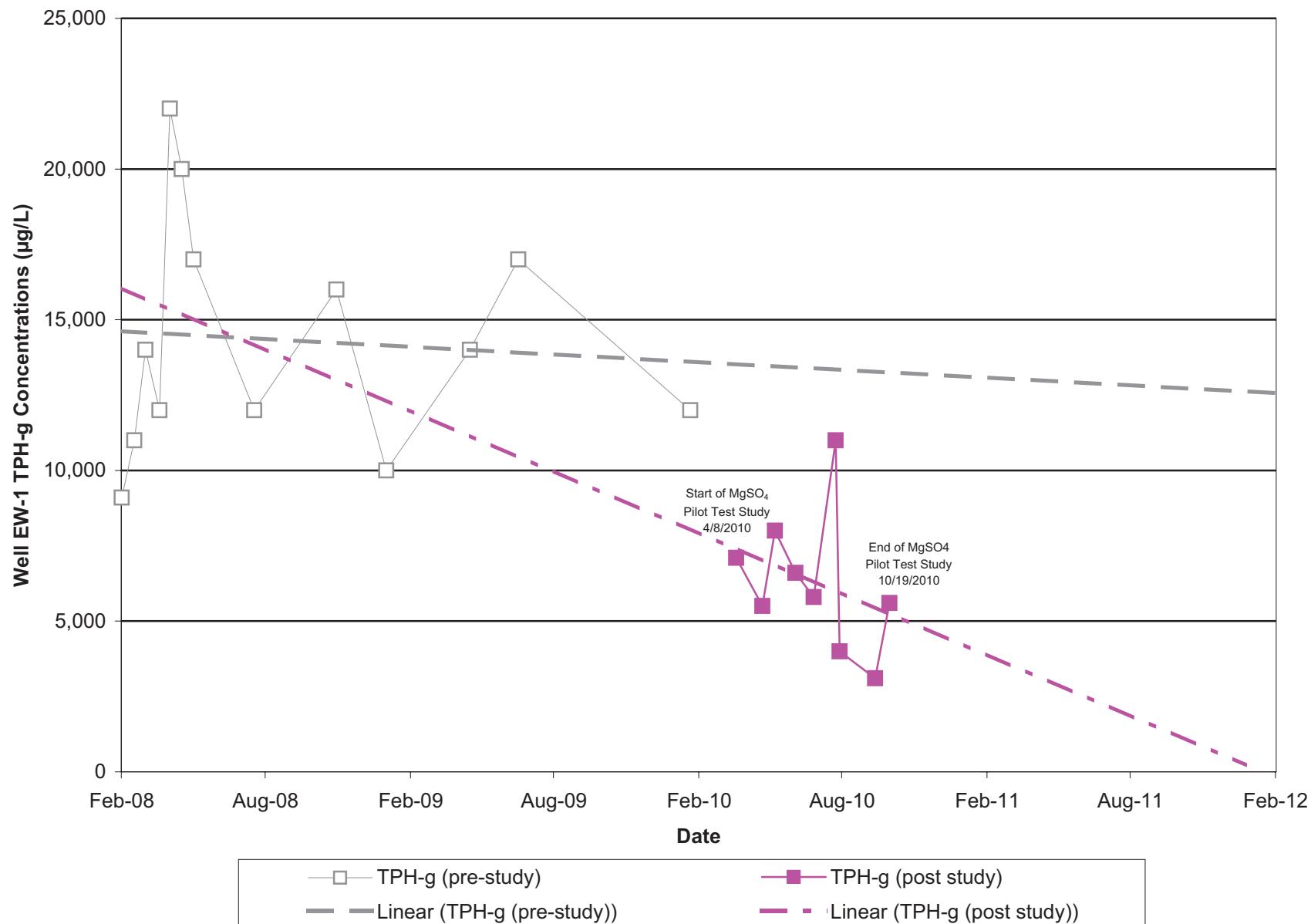
**GRAPH 3**  
**TPH-g TRENDS PRE- AND POST-MgSO<sub>4</sub> PILOT STUDY: WELL EW-1**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California



**GRAPH 4**  
**TPH-g TRENDS PRE- AND POST-MgSO<sub>4</sub> PILOT STUDY: WELL S-3**  
Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California



**GRAPH 5**  
**PROJECTED ATTENUATION TREND FOR WELL EW-1 WITH CONTINUED MgSO<sub>4</sub> APPLICATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California



## **TABLES**

**TABLE 1**  
**MgSO<sub>4</sub> APPLICATION FEASIBILITY GROUNDWATER TESTING DATA**  
 Shell-branded Service Station  
 3790 Hopyard Road  
 Pleasanton, California

Well ID	Date Sampled	TPH-g (ug/L)	BTEX Compounds				Fuel Oxygenates					Sulfate (mg/L)	Ferrous Iron (mg/L)
			B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)		
S-2	10/30/2009	<50	<0.50	<1.0	<1.0	<1.0	33	<2.0	<2.0	<2.0	10	540	<0.10
S-10	10/30/2009	<50	<0.50	<1.0	<1.0	<1.0	1.8	<2.0	<2.0	<2.0	860	170	<0.10
S-3	10/30/2009	2300	390	12	15	24	14	<10	<10	<10	<50	35	<0.10
EW-1	10/30/2009	8400	14	21	360	84	<2.0	<4.0	<4.0	<4.0	<20	3.1	2.1

**Abbreviations:**

TPH-g = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8015

B = Benzene, analyzed by EPA Method 8260B

T = Toluene, analyzed by EPA Method 8260B

E = Ethylbenzene, analyzed by EPA Method 8260B

X = Total xylenes, analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260B

DIPE = Diisopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

Sulfate - Analyzed EPA Method 300.0

Ferrous Iron - Iron (II) analyzed by SM 3500-FeB

µg/L = Micrograms per liter, equivalent to parts per billion

mg/L = Milligrams per liter, equivalent to parts per million

< = Denotes no reported concentration above shown detection limit

**TABLE 2**  
**2010 MgSO<sub>4</sub> PILOT STUDY**

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Well ID	Date	Volume MgSO <sub>4</sub> Applied (gallons)	Ferrous Iron			BTEX Compounds					
			DTW (feet)	pH (pH units)	Sulfate (mg/L)	(Fe+2)† (mg/L)	(Fe+3) (mg/L)	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)

**Observation Wells**

S-1	4/8/10 10:35 AM	N/A	7.95	7.49	3.1	ND(<0.10) <sup>b</sup>	0.511	9,300	23	38	320	56	17
S-1	5/27/10 10:30 AM	N/A	NR	7.5	ND(<1.0)	0.8	ND(<0.10)	14,000	20	36	200	57	ND(<2.0)
S-1	7/15/10 15:10 PM	N/A	7.96	7.90	ND(<1.0)	0.6	ND(<0.10)	12,000	20	38	200	54	ND(<5.0)
S-1	8/18/2010 14:35 PM	N/A	7.92	7.85	3.3	0.4	NS	4,000	15	26	87	34	10
S-1	10/19/10 14:40 PM	N/A	NR	8.00	1.7	0.8	ND(<0.10)	13,000	20	33	92	29	7.2

S-2	4/8/10 11:35 AM	N/A	8.14	7.52	600	ND(<0.10) <sup>b</sup>	0.120	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	38
S-2	5/27/10 10:15 AM	N/A	NR	7.2	570	0.0	ND(<0.10)	80	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	36
S-2	7/15/10 14:10 PM	N/A	8.30	7.72	570	0.0	ND(<0.10)	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	19
S-2	8/18/2010 14:35 PM	N/A	8.40	8.19	450	0.0	NS	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	24
S-2	10/19/10 15:20 PM	N/A	NR	7.68	510	0.0	ND(<0.10)	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	17

S-10	4/8/10 11:15 AM	N/A	7.68	7.71	170	ND(<0.10) <sup>b</sup>	0.915	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	1.5
S-10	5/27/10 9:45 AM	N/A	NR	6.3	160	0.0	0.367	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	1.6
S-10	7/15/10 13:50 PM	N/A	7.92	7.75	150	0.0	0.12	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
S-10	8/12/10 11:25 AM	N/A	8.04	7.47	110	0.0	NS	ND(<100)	ND(<1.0)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<2.0)
S-10	10/19/10 15:00 PM	N/A	NR	8.16	140	0.0	0.26	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)

**Application Points**

EW-1	4/8/10 9:45 AM <sup>a</sup>	55	7.81	7.05	2.7	ND(<0.10) <sup>b</sup>	10.2	7,100	16	25	95	29	3.7
EW-1	4/8/10 5:10 PM	N/A	NR	NR	90,000	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	4/21/10 12:00 PM	N/A	NR	NR	7,800	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	5/11/10 9:45 AM	N/A	NR	7.24	2,000	2.4	7.6	5,500	13	9.5	100	43	ND(<1.0)
EW-1	5/27/10 11:00 AM <sup>c</sup>	25	NR	7.1	960	1.8	5.72	8,000	17	9.8	200	66	ND(<5.0)
EW-1	6/9/10 10:05 AM	N/A	NR	NR	4,800	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	6/22/10 10:30 AM	N/A	NR	7.38	1,300	2.8	2.29	6,600	5.2	4.5	53	20	ND(<2.0)
EW-1	7/15/10 14:40 PM <sup>d</sup>	25	7.78	7.82	300	2.4	0.49	5,800	4.7	4.5	52	27	ND(<2.0)
EW-1	8/2/10 13:50 PM	N/A	NR	4.65	2,100	2.6	NS	NS	NS	NS	NS	NS	NS
EW-1 <sup>e</sup>	8/12/10 13:10 PM	N/A	8.03	6.98	730	1.2	NS	11,000 <sup>e</sup>	2.9	17	370	110	ND(<2.0)
EW-1	8/17/10 11:00 AM	N/A	NR	7.71	740	0.9	0.17	4,000	5.0	3.8	2.9	52	ND(<2.0)
EW-1 <sup>f</sup>	9/9/10 11:30 AM	55	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	10/1/10 14:20 PM	N/A	8.55	6.89	14,000	6.5	0.69	3,100	1.4	1.4	2.2	3.2	ND(<1.0)
EW-1	10/19/10 14:15 PM	N/A	NR	7.49	5,800	4.8	1.56	5,600	1.8	1.4	6.3	9	ND(<1.0)

**TABLE 2**  
**2010 MgSO<sub>4</sub> PILOT STUDY**

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Well ID	Date	Volume MgSO <sub>4</sub> Applied (gallons)	Ferrous Iron			BTEX Compounds					
			DTW (feet)	pH (pH units)	Sulfate (mg/L)	(Fe+2)† (mg/L)	(Fe+3) (mg/L)	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)
S-3	4/8/10 10:15 AM <sup>a</sup>	55	8.45	7.46	19	ND(<0.10) <sup>b</sup>	1.82	2,400	270	6.0	4.0
S-3	4/8/10 7:30 PM	N/A	NR	NR	99,000	NS	NS	NS	NS	NS	NS
S-3	4/21/10 11:45 AM	N/A	NR	NR	7,700	NS	NS	NS	NS	NS	NS
S-3	5/11/10 9:55 AM	N/A	NR	7.11	3,600	4.8	1.43	2,100	230	2.9	15
S-3	5/27/10 11:15 AM <sup>c</sup>	40	NR	6.9	1,600	3.0	1.42	1,900	210	ND(<2.0)	4.1
S-3	6/9/10 10:00 AM	N/A	NR	NR	11,000	NS	NS	NS	NS	NS	NS
S-3	6/22/10 10:15 AM	N/A	NR	6.93	6,400	4.5	4.43	1,800	270	2.4	26
S-3	7/15/10 14:50 PM <sup>d</sup>	45	8.39	7.48	2,600	3.2	1.4	2,200	230	ND(<2.0)	ND(<2.0)
S-3	8/2/10 13:20 PM	N/A	NR	7.01	4,300	3.6	NS	NS	NS	NS	NS
S-3 <sup>e</sup>	8/12/10 13:00 PM	N/A	8.46	6.89	2,700	0.6	NS	1,300	270	3.5	47
S-3	8/17/10 10:40 AM	N/A	NR	7.11	1,700	1.0	ND(<0.10)	870	90	1.3	17
S-3 <sup>f</sup>	9/9/10 12:30 AM	55	NR	NR	NS	NS	NS	NS	NS	NS	NS
S-3	10/1/10 14:40 PM	N/A	8.88	6.68	14,000	6.8	10.4	2,000	240	5.1	140
S-3	10/19/10 13:50 PM	N/A	NR	7.20	9,300	5.6	10.7	3,000	190	ND(<2.0)	80
										24	6.9

**Abbreviations:**

MgSO<sub>4</sub> = Magnesium sulfate

DTW = Depth to water

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 18, 2001, analyzed by EPA Method 8015.

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B; prior to June 18, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260

mg/L = Parts per million

ug/L = Parts per billion

ND(<n) = Not detected above shown detection limit n

N/A = Not applicable

NR = Not reported

NS = Not sampled

**Notes:**

† = Ferrous iron samples collected in field and measured using a field kit unless otherwise specified

a = Initial MgSO<sub>4</sub> application following baseline sampling of all wells in study.

b = Ferrous Iron (Fe+2) samples collected and submitted for laboratory analysis; results were run out of hold time (24 hours) and not representative

c = Second MgSO<sub>4</sub> application event May 28th following sample collection; tech had difficulty with gravity feed resulting in time constraint, so a smaller volume was applied.

d = Third MgSO<sub>4</sub> application event was on the day following sample collection (July 16, 2010).

e = Samples collected by Blaine Tech during third quarter 2010 monitoring and sampling event; TPH-g data for well EW-1 appear anomalous, compared to pre- and post-concentrations.

f = Additional (fourth) MgSO<sub>4</sub> application event using a low-flow pump rather than gravity feed to attempt to apply more volume in the wells.

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-1	1/25/1991	2,500	1,500	460	<25	130	36	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	4/6/1991	6,700	2,600 a	2,600	14	580	250	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	7/24/1991	8,800	3,800 a	2,300	30	640	220	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	10/18/1991	12,000	3,300 a	3,600	380	990	580	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.85	317.88	NA	
S-1	1/23/1992	1,600	890	450	3	120	17	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	4/27/1992	1,100 g	500 a	610	<10	110	10	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	7/21/1992	5,100	290 c	1,900	54	460	140	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	10/16/1992	13,000	390 c	3,200	310	780	360	NA	NA	NA	NA	NA	NA	NA	NA	326.73	NA	NA	NA	
S-1	1/23/1993	2,300	30 d	640	<5	110	13	NA	NA	NA	NA	NA	NA	NA	NA	326.73	7.96	318.77	NA	
S-1	4/28/1993	4,600	390	780	<0.5	250	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.73	9.07	317.66	NA	
S-1	9/22/1993	3,000	610 a	660	28	160	17	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.68	318.05	NA	
S-1	12/8/1993	520	280	210	<2.5	49	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.23	318.50	NA	
S-1	3/4/1994	640	NA	190	1.4	18	1.3	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.81	317.92	NA	
S-1 (D)	3/4/1994	640	NA	180	1.7	17	1.3	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.81	317.92	NA	
S-1	6/16/1994	2,500	NA	390	9.5	31	7.5	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.80	317.93	NA	
S-1 (D)	6/16/1994	2,000	NA	410	7.8	120	20	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.80	317.93	NA	
S-1	9/13/1994	1,400	NA	310	7.7	29	8.5	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.62	318.11	NA	
S-1 (D)	9/13/1994	1,400	NA	240	7.9	44	6.3	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.62	318.11	NA	
S-1	5/5/1995	800	NA	120	3.6	26	2.7	NA	NA	NA	NA	NA	NA	NA	NA	326.73	11.54	315.19	NA	
S-1 (D)	5/5/1995	710	NA	110	3.4	19	2.7	NA	NA	NA	NA	NA	NA	NA	NA	326.73	11.54	315.19	NA	
S-1	5/21/1996	1,500	NA	170	8.5	120	6.7	NA	NA	NA	NA	NA	NA	NA	NA	326.73	8.88	317.85	NA	
S-1	5/12/1997	4,700	NA	200	15	210	20	2,300	NA	NA	NA	NA	NA	NA	NA	326.73	11.19	315.54	2.4	
S-1 (D)	5/12/1997	4,800	NA	210	16	190	16	3,200	2,900	NA	NA	NA	NA	NA	NA	326.73	11.19	315.54	2.4	
S-1	5/8/1998	500	NA	18	2.1	2.3	2	1,000	NA	NA	NA	NA	NA	NA	NA	326.73	8.38	318.35	2.1	
S-1	6/27/1999	2,970	NA	117	32.0	69.1	17.5	374	NA	NA	NA	NA	NA	NA	NA	326.73	8.79	317.94	2.4	
S-1	4/28/2000	1,920	NA	50.5	15.0	67.2	46.7	276	NA	NA	NA	NA	NA	NA	NA	326.73	8.50	318.23	2.8	
S-1	5/30/2001	3,900	NA	27	12	140	28	NA	140	NA	NA	NA	NA	NA	NA	326.73	8.18	318.55	2.6	
S-1	6/17/2002	2,700	NA	25	11	51	14	NA	140	NA	NA	NA	NA	NA	NA	326.73	8.39	318.34	3.2	
S-1	5/30/2003	3,900	NA	12	8.2	47	12	NA	270	NA	NA	NA	NA	NA	NA	326.74	7.41	319.33	1.2	
S-1	5/3/2004	3,700	NA	32	21	170	34	NA	410	NA	NA	NA	NA	NA	NA	326.74	11.18	315.56	2.4	
S-1	1/14/2005	4,200	NA	22	34	380	33	NA	100	NA	NA	NA	NA	NA	NA	326.74	7.10	319.64	0.58	
S-1	5/5/2005	5,000	NA	33	110	970	210	NA	190	<0.50	<0.50	0.95	630	NA	NA	326.74	11.32	315.42	NA	
S-1	08/05/2005 I	4,600	NA	32	52	420	69	NA	110	<40	<40	<40	410	NA	NA	326.74	9.04	317.70	NA	
S-1	9/16/2005	3,300	NA	14	28	280	43	NA	60	51	<10	<10	260	NA	NA	326.74	11.37	315.37	NA	
S-1	11/8/2005	4,700	NA	19.2	47	416	84.0	NA	50.2	<0.500	<0.500	<0.500	<10.0	NA	NA	326.74	9.06	317.68	NA	

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

S-1	1/31/2006	6,380	NA	21.0	33.1	280	31.0	NA	59.9	<0.500	<0.500	<0.500	306	NA	NA	NA	326.74	8.12	318.62	NA
S-1	5/16/2006	9,080	NA	25.8	46.6	517	86.6 m	NA	69.5	<0.500	<0.500	<0.500	268	NA	NA	NA	326.74	7.95	318.79	NA
S-1	8/23/2006	4,980	NA	19.0	22.7	74.7	38.7	NA	42.9	<0.500	<0.500	<0.500	252	NA	NA	NA	326.74	7.95	318.79	NA
S-1	11/13/2006	7,900	NA	38	41	480	52	NA	44	<5.0	<5.0	<5.0	480	NA	NA	NA	326.74	7.99	318.75	NA
S-1	2/1/2007	1,500	NA	18	15	110	17	NA	27	<10	<10	<10	640	NA	NA	NA	326.74	8.19	318.55	NA
S-1	5/23/2007	5,300 n	NA	35	42	260	67.9	NA	<5.0	<10	<10	<10	720	NA	NA	NA	326.74	10.50	316.24	NA
S-1	8/7/2007	6,900 n	NA	26	31	240	40.9 o	NA	30	<10	<10	<10	270	NA	NA	NA	326.74	8.13	318.61	NA
S-1	11/29/2007	840 n	NA	16	18	120	14.5	NA	26	<2.0	<2.0	<2.0	190	NA	NA	NA	326.74	9.40	317.34	NA
S-1	2/8/2008	4,500 n	NA	25	39	410	37	NA	28	<10	<10	<10	330	NA	NA	NA	326.74	7.91	318.83	NA
S-1	2/20/2008	5,700 n	NA	29	56	650	89	NA	35	<10	<10	<10	200	<500	NA	NA	326.74	8.70	318.04	NA
S-1	3/7/2008	6,800 n	NA	25	37	310	59.2	NA	<5.0	<10	<10	<10	240	<500	NA	NA	326.74	10.54	316.20	NA
S-1	3/21/2008	5,300	NA	22	23	210	38.7	NA	<2.0	<4.0	<4.0	<4.0	220	<200	NA	NA	326.74	9.79	316.95	NA
S-1	4/8/2008	4,200	NA	15	18	230	26.4	NA	<2.0	<4.0	<4.0	<4.0	240	<200	NA	NA	326.74	8.27	318.47	NA
S-1	4/21/2008	6,600	NA	21	27	440	53	NA	<2.0	<4.0	<4.0	<4.0	170	<200	NA	NA	326.74	8.17	318.57	NA
S-1	5/6/2008	5,700	NA	21	29	440	56	NA	<5.0	<10	<10	<10	270	<500	NA	NA	326.74	8.00	318.74	NA
S-1	5/21/2008	7,800	NA	29	51	620	108	NA	40	<10	<10	<10	190	<500	NA	NA	326.74	8.27	318.47	NA
S-1	8/6/2008	7,600	NA	17	27	140	30.0	NA	24	<10	<10	<10	180	NA	NA	NA	326.74	8.01	318.73	NA
S-1	11/18/2008	6,500	NA	27	35	310	45.0	NA	22	<20	<20	<20	180	NA	NA	NA	326.74	7.59	319.15	NA
S-1	1/20/2009	5,100	NA	19	21	140	22	NA	21	<10	<10	<10	230	NA	NA	NA	326.74	8.28	318.46	NA
S-1	5/6/2009	6,100	NA	26	37	520	51	NA	27	<10	<10	<10	180	NA	NA	NA	326.74	8.04	318.70	NA
S-1	7/6/2009	5,800	NA	25	34	370	44	NA	22	<10	<10	<10	180	NA	NA	NA	326.74	8.42	318.32	NA
S-1	2/9/2010	8,800	NA	18	33	340	37	NA	13	NA	NA	NA	66	NA	NA	NA	326.74	8.18	318.56	NA
S-1	8/12/2010	Unable to access	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.74	NA	NA	NA
S-1	8/18/2010	4,000	NA	15	26	87	34	NA	10	NA	NA	NA	NA	NA	8.05	0.4	326.74	7.92	318.82	NA

S-2	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	4/16/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	10/18/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	8.83	317.76	NA								
S-2	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	7/17/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	NA	NA	NA								
S-2	1/23/1993	<50	140 b	<0.5	<0.5	<0.5	<0.5	NA	326.59	8.10	318.49	NA								
S-2	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.59	9.06	317.53	NA								
S-2	9/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.91	317.68	NA

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-2	12/8/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.59	9.07	317.52	NA	
S-2	3/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.90	317.69	NA	
S-2	6/16/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.98	317.61	NA	
S-2	9/13/1994	<50	NA	<0.5	2.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.78	317.81	NA	
S-2	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.60	317.99	NA	
S-2	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.59	8.75	317.84	NA	
S-2	5/12/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA	NA	NA	NA	NA	326.59	8.72	317.87	3.4	
S-2	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	326.59	8.63	317.96	3.1	
S-2	6/27/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	NA	NA	NA	NA	NA	NA	326.59	8.79	317.80	2.6	
S-2	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	326.59	8.33	318.26	2.0	
S-2	5/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	NA	NA	326.59	8.56	318.03	1.8	
S-2	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	326.59	8.87	317.72	i	
S-2	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	18	NA	NA	NA	NA	NA	NA	326.47	7.89	318.58	1.7	
S-2	5/3/2004	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	510	NA	NA	NA	NA	NA	NA	326.47	5.44	321.03	0.1	
S-2	1/14/2005	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	270	NA	NA	NA	NA	NA	NA	326.47	7.88	318.59	NA	
S-2	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	280	<0.50	<0.50	0.55	8.9 j	NA	NA	326.47	8.14	318.33	NA	
S-2	08/05/2005 i	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	320	<2.0	<2.0	<2.0	510	NA	NA	326.47	8.24	318.23	NA	
S-2	9/16/2005	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	320	<10	<10	<10	1,800	NA	NA	326.47	8.06	318.41	NA	
S-2	11/8/2005	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	375	<0.500	<0.500	0.610	1,130	NA	NA	326.47	8.20	318.27	NA	
S-2	1/31/2006	281	NA	<0.500	<0.500	<0.500	<0.500	NA	354	<0.500	<0.500	<0.500	3,090	NA	NA	326.47	8.18	318.29	NA	
S-2	5/16/2006	785	NA	<0.500	<0.500	<0.500	<0.500	NA	282	<0.500	<0.500	<0.500	3,250	NA	NA	326.47	8.34	318.13	NA	
S-2	8/23/2006	344	NA	<0.500	<0.500	<0.500	<0.500	NA	194	<0.500	<0.500	0.560	10,600	NA	NA	326.47	8.32	318.15	NA	
S-2	11/13/2006	320	NA	<5.0 f	<5.0 f	<5.0 f	<5.0 f	NA	140 f	<5.0 f	<5.0 f	<5.0 f	6,000 f	NA	NA	326.50	8.37	318.13	NA	
S-2	2/1/2007	160	NA	<0.50	<0.50	<0.50	<1.0	NA	130	<2.0	<2.0	<2.0	3,900	NA	NA	326.50	8.13	318.37	NA	
S-2	5/23/2007	120 n	NA	<0.50	<1.0	<1.0	<1.0	NA	110	<2.0	<2.0	<2.0	1,500	NA	NA	326.50	8.55	317.95	NA	
S-2	8/7/2007	93 n,p	NA	<2.5	<5.0	<5.0	<5.0	NA	120	<10	<10	<10	1,700	NA	NA	326.50	8.26	318.24	NA	
S-2	11/29/2007	110 n,p	NA	<0.50	<1.0	<1.0	<1.0	NA	98	<2.0	<2.0	<2.0	880	NA	NA	326.50	8.29	318.21	NA	
S-2	2/8/2008	110 n,p	NA	<0.50	<1.0	<1.0	<1.0	NA	110	<2.0	<2.0	<2.0	830	NA	NA	326.50	8.07	318.43	NA	
S-2	2/20/2008	73 n,p	NA	<0.50	<1.0	<1.0	<1.0	NA	100	<2.0	<2.0	<2.0	650	<100	NA	326.50	8.30	318.20	NA	
S-2	3/7/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	57	<2.0	<2.0	<2.0	240	<100	NA	326.50	9.25	317.25	NA	
S-2	3/21/2008	73	NA	<0.50	<1.0	<1.0	<1.0	NA	91	<2.0	<2.0	<2.0	480	<100	NA	326.50	9.01	317.49	NA	
S-2	4/8/2008	88	NA	<0.50	<1.0	<1.0	<1.0	NA	72	<2.0	<2.0	<2.0	310	<100	NA	326.50	8.46	318.04	NA	
S-2	4/21/2008	60	NA	<0.50	<1.0	<1.0	<1.0	NA	8.6	<2.0	<2.0	<2.0	310	<100	NA	326.50	9.60	316.90	NA	
S-2	5/6/2008	62	NA	<0.50	<1.0	<1.0	<1.0	NA	53	<2.0	<2.0	<2.0	300	<100	NA	326.50	10.55	315.95	NA	
S-2	5/21/2008	130	NA	<0.50	<1.0	<1.0	<1.0	NA	61	<2.0	<2.0	<2.0	320	<100	NA	326.50	9.43	317.07	NA	
S-2	8/6/2008	76	NA	<0.50	<1.0	<1.0	<1.0	NA	46	<2.0	<2.0	<2.0	77	NA	NA	326.50	8.41	318.09	NA	

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-2	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	42	<2.0	<2.0	<2.0	18	NA	NA	326.50	8.38	318.12	NA	
S-2	1/20/2009	57	NA	<0.50	<1.0	<1.0	<1.0	NA	46	<2.0	<2.0	<2.0	13	NA	NA	326.50	8.64	317.86	NA	
S-2	5/6/2009	64	NA	<0.50	<1.0	<1.0	<1.0	NA	58	<2.0	<2.0	<2.0	<10	NA	NA	326.50	8.31	318.19	NA	
S-2	7/6/2009	110	NA	<0.50	<1.0	<1.0	<1.0	NA	59	<2.0	<2.0	<2.0	<10	NA	NA	326.50	8.53	317.97	NA	
S-2	2/9/2010	62	NA	<0.50	<1.0	<1.0	<1.0	NA	42	NA	NA	NA	<10	NA	NA	326.50	8.20	318.30	NA	
S-2	8/12/2010	Unable to access		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.50	NA	NA	NA	
S-2	8/18/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	24	NA	NA	NA	NA	NA	7.51	0.0	326.50	8.40	318.10	NA
S-3	1/25/1991	870	330	230	<2.5	130	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	4/16/1991	190	140 a	12	0.8	6.2	1.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	7/24/1991	1,700	1,200 a	450	4.4	150	2.9	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	10/18/1991	1,900	500	370	3.1	120	220	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.64	317.74	NA	
S-3	1/23/1992	2,000	650 a	580	3	200	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	4/27/1992	1,100	230 a	150	<3	76	14	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	7/17/1992	810	58	200	<2.5	57	3.8	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	10/16/1992	440	190 c	79	1.8	18	4.6	NA	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA	
S-3	1/23/1993	670	170 d	79	1.5	46	15	NA	NA	NA	NA	NA	NA	NA	NA	327.38	8.81	318.57	NA	
S-3	4/28/1993	2,000	<50	300	3.4	210	38	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.87	317.51	NA	
S-3	9/22/1993	4,800	670 a	2,000	34	150	51	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.65	317.73	NA	
S-3	12/8/1993	1,200	11	440	<5.0	120	29	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.26	318.12	NA	
S-3	3/4/1994	630	NA	130	<0.5	17	0.8	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.64	317.74	NA	
S-3	6/16/1994	1,800	NA	430	19	35	21	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.78	317.60	NA	
S-3	5/5/1995	160	NA	50	0.9	7.2	4.1	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.38	318.00	NA	
S-3	5/21/1996	270	NA	45	<0.5	1.4	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.41	317.97	NA	
S-3 (D)	5/21/1996	210	NA	<0.5	<0.5	0.95	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.41	317.97	NA	
S-3	5/12/1997	420	NA	<1.0	<1.0	<1.0	<1.0	57	NA	NA	NA	NA	NA	NA	NA	327.38	9.30	318.08	2.5	
S-3	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	327.38	9.12	318.26	2.2	
S-3	6/27/1999	106	NA	8.51	<0.500	<0.500	<0.500	31.0	NA	NA	NA	NA	NA	NA	NA	327.38	9.39	317.99	2.1	
S-3	4/28/2000	139	NA	7.58	<0.500	<0.500	<0.500	42.6	NA	NA	NA	NA	NA	NA	NA	327.38	9.04	318.34	1.8	
S-3	5/30/2001	2,200	NA	510	6.9	100	21	NA	33	NA	NA	NA	NA	NA	NA	327.38	9.19	318.19	2.0	
S-3	6/17/2002	600	NA	150	2.1	30	11	NA	36	NA	NA	NA	NA	NA	NA	327.38	9.35	318.03	0.1	
S-3	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	9.0	NA	NA	NA	NA	NA	NA	327.04	8.39	318.65	1.2	
S-3	5/3/2004	61 k	NA	0.90	<0.50	<0.50	<1.0	NA	9.8	NA	NA	NA	NA	NA	NA	327.04	8.73	318.31	1.2	
S-3	1/14/2005	94	NA	4.6	<0.50	3.1	1.0	NA	13	NA	NA	NA	NA	NA	NA	327.04	8.00	319.04	NA	
S-3	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	5.7	<0.50	<0.50	<0.50	<5.0	NA	NA	327.04	8.31	318.73	NA	
S-3	08/05/2005 I	<50	NA	0.51	<0.50	<0.50	<1.0	NA	6.0	<2.0	<2.0	<2.0	42	NA	NA	327.04	8.32	318.72	NA	

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

S-3	9/16/2005	<50	NA	0.62	<0.50	<0.50	<1.0	NA	7.9	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	327.04	8.29	318.75	NA
S-3	11/8/2005	166	NA	63.0	1.32	7.20	2.99	NA	8.67	<0.500	<0.500	<0.500	<10.0	NA	NA	NA	327.04	8.17	318.87	NA
S-3	1/31/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	7.05	<0.500	<0.500	<0.500	<10.0	NA	NA	NA	327.04	8.05	318.99	NA
S-3	5/16/2006	<50.0	NA	3.23	<0.500	1.42	1.63 m	NA	3.92	<0.500	<0.500	<0.500	<10.0	NA	NA	NA	327.04	8.62	318.42	NA
S-3	8/23/2006	<50.0	NA	18.9	<0.500	1.72	0.800	NA	7.65	<0.500	<0.500	<0.500	<10.0	NA	NA	NA	327.04	8.54	318.50	NA
S-3	11/13/2006	530	NA	130 f	3.4 f	10 f	4.6 f	NA	17 f	<2.0 f	<2.0 f	<2.0 f	<80 f	NA	NA	NA	327.01	8.65	318.36	NA
S-3	2/1/2007	430	NA	230	4.4	4.0	<5.0	NA	17	<10	<10	<10	<25	NA	NA	NA	327.01	8.41	318.60	NA
S-3	5/23/2007	1,400 n	NA	370	11	17	11.58 o	NA	21	<2.0	<2.0	<2.0	12	NA	NA	NA	327.01	8.37	318.64	NA
S-3	8/7/2007	1,000 n	NA	150	4.6 o	4.1 o	4.0 o	NA	21	<10	<10	<10	<50	NA	NA	NA	327.01	8.59	318.42	NA
S-3	11/29/2007	710 n	NA	110	3.1	3.8	5.3 o	NA	17	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.01	8.78	318.23	NA
S-3	2/8/2008	300 n	NA	2.7	<1.0	<1.0	<1.0	NA	19	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.01	8.05	318.96	NA
S-3	2/20/2008	620 n	NA	150	4.1	11	11	NA	19	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.57	318.44	NA
S-3	3/7/2008	170 n	NA	15	<1.0	2.5	4.0	NA	12	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.87	318.14	NA
S-3	3/21/2008	68	NA	4.8	<1.0	1.3	1.6	NA	8.6	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	9.00	318.01	NA
S-3	4/8/2008	170	NA	7.8	<1.0	2.6	4.0	NA	8.1	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.55	318.46	NA
S-3	4/21/2008	350	NA	2.8	<1.0	1.2	1.9	NA	12	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.65	318.36	NA
S-3	5/6/2008	210	NA	2.3	<1.0	<1.0	<1.0	NA	9.1	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.60	318.41	NA
S-3	5/21/2008	430	NA	21	<1.0	3.5	4.2	NA	17	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.01	8.81	318.20	NA
S-3	8/6/2008	210	NA	<0.50	<1.0	<1.0	<1.0	NA	13	<2.0	<2.0	<2.0	11	NA	NA	NA	327.01	8.71	318.30	NA
S-3	11/18/2008	930	NA	130	3.5	15	19	NA	18	<2.0	<2.0	<2.0	10	NA	NA	NA	327.01	8.79	318.22	NA
S-3	1/20/2009	950	NA	100	1.2	1.8	<1.0	NA	18	<2.0	<2.0	<2.0	16	NA	NA	NA	327.01	9.10	317.91	NA
S-3	5/6/2009	2,000	NA	490	5.9	14	4.8	NA	21	<2.0	<2.0	<2.0	14	NA	NA	NA	327.01	8.51	318.50	NA
S-3	7/6/2009	2,300	NA	500	10	30	13	NA	21	<10	<10	<10	<50	NA	NA	NA	327.01	8.80	318.21	NA
S-3	2/9/2010	1,400	NA	180	4.7	11	13	NA	12	NA	NA	NA	32	NA	NA	NA	327.01	8.36	318.65	NA
S-3	8/12/2010	1,300	NA	270	3.5	47	46	NA	4.5	NA	NA	NA	21	NA	7.07	0.6	327.01	8.46	318.55	NA
S-3	8/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.01	8.43	318.58	NA

S-4	1/25/1991	<50	<50	<0.5	1.5	<0.5	2.8	NA	327.38	NA	NA	NA								
S-4	4/16/1991	<50	0.7	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	10/18/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	327.38	8.82	318.56	NA								
S-4	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	7/17/1992	<500	74	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	10/16/1992	<500	<50	<0.5	<0.5	<0.5	<0.5	NA	327.38	NA	NA	NA								
S-4	1/23/1993	<500	94 b	<0.5	<0.5	<0.5	<0.5	NA	327.38	8.32	319.06	NA								

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-4	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.76	317.62	NA	
S-4	9/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.30	318.08	NA	
S-4	12/8/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.74	317.64	NA	
S-4	3/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.60	317.78	NA	
S-4	6/16/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.42	317.96	NA	
S-4	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.02	318.36	NA	
S-4	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.38	9.29	318.09	NA	
S-4	5/12/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	140	NA	NA	NA	NA	NA	NA	NA	327.38	7.95	319.43	2.5	
S-4	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	250	NA	NA	NA	NA	NA	NA	NA	327.38	8.96	318.42	2.0	
S-4	6/27/1999	303	NA	35.8	24.8	12.4	69.8	106	NA	NA	NA	NA	NA	NA	NA	327.38	8.90	318.48	2.6	
S-4	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	40.2	NA	NA	NA	NA	NA	NA	NA	327.38	8.37	319.01	1.9	
S-4	5/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	6.8	NA	NA	NA	NA	NA	NA	327.38	8.83	318.55	1.8	
S-4	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	31	NA	NA	NA	NA	NA	NA	327.38	9.37	318.01	4.8	
S-4	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	130	NA	NA	NA	NA	NA	NA	327.24	8.46	318.78	1.4	
S-4	5/3/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	170	NA	NA	NA	NA	NA	NA	327.24	8.70	318.54	1.1	
S-4	1/14/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	25	NA	NA	NA	NA	NA	NA	327.24	8.17	319.07	NA	
S-4	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	15	<0.50	<0.50	<0.50	<5.0	NA	NA	327.24	8.25	318.99	NA	
S-4	8/5/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	6.1	<2.0	<2.0	<2.0	<5.0	NA	NA	327.24	8.14	319.10	NA	
S-4	11/8/2005	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	1.01	<0.500	<0.500	<0.500	<10.0	NA	NA	327.24	8.33	318.91	NA	
S-4	1/31/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	327.24	8.29	318.95	NA	
S-4	5/16/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	327.24	8.46	318.78	NA	
S-4	8/23/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	327.24	8.34	318.90	NA	
S-4	11/13/2006	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<20	NA	NA	327.24	8.23	319.01	NA	
S-4	2/1/2007	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	327.24	8.56	318.68	NA	
S-4	5/23/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	0.60 o	<2.0	<2.0	<2.0	<10	NA	NA	327.24	7.92	319.32	NA	
S-4	8/7/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	0.32 o	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.52	318.72	NA	
S-4	11/29/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.58	318.66	NA	
S-4	2/8/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.07	319.17	NA	
S-4	5/21/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.24	8.80	318.44	NA
S-4	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.73	318.51	NA	
S-4	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.77	318.47	NA	
S-4	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	9.32	317.92	NA	
S-4	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.45	318.79	NA	
S-4	7/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	327.24	8.79	318.45	NA	
S-4	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	NA	327.24	8.59	318.65	NA	
<b>S-4</b>	<b>8/12/2010</b>	<b>Unable to access</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>327.24</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-4	8/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.24	8.50	318.74	NA
S-5	1/25/1991	<50	<50	<0.5	<0.5	<0.5	0.7	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	4/16/1991	<50	<50	<0.5	<0.5	<0.5	0.8	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	10/18/1991	120 e	<50	4.3	<0.5	1	0.7	NA	NA	NA	NA	NA	NA	NA	NA	327.76	10.00	317.76	NA	NA
S-5	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	4/27/1992	50	<50	<0.5	<0.5	<0.5	0.6	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	7/17/1992	<50	70	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	10/16/1992	230	57	13	<0.5	4.9	4.3	NA	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA	NA
S-5	1/23/1993	<50	150 b	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	8.88	318.88	NA	NA
S-5	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	10.20	317.56	NA	NA
S-5	9/22/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	9.92	317.84	NA	NA
S-5	12/8/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	10.19	317.57	NA	NA
S-5	3/4/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	9.95	317.81	NA	NA
S-5	6/16/1994	<50	NA	0.9	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	10.02	317.74	NA	NA
S-5	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	9.58	318.18	NA	NA
S-5	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	327.76	9.84	317.92	NA	NA
S-5	5/12/1997	360	NA	3.3	<0.50	17	9.8	130	NA	NA	NA	NA	NA	NA	NA	327.76	9.16	318.60	4.2	NA
S-5	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	92	NA	NA	NA	NA	NA	NA	NA	327.76	9.25	318.51	3.8	NA
S-5 (D)	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	100	NA	NA	NA	NA	NA	NA	NA	327.76	9.25	318.51	3.8	NA
S-5	6/27/1999	223	NA	13.7	12.9	8.20	45.8	106	NA	NA	NA	NA	NA	NA	NA	327.76	9.39	318.37	3.0	NA
S-5	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	255	NA	NA	NA	NA	NA	NA	NA	327.76	9.43	318.33	1.2	NA
S-5	5/30/2001	<100	NA	<1.0	<1.0	<1.0	<1.0	NA	480	NA	NA	NA	NA	NA	NA	327.76	9.47	318.29	1.1	NA
S-5	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	210	NA	NA	NA	NA	NA	NA	327.76	9.74	318.02	0.2	NA
S-5	5/30/2003	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	450	NA	NA	NA	NA	NA	NA	327.43	8.87	318.56	1.7	NA
S-5	5/3/2004	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	470	NA	NA	NA	NA	NA	NA	327.43	9.10	318.33	0.7	NA
S-5	1/14/2005	<100	NA	<1.0	<1.0	<1.0	<2.0	NA	230	NA	NA	NA	NA	NA	NA	327.43	8.43	319.00	NA	NA
S-5	5/5/2005	76	NA	16	<0.50	<0.50	<0.50	NA	120	<0.50	<0.50	<0.50	630	NA	NA	327.43	8.71	318.72	NA	NA
S-5	08/05/2005 I	1,900	NA	57	7.5	22	17	NA	240	<4	<4	<4	480	NA	NA	327.43	8.90	318.53	NA	NA
S-5	9/16/2005	1,400	NA	87	2.0	7.8	5.8	NA	75	<4.0	<4.0	<4.0	630	NA	NA	327.43	8.84	318.59	NA	NA
S-5	11/8/2005	315	NA	35.8	<0.500	<0.500	1.07	NA	49.1	<0.500	<0.500	<0.500	<10.0	NA	NA	327.43	8.86	318.57	NA	NA
S-5	1/31/2006	335	NA	7.74	<0.500	<0.500	<0.500	NA	48.2	<0.500	<0.500	<0.500	337	NA	NA	327.43	8.66	318.77	NA	NA
S-5	5/16/2006	349	NA	3.54	<0.500	<0.500	<0.500	NA	24.7	<0.500	<0.500	<0.500	182	NA	NA	327.43	9.00	318.43	NA	NA
S-5	8/23/2006	<50.0	NA	5.39	<0.500	<0.500	<0.500	NA	17.0	<0.500	<0.500	<0.500	91.0	NA	NA	327.43	8.97	318.46	NA	NA
S-5	11/13/2006	420	NA	19	1.7	<0.50	1.7	NA	19	<0.50	<0.50	<0.50	80	NA	NA	327.43	8.77	318.66	NA	NA

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

S-5	2/1/2007	280	NA	14	2.1	<0.50	1.4	NA	13	<2.0	<2.0	<2.0	42	NA	NA	NA	327.43	9.30	318.13	NA
S-5	5/23/2007	590 n	NA	19	2.0	<1.0	0.92 o	NA	11	<2.0	<2.0	<2.0	24	NA	NA	NA	327.43	8.73	318.70	NA
S-5	8/7/2007	450 n	NA	10	1.0	<1.0	<1.0	NA	13	<2.0	<2.0	<2.0	17	NA	NA	NA	327.43	9.00	318.43	NA
S-5	11/29/2007	340 n	NA	4.1	0.34 o	<1.0	<1.0	NA	7.1	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	9.06	318.37	NA
S-5	2/8/2008	270 n	NA	4.7	<1.0	<1.0	<1.0	NA	6.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	8.75	318.68	NA
S-5	2/20/2008	340 n	NA	4.6	<1.0	<1.0	<1.0	NA	5.5	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.03	318.40	NA
S-5	3/7/2008	220 n	NA	1.8	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.20	318.23	NA
S-5	3/21/2008	150	NA	0.71	<1.0	<1.0	<1.0	NA	5.2	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.43	318.00	NA
S-5	4/8/2008	120	NA	0.76	<1.0	<1.0	<1.0	NA	5.2	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.11	318.32	NA
S-5	4/21/2008	190	NA	0.63	<1.0	<1.0	<1.0	NA	3.4	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.17	318.26	NA
S-5	5/6/2008	150	NA	1.0	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	190	NA	NA	327.43	8.80	318.63	NA
S-5	5/21/2008	250	NA	1.6	<1.0	<1.0	<1.0	NA	3.8	<2.0	<2.0	<2.0	<10	<100	NA	NA	327.43	9.20	318.23	NA
S-5	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	6.2	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	9.11	318.32	NA
S-5	11/18/2008	93	NA	<0.50	<1.0	<1.0	<1.0	NA	3.5	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	9.06	318.37	NA
S-5	1/20/2009	59	NA	<0.50	<1.0	<1.0	<1.0	NA	2.7	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	9.60	317.83	NA
S-5	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	2.5	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	8.94	318.49	NA
S-5	7/6/2009	62	NA	<0.50	<1.0	<1.0	<1.0	NA	2.5	<2.0	<2.0	<2.0	<10	NA	NA	NA	327.43	9.18	318.25	NA
S-5	2/9/2010	130	NA	2.3	<1.0	<1.0	<1.0	NA	2.4	NA	NA	NA	<10	NA	NA	NA	327.43	8.90	318.53	NA
<b>S-5</b>	<b>8/12/2010</b>	<b>220</b>	<b>NA</b>	<b>3.3</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>2.8</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>6.81</b>	<b>NA</b>	<b>327.43</b>	<b>9.22</b>	<b>318.21</b>	<b>NA</b>
<b>S-5</b>	<b>8/18/2010</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>327.43</b>	<b>9.12</b>	<b>318.31</b>	<b>NA</b>

S-6	1/25/1991	<50	<50	<0.5	1.7	<0.5	2.8	NA	326.56	NA	NA	NA								
S-6	4/16/1991	<50	<50	<0.5	<0.5	<0.5	0.6	NA	326.56	NA	NA	NA								
S-6	7/24/1991	<50	<50	<0.5	<0.5	<0.5	0.5	NA	326.56	NA	NA	NA								
S-6	10/18/1991	<50	<50	<0.5	<0.5	<0.5	0.5	NA	326.56	8.84	317.22	NA								
S-6	1/23/1992	<50	<50	<0.5	<0.5	<0.5	0.5	NA	326.56	NA	NA	NA								
S-6	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.56	NA	NA	NA								
S-6	7/17/1992	400	130	<0.5	<0.5	<0.5	<0.5	NA	326.56	NA	NA	NA								
S-6	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.56	NA	NA	NA								
S-6	1/23/1993	<50	230 b	<0.5	<0.5	<0.5	<0.5	NA	326.56	7.82	318.74	NA								
S-6	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.56	9.00	317.56	NA								
S-6	9/22/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.56	8.61	317.96	NA								
S-6	12/8/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.56	10.02	316.54	NA								
S-6	3/4/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	326.56	8.88	317.68	NA								
S-6	6/16/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	326.56	9.04	317.52	NA								
S-6	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	326.56	8.54	318.02	NA								

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

S-6	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	326.56	8.62	317.94	NA								
S-6	5/12/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	326.56	8.60	317.96	2.6							
S-6	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	326.56	7.90	318.66	2.2							
S-6	6/27/1999	430	NA	50.1	30.5	15.2	83.5	8.05	NA	326.56	8.01	318.55	2.3							
S-6	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	326.56	8.84	317.72	2.0							
S-6	5/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	NA	NA	326.56	8.54	318.02	1.9	
S-6	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	326.56	8.48	318.08	1.3	
S-6	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	8.7	NA	NA	NA	NA	NA	NA	326.35	7.36	318.99	1.0	
S-6	5/3/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	326.35	8.08	318.27	0.9	
S-6	1/14/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	326.35	7.38	318.97	NA	
S-6	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	326.35	7.55	318.80	NA	
S-6	8/5/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	326.35	7.61	318.74	NA	
S-6	11/8/2005	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	326.35	7.64	318.71	NA	
S-6	1/31/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	30.5	NA	NA	326.35	7.90	318.45	NA
S-6	5/16/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	326.35	8.16	318.19	NA	
S-6	8/23/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	10.9	NA	NA	326.35	7.77	318.58	NA	
S-6	11/13/2006	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<20	NA	NA	326.35	8.15	318.20	NA	
S-6	2/1/2007	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	1.2	<2.0	<2.0	<2.0	<5.0	NA	NA	326.35	8.36	317.99	NA	
S-6	5/23/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	7.80	318.55	NA	
S-6	8/7/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	0.39 o	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.07	318.28	NA	
S-6	11/29/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.17	318.18	NA	
S-6	2/8/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	7.67	318.68	NA	
S-6	5/21/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.17	318.18	NA	
S-6	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	7.89	318.46	NA	
S-6	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.30	318.05	NA	
S-6	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.01	318.34	NA	
S-6	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	7.96	318.39	NA	
S-6	7/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	326.35	8.32	318.03	NA	
S-6	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	NA	326.35	7.99	318.36	NA	
<b>S-6</b>	<b>8/12/2010</b>	<b>NA</b>	<b>326.35</b>	<b>7.84</b>	<b>318.51</b>	<b>NA</b>														

S-7	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.49	NA	NA	NA							
S-7	4/16/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.49	NA	NA	NA							
S-7	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	326.49	NA	NA	NA							
S-7	10/18/1991	<50	140 f	<0.5	<0.5	<0.5	<0.5	NA	326.49	8.92	317.57	NA							
S-7	1/23/1992	<50	140 f	<0.5	<0.5	<0.5	<0.5	NA	326.49	NA	NA	NA							

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-7	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA	
S-7	7/17/1992	<50	<50	<0.5	1.8	0.6	4.1	NA	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA	
S-7	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA	
S-7	1/23/1993	<50	110 b	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.06	318.43	NA	
S-7	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.94	317.55	NA	
S-7	9/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.57	317.92	NA	
S-7	12/8/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.49	9.00	317.49	NA	
S-7	3/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.96	317.53	NA	
S-7	6/16/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.49	9.12	317.37	NA	
S-7	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.58	317.91	NA	
S-7	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	326.49	8.64	317.85	NA	
S-7	5/12/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	326.49	8.74	317.75	2.3	
S-7	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	326.49	8.00	318.49	2.5	
S-7	6/27/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	NA	NA	NA	NA	NA	NA	326.49	8.75	317.74	2.9	
S-7	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	326.49	8.96	317.53	2.2	
S-7	5/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	NA	NA	326.49	8.65	317.84	2.0	
S-7	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	326.49	8.55	317.94	2.3	
S-7	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	12	NA	NA	NA	NA	NA	NA	326.36	7.88	318.48	1.8	
S-7	5/3/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	100	NA	NA	NA	NA	NA	NA	326.36	8.30	318.06	1.2	
S-7	1/14/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	41	NA	NA	NA	NA	NA	NA	326.36	7.70	318.66	NA	
S-7	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	91	<0.50	<0.50	6.8	<5.0	NA	NA	326.36	7.60	318.76	NA	
S-7	8/5/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	100	<2.0	<2.0	7.5	<5.0	NA	NA	326.36	8.42	317.94	NA	
S-7	11/8/2005	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	124	<0.500	<0.500	8.70	<10.0	NA	NA	326.36	7.61	318.75	NA	
S-7	1/31/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	93.0	<0.500	<0.500	4.50	<10.0	NA	NA	326.36	7.85	318.51	NA	
S-7	5/16/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	76.3	<0.500	<0.500	2.98	<10.0	NA	NA	326.36	8.08	318.28	NA	
S-7	8/23/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	34.7	<0.500	<0.500	2.02	<10.0	NA	NA	326.36	7.93	318.43	NA	
S-7	11/13/2006	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	27	<0.50	<0.50	1.6	<20	NA	NA	326.36	8.15	318.21	NA	
S-7	2/1/2007	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	45	<2.0	<2.0	2.9	28	NA	NA	326.36	8.35	318.01	NA	
S-7	5/23/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	1.7	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.11	318.25	NA	
S-7	8/7/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	23	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.36	318.00	NA	
S-7	11/29/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	10	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.19	318.17	NA	
S-7	2/8/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	9.2	<2.0	<2.0	<2.0	<10	NA	NA	326.36	7.73	318.63	NA	
S-7	5/21/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	8.8	<2.0	<2.0	<2.0	<10	<100	NA	NA	326.36	8.10	318.26	NA
S-7	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	1.2	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.49	317.87	NA	
S-7	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	7.6	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.31	318.05	NA	
S-7	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	7.7	<2.0	<2.0	<2.0	<10	NA	NA	326.36	8.39	317.97	NA	

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-7	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	6.4	<2.0	<2.0	<2.0	<10	NA	NA	NA	326.36	8.39	317.97	NA
S-7	7/6/2009	58	NA	<0.50	<1.0	<1.0	<1.0	NA	4.3	<2.0	<2.0	<2.0	<10	NA	NA	NA	326.36	8.63	317.73	NA
S-7	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	8.4	NA	NA	NA	<10	NA	NA	NA	326.36	8.15	318.21	NA
S-7	8/12/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	7.08	NA	326.36	7.98	318.38	NA
S-8	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	4/16/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	10/18/1991	<50	360 f	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.62	317.70	NA
S-8	1/23/1992	<50	90	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	7/17/1992	53	<50	<0.5	1	<0.5	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	NA	NA	NA
S-8	1/23/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.00	318.32	NA
S-8	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.77	317.55	NA
S-8	9/22/1993	<50	160	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.67	317.65	NA
S-8	12/8/1993	<50	210	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.76	317.56	NA
S-8	3/4/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.66	317.66	NA
S-8	6/16/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.78	317.54	NA
S-8	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.42	317.90	NA
S-8	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.50	317.82	NA
S-8	5/12/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.56	317.76	1.6
S-8	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	325.32	7.64	317.68	2.0
S-8	6/27/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<2.00	NA	NA	NA	NA	NA	NA	NA	325.32	7.75	317.57	2.3
S-8	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	325.32	8.02	317.30	1.8
S-8	5/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	325.32	7.34	317.98	1.8
S-8	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	325.32	7.45	317.87	1.8
S-8	5/30/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	14	NA	NA	NA	NA	NA	NA	NA	325.03	7.39	317.64	3.0
S-8	5/3/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	325.03	7.00	318.03	1.0
S-8	1/14/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	325.03	8.65	316.39	NA
S-8	5/5/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	325.03	6.73	318.30	NA
S-8	8/5/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	325.03	6.93	318.10	NA
S-8	11/8/2005	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	325.03	6.95	318.08	NA
S-8	1/31/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	325.03	6.91	318.12	NA
S-8	5/16/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	325.03	7.02	318.01	NA
S-8	8/23/2006	<50.0	NA	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	NA	NA	325.03	6.98	318.05	NA

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-8	11/13/2006	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<20	NA	NA	NA	325.03	7.09	317.94	NA
S-8	2/1/2007	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	325.03	7.27	317.76	NA
S-8	5/23/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	6.80	318.23	NA
S-8	8/7/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.04	317.99	NA
S-8	11/29/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.04	317.99	NA
S-8	2/8/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	6.77	318.26	NA
S-8	5/21/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	<100	NA	NA	325.03	7.10	317.93	NA
S-8	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	6.94	318.09	NA
S-8	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.10	317.93	NA
S-8	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.18	317.85	NA
S-8	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.18	317.85	NA
S-8	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.01	318.02	NA
S-8	7/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.03	7.83	317.20	NA
S-8	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	NA	NA	325.03	6.91	318.12	NA
<b>S-8</b>	<b>8/12/2010</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>325.03</b>	<b>7.14</b>	<b>317.89</b>	<b>NA</b>
S-9	11/22/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	325.89	7.61	318.28	NA
S-9	11/27/2006	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	325.89	7.77	318.12	NA
S-9	2/1/2007	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	325.89	8.14	317.75	NA
S-9	5/23/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.85	318.04	NA
S-9	8/7/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.77	318.12	NA
S-9	11/29/2007	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.99	317.90	NA
S-9	2/8/2008	<50 n	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.78	318.11	NA
S-9	5/21/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	<100	NA	NA	325.89	7.84	318.05	NA
S-9	8/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.69	318.20	NA
S-9	11/18/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.93	317.96	NA
S-9	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	8.13	317.76	NA
S-9	5/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	8.02	317.87	NA
S-9	7/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	8.06	317.83	NA
S-9	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	325.89	7.80	318.09	NA
<b>S-9</b>	<b>8/12/2010</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>325.89</b>	<b>7.96</b>	<b>317.93</b>	<b>NA</b>
<b>S-9</b>	<b>8/18/2010</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>325.89</b>	<b>7.86</b>	<b>318.03</b>	<b>NA</b>
S-10	6/30/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.24	8.04	318.20	NA
S-10	7/6/2009	340	NA	<1.0	<2.0	<2.0	<2.0	NA	<2.0	<4.0	<4.0	<4.0	5,100	NA	NA	NA	326.24	8.11	318.13	NA
S-10	2/9/2010	65	NA	<0.50	<1.0	<1.0	<1.0	NA	1.7	NA	NA	NA	1,400	NA	NA	NA	326.24	7.90	318.34	NA

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

S-10	8/12/2010	<100	NA	<1.0	<2.0	<2.0	<2.0	NA	<2.0	NA	NA	NA	610	NA	7.44	0.0	326.24	8.04	318.20	NA
S-10	8/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.24	8.04	318.20	NA

S-11	6/30/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.12	7.97	318.15	NA
S-11	7/6/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	326.12	7.98	318.14	NA
S-11	2/9/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	NA	NA	326.12	9.99	316.13	NA
<b>S-11</b>	<b>8/12/2010</b>	<b>&lt;50</b>	<b>NA</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>7.28</b>	<b>NA</b>	<b>326.12</b>	<b>8.17</b>	<b>317.95</b>	<b>NA</b>
S-11	8/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.12	7.91	318.21	NA

S-12	6/30/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.91	8.49	318.42	NA
S-12	7/6/2009	83	NA	<0.50	<1.0	<1.0	<1.0	NA	37	<2.0	<2.0	<2.0	<10	NA	NA	NA	326.91	8.89	318.02	NA
S-12	2/9/2010	57	NA	<0.50	<1.0	<1.0	<1.0	NA	26	NA	NA	NA	11	NA	NA	NA	326.91	7.97	318.94	NA
<b>S-12</b>	<b>8/12/2010</b>	<b>Unable to access</b>	<b>NA</b>	<b>326.91</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>													
S-12	8/18/2010	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	20	NA	326.91	8.33	318.58	NA						

EW-1	2/20/2008	9,100 n	NA	110	180	840	146.9	NA	<5.0	<10	<10	<10	<50	<500	NA	NA	NA	8.07	NA	NA	
EW-1	3/7/2008	11,000 n	NA	380	200	370	317.0	NA	<5.0	<10	<10	<10	<50	<500	NA	NA	NA	17.80	NA	NA	
EW-1	3/21/2008	14,000	NA	690	430	750	614	NA	<5.0	<10	<10	<10	<50	<500	NA	NA	NA	8.61	NA	NA	
EW-1	4/8/2008	12,000	NA	430	200	430	302	NA	<5.0	<10	<10	<10	<50	<500	NA	NA	NA	8.40	NA	NA	
EW-1	4/21/2008	22,000	NA	430	510	1,100	747	NA	<5.0	<10	<10	<10	<50	<500	NA	NA	NA	8.33	NA	NA	
EW-1	5/6/2008	20,000	NA	280	620	1,000	616	NA	<10	<20	<20	<20	<100	<1,000	NA	NA	NA	8.30	NA	NA	
EW-1	5/21/2008	17,000	NA	180	440	830	484	NA	<10	<20	<20	<20	<100	<1,000	NA	NA	NA	8.60	NA	NA	
EW-1	8/6/2008	12,000	NA	140	79	720	110	NA	<10	<20	<20	<20	<100	<1,000	NA	NA	NA	8.41	NA	NA	
EW-1	11/18/2008	16,000	NA	94	170	970	310	NA	<20	<40	<40	<40	<200	NA	NA	NA	NA	8.03	NA	NA	
EW-1	1/20/2009	10,000	NA	110	58	440	61	NA	<20	<40	<40	<40	<200	NA	NA	NA	NA	8.98	NA	NA	
EW-1	5/6/2009	14,000	NA	73	120	690	120	NA	<20	<40	<40	<40	<200	NA	NA	NA	NA	7.92	NA	NA	
EW-1	7/6/2009	17,000	NA	18	82	750	140	NA	<10	<20	<20	<20	<100	NA	NA	NA	NA	326.98	8.21	318.77	NA
EW-1	2/9/2010	12,000	NA	13	41	490	120	NA	<5.0	NA	NA	NA	<50	NA	NA	NA	326.98	8.20	318.78	NA	
<b>EW-1</b>	<b>8/12/2010</b>	<b>11,000</b>	<b>NA</b>	<b>2.9</b>	<b>17</b>	<b>370</b>	<b>113.4</b>	<b>NA</b>	<b>&lt;2.0</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;20</b>	<b>NA</b>	<b>7.13</b>	<b>1.2</b>	<b>326.98</b>	<b>8.03</b>	<b>318.95</b>	<b>NA</b>	
EW-1	8/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	326.98	8.09	318.89	NA	

EW-2	12/14/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.25	NA	NA
EW-2	2/8/2008	70 n,p	NA	<0.50	<1.0	<1.0	<1.0	NA	8.9	<2.0	<2.0	<2.0	940	NA	NA	NA	8.42	NA	NA
EW-2	2/20/2008	59 n,p	NA	<1.0	<2.0	<2.0	<2.0	NA	10	<4.0	<4.0	<4.0	1,300	<200	NA	NA	8.85	NA	NA
EW-2	3/7/2008	850 n,p	NA	<1.0	<2.0	<2.0	<2.0	NA	8.0	<4.0	<4.0	<4.0	1,200	<200	NA	NA	9.75	NA	NA
EW-2	3/21/2008	350	NA	5.3	4.6	6.2	18	NA	<2.0	<4.0	<4.0	<4.0	990	<200	NA	NA	9.51	NA	NA

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

EW-2	4/8/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	8.9	<2.0	<2.0	<2.0	180	<100	NA	NA	NA	9.12	NA	NA
EW-2	4/21/2008	140	NA	<0.50	<1.0	<1.0	<1.0	NA	57	<2.0	<2.0	<2.0	230	<100	NA	NA	NA	8.86	NA	NA
EW-2	5/6/2008	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	8.3	<2.0	<2.0	<2.0	590	<100	NA	NA	NA	8.87	NA	NA
EW-2	5/21/2008	53	NA	<0.50	<1.0	<1.0	<1.0	NA	11	<2.0	<2.0	<2.0	380	<100	NA	NA	NA	9.00	NA	NA
EW-2	8/6/2008	60	NA	<0.50	<1.0	<1.0	<1.0	NA	10	<2.0	<2.0	<2.0	560	NA	NA	NA	NA	8.81	NA	NA
EW-2	11/18/2008	140	NA	8.0	<1.0	6.2	29	NA	7.4	<2.0	<2.0	<2.0	410	NA	NA	NA	NA	8.92	NA	NA
EW-2	1/20/2009	<50	NA	<0.50	<1.0	<1.0	<1.0	NA	6.8	<2.0	<2.0	<2.0	390	NA	NA	NA	NA	9.28	NA	NA
EW-2	5/6/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327.21	NA	NA	NA	

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to May 30, 2001 analyzed by EPA Method 8015.

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to May 30, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

TOB = Top of Wellbox Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

ppm = Parts per million

mg/L = milligrams per litre

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

**TABLE 3**  
**WELL CONCENTRATIONS**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	pH	Fe <sup>2+</sup> (mg/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	----	----------------------------	--------------	----------------------------	--------------------------	------------------------

Notes:

Ethanol analyzed by EPA Method 8260B

a = Compounds detected as TEPH appear to be the less volatile constituents of gasoline.

b = The concentration reported as TEPH primarily due to the presence of a heavier petroleum product.

c = The concentration reported as TEPH due to the presence of a lighter petroleum product.

d = Concentrations reported as diesel includes a heavier petroleum product.

e = Compounds detected within the chromatographic range of TEPH but not characteristic of the standard gasoline pattern.

f = There was insufficient preservative to reduce the sample pH to less than 2.

g = Compounds detected within the chromatographic range of TEPH but not characteristic of the standard diesel pattern.

h = The chromatographic pattern of the purgeable hydrocarbons found in the sample is similar to the pattern of weathered gasoline.

i = DO reading not taken.

j = The results may be biased slightly high.

k = The hydrocarbon reported in the gasoline range does not match the laboratory standard.

l = Extracted out of holding time.

m = Analyte was detected in the associated Method Blank.

n = Analyzed by EPA Method 8015B (M).

o = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

p = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Site surveyed April 16, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

Beginning May 30, 2003, depth to water referenced to Top of Casing elevation.

Wells S-2, S-3 and S-9 were surveyed on November 22, 2006 by Mid Coast Engineers.

Wells S-10 through S-12 and EW-1 were surveyed on June 25, 2009 by Mid Coast Engineers.

**APPENDIX A**

**REGULATORY CORRESPONDENCE**



January 12, 2010

Denis Brown  
Shell Oil Products US  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039

Carl Cox  
CJC Hopyard LLC  
4431 Stoneridge Drive, #100  
Pleasanton, CA 94588-8412

Subject: Fuel Leak Case No. RO0000194 and Geotracker Global ID T0600101267, Shell#13-5785, 5251 Hopyard Road, Pleasanton, CA 94566

Dear Mr. Brown and Mr. Cox:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the most recent document entitled, "*Magnesium Sulfate Feasibility Study and Work Plan, Shell Branded Service Station, 5251 Hopyard Road, Pleasanton, California*," dated March 19, 2009. The Work Plan, which was prepared on Shell's behalf by Delta Environmental Consultants, Inc., proposes adding magnesium sulfate to groundwater through infiltration to enhance biodegradation processes in the source area.

The proposed scope of work is acceptable and may be implemented as proposed. We request that you perform the proposed work and present results from the feasibility study in the quarterly reports described below.

#### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **45 days following the end of each quarter** – Quarterly Feasibility Study and Monitoring Reports

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

#### **ELECTRONIC SUBMITTAL OF REPORTS**

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

Denis Brown  
Carl Cox  
RO0000194  
January 12, 2010  
Page 2

FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Denis Brown  
Carl Cox  
RO0000194  
January 12, 2010  
Page 3

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566  
(Sent via E-mail to: [dstefani@lpfire.org](mailto:dstefani@lpfire.org))

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551  
(Sent via E-mail to: [cdizon@zone7water.com](mailto:cdizon@zone7water.com))

Suzanne McClurkin-Nelson, Delta Environmental Consultants, Inc., 312 Piercy Road, San Jose, CA 95138 (Sent via E-mail to: [SMcClurkin-Nelson@deltaenv.com](mailto:SMcClurkin-Nelson@deltaenv.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))  
Jerry Wickham, ACEH  
Geotracker, File

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> March 27, 2009
	<b>PREVIOUS REVISIONS:</b> December 16, 2005, October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

## Submission Instructions

- 1) Obtain User Name and Password:
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org)  
Or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape and Firefox browsers will not open the FTP site.
  - b) Click on File, then on Login As.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

September 10, 2010

Denis Brown  
Shell Oil Products US  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039

Carl Cox  
CJC Hopyard LLC  
4431 Stoneridge Drive, #100  
Pleasanton, CA 94588-8412

Subject: Review of Feasibility Study for Fuel Leak Case No. RO0000194 and Geotracker Global ID T0600101267, Shell#13-5785, 5251 Hopyard Road, Pleasanton, CA 94566

Dear Mr. Brown and Mr. Cox:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the most recent document entitled, "Second Quarter 21010 Quarterly Magnesium Sulfate Feasibility Study Report, Shell Branded Service Station, 5251 Hopyard Road, Pleasanton, California," dated August 11, 2010. The Report, which was prepared on Shell's behalf by Delta Environmental Consultants, Inc., presents results from monitoring of three applications of magnesium sulfate to existing monitoring wells. The Report also recommends one additional magnesium sulfate application event using a pump to be conducted once sulfate concentrations decrease below 1,000 milligrams per liter in the application wells. Monitoring samples would be collected during the two months following the application.

We have no objection to implementing an additional application event as proposed. We request that you perform the proposed work and present results and recommendations from the feasibility study in the reports described below.

#### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **November 15, 2010 or February 15, 2011 (contingent upon concentration of MgSO<sub>4</sub> in application wells)** – Quarterly Feasibility Study and Monitoring Report

Denis Brown  
Carl Cox  
RO0000194  
September 10, 2010  
Page 2

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Attachments: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasonton Fire Department, 3560 Nevada St, Pleasonton, CA 94566  
(Sent via E-mail to: [dstefani@lpfire.org](mailto:dstefani@lpfire.org))

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551  
(Sent via E-mail to: [cdizon@zone7water.com](mailto:cdizon@zone7water.com))

Suzanne McClurkin-Nelson, Delta Environmental Consultants, Inc., 312 Piercy Road, San Jose, CA 95138 (Sent via E-mail to: [SMcClurkin-Nelson@deltaenv.com](mailto:SMcClurkin-Nelson@deltaenv.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))

Jerry Wickham, ACEH

Geotracker, File

Attachment 1  
**Responsible Party(ies) Legal Requirements/Obligations**

**REPORT REQUESTS**

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

**ELECTRONIC SUBMITTAL OF REPORTS**

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/electronic\\_submittal/report\\_rqmts.shtml](http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml)).

**PERJURY STATEMENT**

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

**PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS**

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

**UNDERGROUND STORAGE TANK CLEANUP FUND**

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

**AGENCY OVERSIGHT**

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> July 8, 2010
	<b>PREVIOUS REVISIONS:</b> December 16, 2005, October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

## Submission Instructions

- 1) Obtain User Name and Password:
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org)  
Or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Teena Le Khan.
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape and Firefox browsers will not open the FTP site.
  - b) Click on Page on upper right side of browser, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

**APPENDIX B**

**DECEMBER 11, 2009 MAGNESIUM SULFATE  
FEASIBILITY STUDY AND WORK PLAN**



December 11, 2009  
Delta Project: SCA5251H1A  
SAP #: 135785

Mr. Jerry Wickham, PG, CHG  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6540

**Re:** **Magnesium Sulfate Feasibility Study and Work Plan**  
Shell Branded Service Station  
5251 Hopyard Road  
Pleasanton, California

Dear Mr. Wickham:

Delta Consultants (Delta) has prepared this *Magnesium Sulfate Feasibility Study Work Plan* to (1) review and summarize historic remedial efforts and effectiveness at the site, (2) evaluate historic data for compounds of concern including total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), and fuel oxygenates, (3) determine the feasibility of enhanced biodegradation and chemical degradation of TPH-g and BTEX compounds at the site through the introduction of magnesium sulfate ( $MgSO_4$ ), and (4) establish a sampling and field monitoring plan following  $MgSO_4$  application events.

Based on a review of current groundwater parameters, Delta proposes a feasibility study utilizing  $MgSO_4$  enhancement for site remediation. This pilot study is designed to determine the optimal  $MgSO_4$  infiltration volumes, solution concentrations and the application and monitoring frequencies that will be used in site remediation. Delta is providing this report to the Alameda County Health Care Services Agency and to the Zone 7 Water Agency for their review and approval of this work plan and the proposed monitoring scope and schedule.

## BACKGROUND

### Site Description

The site is an active Shell-branded service station located on the southeast corner of Owens Drive and Hopyard Road in Pleasanton, California (Figure 1). The site is surrounded primarily by commercial properties. The station has four 10,000-gallon gasoline underground storage tanks (USTs), four fuel dispenser islands under a single canopy, a carwash, and a food mart building. Figure 2 depicts recent groundwater elevation contours based on monitoring data collected during the July 2009 sampling event.

### Hydrogeologic Setting

The site is located in the western portion of the Livermore Valley Groundwater Basin where surficial deposits consist primarily of clay. Based on soil borings and cone penetration test (CPT) borings, the site is predominantly underlain by clay and silt with interbedded sand layers to depths of greater than 80 feet below ground surface (bgs). Sand, cemented sand, and silty sand were encountered in boring CPT-1 from 52 feet bgs to the total depth explored of 60 feet bgs and in boring CPT-2 from 36 to 43 feet bgs. Historic boring logs and monitoring wells are included as Attachment A; we were unable to obtain boring logs for wells S-2 through S-5.

The most recent monitoring and sampling event was conducted at the site on July 6, 2009. Groundwater levels ranged from 7.83 feet to 9.18 feet bgs; the groundwater flow direction was variable, but the site historically has had a gradient which varies between the north and west. The historical groundwater elevation and analytical data tables are provided as Attachment B.

### Site Investigation Summary

During an initial site investigation in December 1988, one groundwater monitoring well (S-1) and three vadose zone wells (V-1 through V-3) were installed. In May 1989, four additional groundwater monitoring wells were installed (S-2 through S-5). In October and November of 1989, three offsite monitoring wells were installed (S-6 through S-8). In August 2005 CPT Borings were completed to collect groundwater from the 40 foot and 80 foot groundwater zones. One additional offsite groundwater monitoring well (S-9) was installed in November 2006 to monitor shallow groundwater east of the site. In June 2009, three additional groundwater monitoring wells were installed in an effort to complete delineation of the dissolved-phase plume, two onsite (S-10 and S-12) and one offsite (S-11).

Groundwater has been monitored on a quarterly schedule since January 1991; approval to reduce monitoring to a semiannual schedule was granted in July 2009.

### Petroleum Hydrocarbon Distribution in Soil and Groundwater

The dissolved-phase petroleum hydrocarbon plume appears to be located primarily beneath the central portion of the site; the primary compounds of concern at the site are TPH-g, benzene, and fuel oxygenates methyl tert-butyl ether (MTBE) and tert-butyl alcohol (TBA). The majority of impacts to soil were excavated from beneath the dispensers in 2004 during piping and dispenser upgrades. Confirmation samples collected after the excavation reported the highest concentration of remaining soil impacts at 7 feet bgs with a concentration of 5.6 milligrams per kilogram (mg/kg) TPH-g and 0.88 mg/kg benzene.

Based on the most recent groundwater monitoring data, groundwater impacts are located primarily in the vicinity of the former UST complex, the current UST complex, and the product dispensers. The most recent monitoring event reported significant concentrations of TPH-g in wells EW-1, S-1, and S-3 at

concentrations of 17,000 micrograms per liter ( $\mu\text{g/L}$ ), 5,800  $\mu\text{g/L}$ , and 2,300  $\mu\text{g/L}$ , respectively. Benzene was reported at concentrations of 500  $\mu\text{g/L}$ , 25  $\mu\text{g/L}$  and 18  $\mu\text{g/L}$  in wells S-3, S-1, and EW-1, respectively. MTBE was reported at concentrations of 59  $\mu\text{g/L}$ , 37  $\mu\text{g/L}$ , 22  $\mu\text{g/L}$  and 21  $\mu\text{g/L}$ , respectively, in wells S-2, S-12, S-1 and S-3, and TBA was reported in wells S-10, S-1, and S-5 at concentrations of 5,100  $\mu\text{g/L}$ , 180  $\mu\text{g/L}$ , and 11  $\mu\text{g/L}$ , respectively.

Wells S-4 and S-12 delineate the general upgradient extent of the impacted groundwater; offsite wells S-7 and S-8 delineate the general downgradient extent of impacted groundwater to the west and north, and offsite wells S-6 and S-11 define the crossgradient extent of impacts to groundwater. Current TPH-g, benzene, MTBE and TBA concentrations are detailed on Figure 3, and historic groundwater concentrations are included as Attachment B.

### Sensitive Receptors

A review of the sensitive receptor survey data generated from Department of Water records identified no municipal wells within a 1-mile radius of the site. The nearest surface water body is approximately 1,133 feet northeast of the site and Hewlett Canal is located approximately 1,156 feet east of the site. Based on utility survey results, utilities in the site vicinity are not expected to affect groundwater flow or to provide preferential groundwater migration pathways.

## REMEDIATION ASSESSMENT

### Historic Remediation Summary

In September 2004, product dispensers and product lines were removed to facilitate environmental sampling. A product line was ruptured during excavation of the pea gravel; free product was observed locally within the pea gravel area. Soils were sample beneath the dispenser and in the product trenching and over-excavation was performed along the trench, screening soils with a photoionization detector (PID). The total depth removed varied from 4 feet to 10 feet bgs. A total of approximately 75 cubic yards of petroleum hydrocarbon-impacted soil were removed from the piping trench with observed free product. Groundwater was extracted from the UST area during excavation activities, with a total volume of 33,749 gallons removed. An extraction well (EW-1) was installed in March 2006 for the purpose of batch extractions, but has never been utilized.

### Sulfate in the Hydrocarbon Biodegradation Process

Recent case studies show that in anaerobic conditions, microbes utilize sulfate as a terminal electron acceptor in the process of hydrocarbon biodegradation in groundwater. Although other terminal-electron accepting processes (TEAPs) may occur simultaneously during hydrocarbon degradation (with the utilization of nitrite/nitrate, manganese, iron, and oxygen), data suggests that sulfate reduction may be the most important TEAP in the active reduction of hydrocarbons (Dale R. Van Stempvoort, James Armstrong, and Bernhard Mayer, 2007).

Where dissolved BTEX compound plumes show significantly depleted concentrations of sulfate, typically less than 10 milligrams per liter (mg/L), within the plume core, as well as slightly depleted sulfate on the plume fringe and an elevated sulfate concentration consistent with background concentrations in uncontaminated areas just beyond the plume edge, suggest that anaerobic sulfate reduction is occurring (Lyle Bruce, Jim Cuthbertson, Arati Kolhatkar, J. Scott Ziegler, and Brent Graves, 2007).

A 2001 study conducted by Dale R. Van Stempvoort, et al., concluded that the periodic replenishment of sulfate, resulting from the infiltration of snowmelt carrying dissolved sulfate from soils through the vadose zone and into the aquifer, played a key role in the biodegradation of petroleum hydrocarbons.

### Site Sulfate and Iron Conditions

The 2008 City of Pleasanton Water Quality Report indicates that local groundwater has an average sulfate concentration ranging from 32 to 111 mg/L with an average concentration of 54 mg/L. Groundwater samples collected at the site from wells S-2, S-3, S-10, and EW-1 on October 30, 2009 reported sulfate concentrations ranging from 3.1 mg/L to 540 mg/L, with the lowest concentrations at the core of the plume (EW-1) and the highest concentrations in a perimeter well (S-2). The plume has generally remained centered around well EW-1, with well S-3 presumed to be on the inner fringe of the source area, and wells S-10 and S-2 are on the outer edges of the plume. Groundwater data are summarized in Table 1 and the certified analytical report is included as Attachment C. A graph showing the correlation at each well of TPH-g and sulfate concentrations is provided on Graph 1.

Under anaerobic conditions, insoluble iron (ferric iron—Fe<sup>3+</sup>) can be reduced to its more soluble form, ferrous iron (Fe<sup>2+</sup>). Conversely, through oxidation ferrous iron is converted to ferric iron. The data for ferrous iron at the site appears to follow an inverse relationship to the sulfate concentrations—ferrous iron was detected in the plume core (EW-1) where sulfate levels are low; while ferrous iron was not detected where sulfate levels are high in well S-2 which is located outside of the TPH-g and BTEX plume.

The anaerobic sulfate reduction of hydrocarbons uses ferric (insoluble) iron as a co-metabolite. In this TEAP, as sulfate is utilized and depleted during the degradation of hydrocarbons, you typically see an increase in the concentrations of ferrous (soluble iron) in source areas. The concentration of ferrous iron in the center of the plume (EW-1) was 2.1 mg/L (2,100 µg/L) during this sampling event. This data point strongly suggests sulfate is being consumed in the process of anaerobic hydrocarbon biodegradation and the current low sulfate concentrations may be a limiting factor for continued bioremediation of the plume. Delta proposes that biodegradation may be accelerated by replenishing sulfate where depleted at the core of the plume (wells EW-1 and S-3).

### WORK PLAN FOR PROPOSED BIODEGRADATION ENHANCEMENT

Delta has recently been awarded a patent for the application of sulfate for the purposes of accelerating the cleanup of soil and groundwater. With *in-situ* heterotrophic microbes and iron (ferric iron), the introduction of magnesium sulfate solution (MgSO<sub>4</sub> - dissolved Epsom salt), into hydrocarbon-impacted groundwater yields the following reaction:



Data show that conditions are favorable at the site for sulfate enrichment for the purpose of hydrocarbon remediation. Delta proposes a series of MgSO<sub>4</sub> applications and sampling for sulfate and ferrous iron to monitor the rate of breakdown of hydrocarbons in groundwater.

Prior to the first proposed magnesium sulfate introduction, wells EW-1, S-3, and S-2 will be analyzed for ferrous iron and sulfate, in addition to TPH-g, BTEX compounds, and fuel oxygenates. These three wells will be used as the source (EW-1 and S-3) and upgradient (S-2) data collection points. This information will be used to determine the remedial success of the MgSO<sub>4</sub> infiltration events, and will be used to make a determination for future infiltration events. Following the addition of magnesium sulfate, ferrous iron and sulfate will be added to the quarterly analytical suite for wells EW-1, S-3 and S-2.

For each infiltration event, Delta will introduce a pre-mixed solution of Epsom salt and tap water into wells EW-1 and S-3 by gravity feed. Well EW-1 is screened approximately between 10 and 20 feet bgs, providing a large vertical surface area for MgSO<sub>4</sub> infiltration into the contaminated area. The volume and concentration of the infiltration solution are determined by several factors: site layout conditions, contaminant concentrations, soil types encountered in the vicinity of EW-1 and S-3, estimated pore space volume, and a target source area 30 feet wide by 30 feet long by 10 feet thick. The goal of these infiltration events is to raise the starting sulfate concentration in groundwater to between 3,000 and 5,000 mg/L. It is estimated that the optimal initial application into each well is approximately 200 pounds of MgSO<sub>4</sub> with the appropriate amount of water required to be determined during application.

A baseline groundwater sample from wells EW-1 and S-3 will be collected prior to the first infiltration application of MgSO<sub>4</sub>. The samples will be analyzed for pH, TPH-g, BTEX compounds, MTBE, sulfate, ferrous iron and ferric iron. The groundwater in wells EW-1 and S-3 will be sampled again 4 hours after the initial application of MgSO<sub>4</sub> (for sulfate only), and once every two weeks for the following month. During the second and third months, groundwater samples will be collected once a month. The samples will be analyzed for pH, TPH-g, BTEX compounds, MTBE, sulfate and ferrous iron.

Delta will perform an additional infiltration event when the concentration of sulfate in well EW-1 decreases to approximately 1,000 mg/L. These continued applications, anticipated to be successively smaller in concentration, are necessary to maintain elevated concentrations of sulfate in order to sustain the accumulated anaerobic heterotrophic biomass. The mass of Epson salt applied during the next application will be determined from the current TPH-g concentration at the time. Samples will be collected on the same schedule that followed the previous MgSO<sub>4</sub> application event. Based on the observed starting concentrations and typical sulfate degradation rates, an injection every two to three months is expected. Delta recommends continuing these infiltration events for two to four quarters to evaluate the remedial strategy and effectiveness of the application procedure.

## **REPORTING**

Delta will compile a quarterly report summarizing the remedial progress at the site, including a detailed assessment of the MgSO<sub>4</sub> applications, site contaminant reductions, and recommendations for future applications. In accordance with State of California requirements for the GeoTracker database, the report, including maps, graphs, and all analytical data will be uploaded to the GeoTracker system and to the Alameda county FTP website.

## **LIMITATIONS**

The contents of this document represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This document is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined here will be performed. This document is intended only for the use of Delta's Client and anyone else specifically listed on this document. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this document.

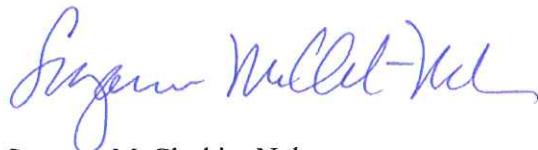
If you have any questions regarding this work plan, or need additional information about the Site, please do not hesitate to contact Suzanne McClurkin- Nelson at (408) 826-1875.

Sincerely,

**DELTA CONSULTANTS**



Cora Olson  
Staff Engineer



Suzanne McClurkin- Nelson  
Senior Project Manager



Doug Umland, P.G.  
Senior Geologist



cc: Denis Brown, Shell Oil Products US, Carson  
Carl Cox, C and J Cox Corporation, Pleasanton  
Colleen Winey, Zone 7 Water Agency, Livermore  
Danielle Stefani, Livermore-Pleasanton Fire Department, Pleasanton

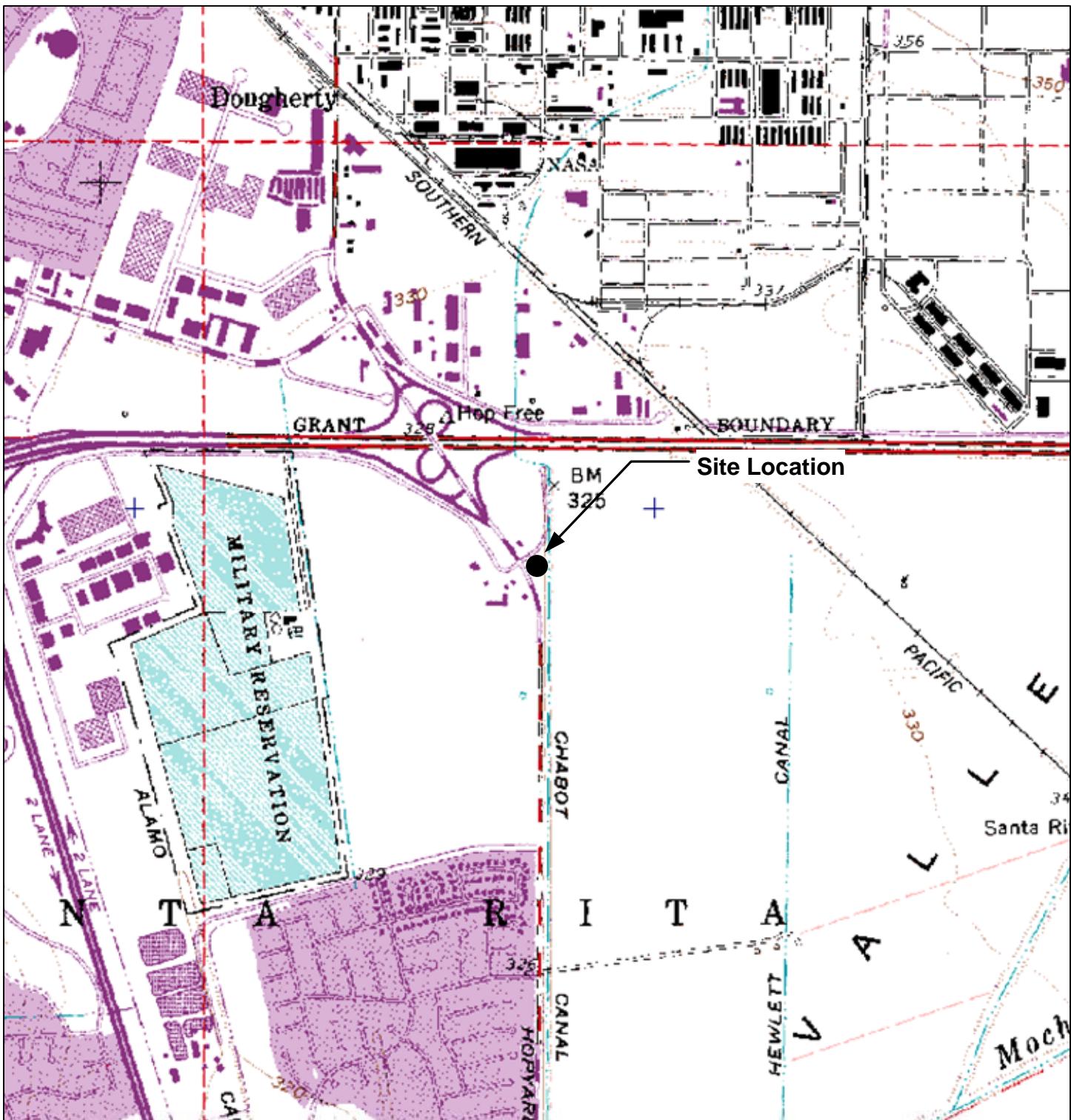
## ATTACHMENTS

- Figure 1 Site Location Map
- Figure 2 Groundwater Elevation Contour Map – 7/6/2009
- Figure 3 Groundwater Hydrocarbon Distribution Map – 7/6/2009
- Table 1 MgSO<sub>4</sub> Application Feasibility Groundwater Testing Data
- Graph 1 TPH-g vs. Sulfate Concentrations
- Attachment A: Historic Boring Logs
- Attachment C: Historic Well Concentrations
- Attachment C: Certified Analytical Report with Chain-of-Custody Documentation

---

## REFERENCES CITED

- City of Pleasanton, 2008, Annual Water Quality Report.
- Cunningham, J. A., et al., 2001, Enhanced In Situ Bioremediation of BTEX Contaminated Groundwater by Combined Injection of Nitrate and Sulfate, *Environ. Sci. Technol.*, 2001, 35, 1663-1670.
- Lyle Bruce, Jim Cuthbertson, Arati Kolhatkar, J. Scott Ziegler, and Brent Graves Substantially Increasing the Hydrocarbon Degradation Rate at a Central Indiana Site., 2007
- Van Stempvoort Dale R., et al., 2001, Seasonal Recharge and Replenishment of Sulfate Associated with Biodegradation of a Hydrocarbon Plume, *Ground Water Monitoring & Remediation* 27, no. 4: 110–121



**GENERAL NOTES:**

Base Map from: DeLorme Yarmouth, ME 04096  
Source Data: USGS

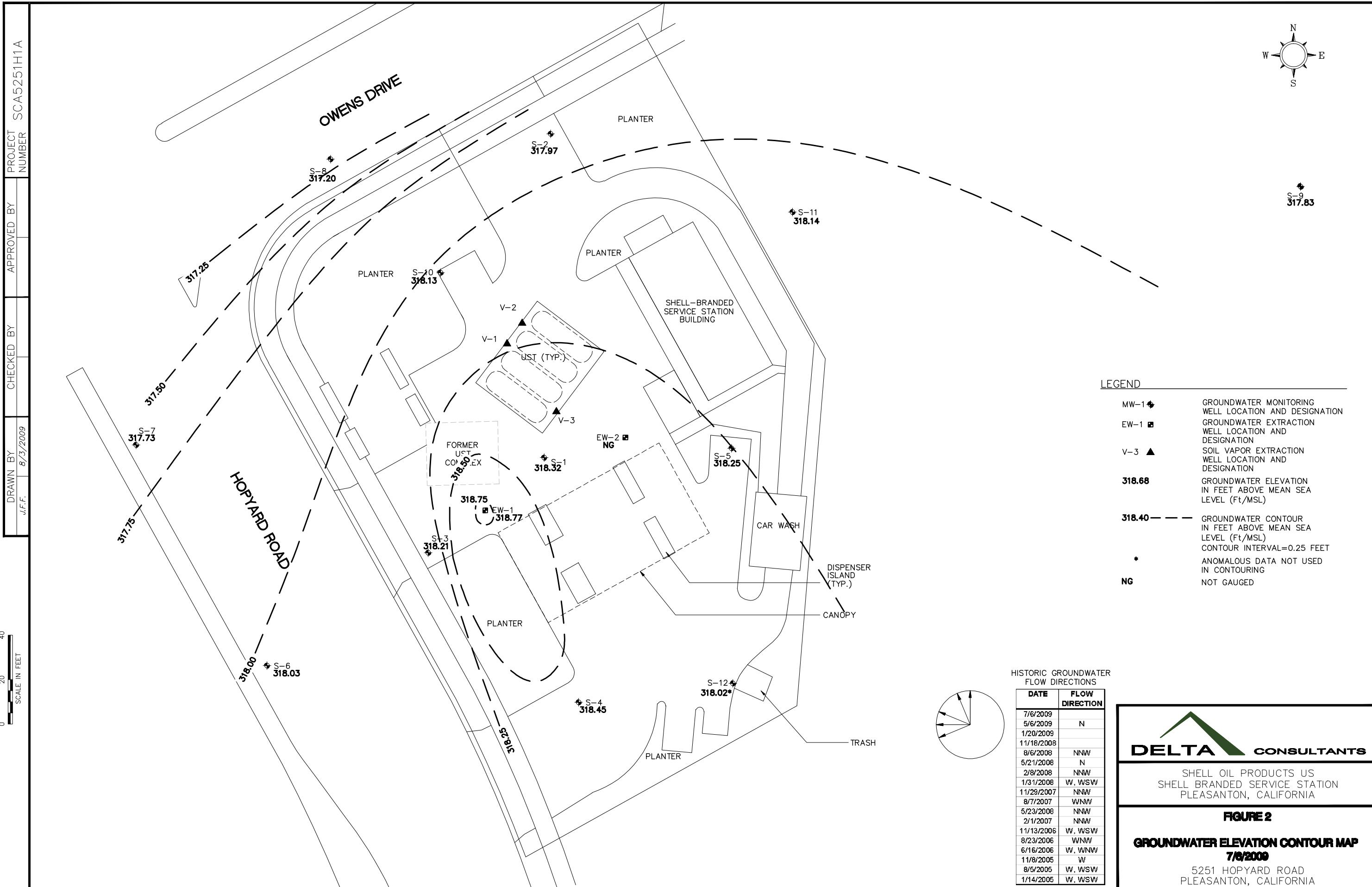


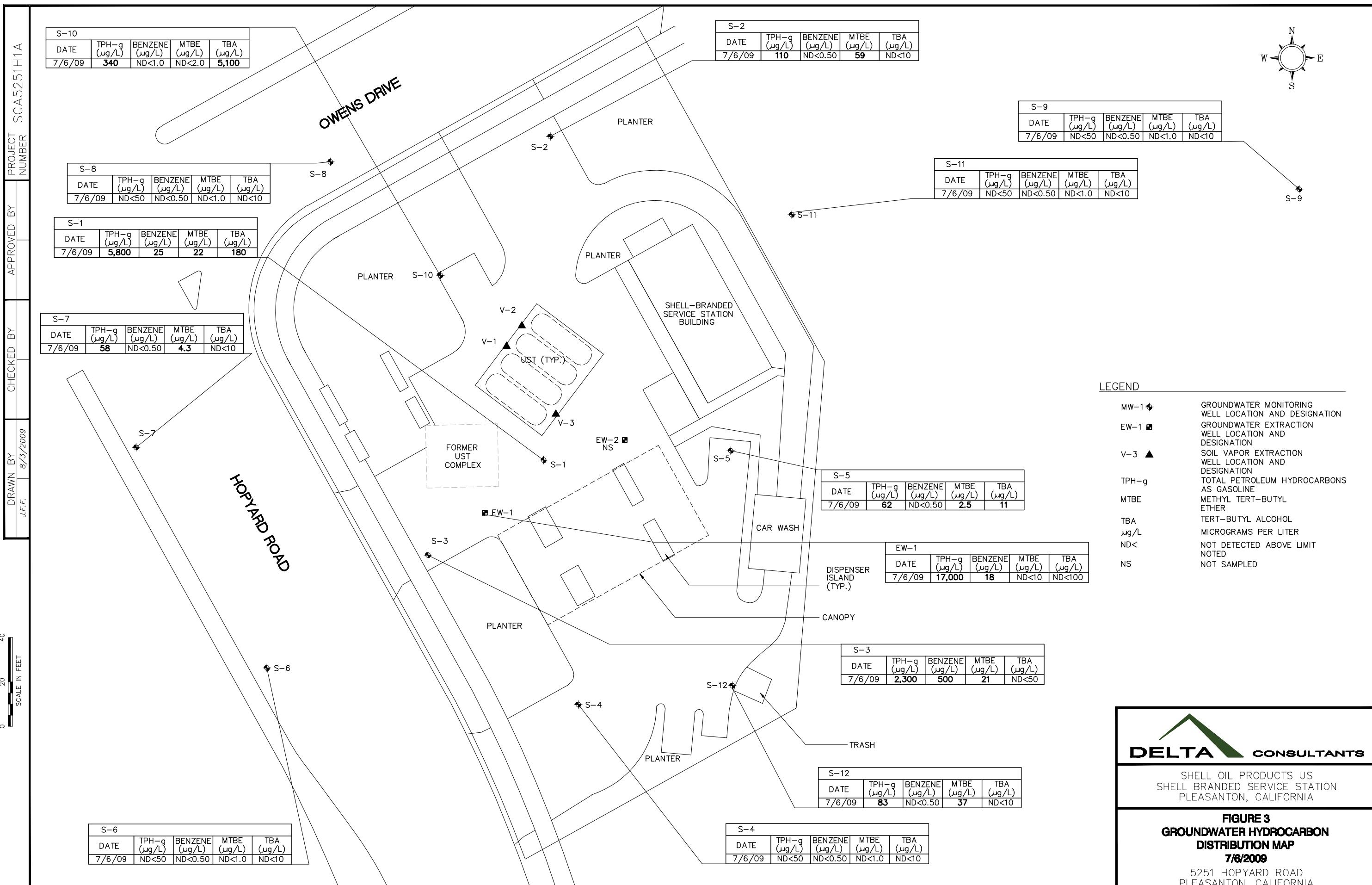
0 1,300 2,600  
Scale, Feet

**FIGURE 1**  
**SITE LOCATION MAP**

**SHELL-BRANDED SERVICE STATION**  
5251 Hopyard Road  
Pleasanton, California

PROJECT NO. SCA5251H1A	DRAWN BY V. F. 3/31/05	 <b>DELTA</b> CONSULTANTS
FILE NO.	PREPARED BY VF	
REVISION NO.	REVIEWED BY	





**TABLE 1**  
**MgSO<sub>4</sub> APPLICATION FEASIBILITY GROUNDWATER TESTING DATA**  
 Shell-branded Service Station  
 3790 Hopyard Road  
 Pleasanton, California

Well ID	Date Sampled	TPH-g (ug/L)	BTEX Compounds				Fuel Oxygenates					Sulfate (mg/L)	Ferrous Iron (mg/L)
			B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)		
S-2	10/30/2009	<50	<0.50	<1.0	<1.0	<1.0	33	<2.0	<2.0	<2.0	10	540	<0.10
S-10	10/30/2009	<50	<0.50	<1.0	<1.0	<1.0	1.8	<2.0	<2.0	<2.0	860	170	<0.10
S-3	10/30/2009	2300	390	12	15	24	14	<10	<10	<10	<50	35	<0.10
EW-1	10/30/2009	8400	14	21	360	84	<2.0	<4.0	<4.0	<4.0	<20	3.1	2.1

**Abbreviations:**

TPH-g = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8015

B = Benzene, analyzed by EPA Method 8260B

T = Toluene, analyzed by EPA Method 8260B

E = Ethylbenzene, analyzed by EPA Method 8260B

X = Total xylenes, analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260B

DIPE = Diisopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

Sulfate - Analyzed EPA Method 300.0

Ferrous Iron - Iron (II) analyzed by SM 3500-FeB

µg/L = Micrograms per liter, equivalent to parts per billion

mg/L = Milligrams per liter, equivalent to parts per million

< = Denotes no reported concentration above shown detection limit

**APPENDIX C**

**FIELD DATA SHEETS**



DELTA

## FIELD WORK LOG

CLIENT: Shell

JOB NO. SEA S2S1H1D

PERSONNEL: Will Lambert

DATE: 8/2/10

SIGNATURE:

DATE: 8/2/10 PAGE 1 OF 1

**MgS04 Application and Sampling Schedule**  
**5251 Hopyard Road, Pleasanton, CA**

Date	Samples	Analysis	Notes
4/8/2010	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (125ml or 250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Baseline samples collected prior to initial MgS04 Application
4/8/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	Samples taken 4 hours after MgS04 application
4/21/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	
5/11/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron (see sample containers above)	<i>1 month after application</i>
5/27-28/2010	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Baseline samples collected prior to MgS04 Application (Matt to pick up EOS product 5/26) (Cora@Application Event)
6/9/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	2 weeks after application
6/22/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron (see sample containers above)	1 month after application
7/15-16/10	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Collect gw samples on 7/14 from all wells; apply MgS04 product 7/15
7/30/2010	EW-1 (A) S-3 (A)	<u>Sulfate Only (125ml or 250 ml Poly NP)</u>	<i>2 weeks after application</i>
8/17/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron	<i>1 month after application</i>
9/14/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron	<i>Monthly; schedule next app when sulfate at EW-1 drops to ~1,000 mg/L</i>

A = Application well

O = Observation well

Ferrous iron can be collected with 250 ml amber (NP) but has a 24-hour hold time; prefer field kit, write reading on COC

Note: Coordinate sampling with Blaine Tech during semiannual monitoring events in August and February, no duplicates

# **SHELL WELLHEAD INSPECTION FORM**

**(FOR SAMPLE TECHNICIAN)**

Site Address 5251 HOPYARD RD., PLEASANTON, CA Date 8/12/10

Job Number 100812-IW1 Technician IW Page 1 of 1

\*Well box must meet all three criteria to be compliant: 1) WELL IS SECURABLE BY DESIGN (12"or less) 2) WELL IS MARKED WITH THE WORDS "MONITORING WELL" (12"or less) 3) WELL TAG IS PRESENT, SECURE, AND CORRECT

## Notes:

# WELL GAUGING DATA

Project # 100812 - IWI Date 8/12/10 Client SHELL

Site 5251 HOPYARD RD., PLEASANTON, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
S-1	—	—	—	COVERED BY ASPHALT	—	—	—	—	—	—
S-2	—	—	—	COVERED BY ASPHALT	—	—	—	—	—	—
S-3	0745	3	—	—	—	—	8.46	24.10	—	—
S-4	—	—	—	COVERED BY ASPHALT	—	—	—	—	—	—
S-5	0813	3	—	—	—	—	9.22	24.12	—	—
S-6	0910	3	—	—	—	—	7.84	25.55	—	—
S-7	0916	3	—	—	—	—	7.98	25.05	—	—
S-8	1008	3	—	—	—	—	7.14	24.55	—	—
S-9	0836	2	—	—	—	—	7.96	19.62	—	—
S-10	0736	4	—	—	—	—	8.04	19.15	—	—
S-11	0822	4	—	—	—	—	8.17	19.82	—	—
S-12	—	—	—	COVERED BY ASPHALT	—	—	—	—	—	—
EW-1	0756	4	—	—	—	—	8.03	19.70	—	—

**SHELL WELL MONITORING DATA SHEET**

BTS #: 100812 - IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA		
Sampler: IW	Date: 8/12/10		
Well I.D.: S-1	Well Diameter: 2 3 4 6 8		
Total Well Depth (TD):	Depth to Water (DTW):		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other:

**COVERED BY ASPHALT**

(Gals.) X	3	=	Gals.
1 Case Volume	Specified Volumes	Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
* COVERED BY ASPHALT.						
POST PURGE =						

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 8/12/10 Sampling Time: Depth to Water:

Sample I.D.: Laboratory: CalScience Columbia Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----

## SHELL WELL MONITORING DATA SHEET

BTS #: 100812-IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA
Sampler: IW	Date: 8/12/10
Well I.D.: S-2	Well Diameter: 2 3 4 6 8
Total Well Depth (TD):	Depth to Water (DTW):
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

### Purge Method: Bailer

~~Disposable Bailer  
Positive Air Displacement  
Electric Submersible~~

**Waterra  
Peristaltic  
Extraction Pump**

#### Sampling Method:

~~X Bailer  
Disposable Bailer  
Extraction Port  
Dedicated Tubing~~

Other:

COVERED BY ASPHALT

$$\text{Case Volume} \times 3 = \text{Calculated Volume}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$\text{radius}^2 * 0.163$

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
* CONCRETE	BY	ASPHALT.				
POST PURGE =						

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 8/12/10 Sampling Time: / / Depth to Water:

Sample I.D.:    Laboratory:  CalScience  Columbia  Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: sec-butyl

~~EB I.D.~~ (if applicable):    @    ~~Time~~ Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:		mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:		mV

SHEI WELL MONITORING DATA SHEET

BTS #: 100812 - IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA		
Sampler: IW	Date: 8/12/10		
Well I.D.: S-3	Well Diameter: 2 3 4 6 8		
Total Well Depth (TD): 24.10	Depth to Water (DTW): 8.46		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH		
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.59			

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
Other \_\_\_\_\_

Sampling Method:  
 Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

$$5.8 \text{ (Gals.)} \times 3 = 17.4 \text{ Gals.}$$

1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1216	68.5	6.89	6235	63	5.8	ODOR
1220	69.1	6.86	6294	468	11.6	"
1221	WELL DEWATERED @ 12.0			GALLONS	17.4 <sup>12.0</sup> , <sub>lw</sub>	" DTW = 20.90
1300	68.4	7.07	6535	42	GRAB	ODOR
	POST PURGE = 7.07				Fe <sup>2+</sup> = 0.6 mg/L	

Did well dewater? Yes No Gallons actually evacuated: 12.0

Sampling Date: 8/12/10 Sampling Time: 1300 Depth to Water: WAITED 10.88

Sample I.D.: S-3 Laboratory: CalScience Columbia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----

## SHEI WELL MONITORING DATA SHEET

BTS #: 100812 - IW	Site: 5251 HOPYARD RD., PLEASANTON, CA	
Sampler: IW	Date: 8/12/10	
Well I.D.: S-5	Well Diameter: 2 3 4 6 8	
Total Well Depth (TD): 24.12	Depth to Water (DTW): 9.22	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.20		

Purge Method: Bailer      Waterra      Sampling Method:  Bailer  
 Disposable Bailer      Peristaltic  
 Positive Air Displacement      Extraction Pump  
 Electric Submersible      Other \_\_\_\_\_  
 Disposable Bailer      Extraction Port  
 Dedicated Tubing

5.6 (Gals.) X	3	=	16.8 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <del>μS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1139	66.4	6.83	1442	34	5.6	
1143	65.4	6.75	1481	11	11.2	
1147	65.2	6.78	1479	15	16.8	DTW = 11.04
	POST PURGE	= 6.81				

Did well dewater? Yes  No Gallons actually evacuated: 16.8

Sampling Date: 8/12/10 Sampling Time: 1200 Depth to Water: 11.04

Sample I.D.: S-5 Laboratory: CalScience Columbia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
-----------------------------	------	-------------	------

O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV
-------------------------------	----	-------------	----

## SHEI WELL MONITORING DATA SHEET

BTS #: 100812-IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA
Sampler: IW	Date: 8/12/10
Well I.D.: S-7	Well Diameter: 2 3 4 6 8
Total Well Depth (TD): 25.05	Depth to Water (DTW): 7.98
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.39	

### Purge Method: Bailer

## Disposable Bailer

### Positive Air Displacement

#### **X Electric Submersible**

Waterra

Water

**Peristaltic**

### **Peristaltic Extraction Pump**

**Other**

## Sampling Methods

Xp-1

Baller

#### Disposable Baileys

## Extraction Port Radius

Outline

$$\frac{6.4 \text{ (Gals.)}}{1 \text{ Case Volume}} \times 3 \text{ Specified Volumes} = \frac{19.2 \text{ Gals.}}{\text{Calculated Volume}}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$\text{radius}^2 * 0.163$

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
0928	67.5	7.38	8236	69	6.5	
0931	68.4	7.12	8295	48	13.0	
0934	68.6	7.10	8310	32	19.5	
			POST PURGE = 7.08			

Did well dewater? Yes No Gallons actually evacuated: 19.5

Sampling Date: 8/12/10 Sampling Time: 0940 Depth to Water: TRAFFIC  
13.86

Sample I.D.: s-7 Laboratory:  CalScience  Columbia  Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: see doc

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable)

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	$\text{mg/L}$	Post-purge:	$\text{mg/L}$
O.R.P. (if req'd):	Pre-purge:	$\text{mV}$	Post-purge:	$\text{mV}$

## SHE WELL MONITORING DATA SHEET

BTS #: 100812 - IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA		
Sampler: IW	Date: 8/12/10		
Well I.D.: S-10	Well Diameter: 2 3 (4) 6 8		
Total Well Depth (TD): 19.15	Depth to Water (DTW): 8.04		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.27			

Purge Method: Bailer      Waterra      Sampling Method:  Bailer  
 Disposable Bailer      Peristaltic  
 Positive Air Displacement      Extraction Pump  
 Electric Submersible      Other \_\_\_\_\_

$$7.3 \text{ (Gals.)} \times 3 = 21.9 \text{ Gals.}$$

1 Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1104	69.4	7.47	2284	53	8.0	
1109	68.8	7.26	2283	68	15.0	
1115	68.9	7.28	2276	56	22.0	DTW = 15.68
	POST PURGE = 7.44				Fe <sup>2+</sup> = 0.0 mg/L	

Did well dewater? Yes  Gallons actually evacuated: 22.0

Sampling Date: 8/12/10 Sampling Time: 1125 Depth to Water: 10.20

Sample I.D.: S-10 Laboratory: CalScience Columbia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----

## SHELLWELL MONITORING DATA SHEET

BTS #: 100812-IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA
Sampler: IW	Date: 8/12/10
Well I.D.: S-11	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 19.82	Depth to Water (DTW): 8.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.50	

- Purge Method: Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible

Watermark  
Peristaltic  
Extraction Pump  
ether

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

$$\frac{1.6 \text{ (Gals.)} \times 3}{\text{1 Case Volume}} = \frac{22.8 \text{ Gals.}}{\text{Specified Volumes}} = \frac{\text{Calculated Volume}}{\text{1 Case Volume}}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$\text{radius}^2 * 0.163$

Did well dewater? Yes No Gallons actually evacuated: 23.0

Sampling Date: 8/12/10 Sampling Time: 1040 Depth to Water: 10.28  
7.10 m

Sample I.D.: S-11      Laboratory:  CalScience  Columbia  Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: see coc

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	$\text{mg/L}$	Post-purge:	$\text{mg/L}$
O.R.P. (if req'd):	Pre-purge:	$\text{mV}$	Post-purge:	$\text{mV}$

## SHE WELL MONITORING DATA SHEET

BTS #: 100812-IW1	Site: 5251 HOPYARD RD., PLEASANTON, CA	
Sampler: IW	Date: 8/12/10	
Well I.D.: S-12	Well Diameter: 2 3 4 6 8	
Total Well Depth (TD):	Depth to Water (DTW):	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:		

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other

Sampling Method: X Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other:

COVERED BY ASPHALT.

(Gals.) X	3	=	Gals.
1 Case Volume	Specified Volumes	Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
* COVERED BY ASPHALT.						
POST PURGE =						

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 8/12/10 Sampling Time: Depth to Water:

Sample I.D.: Laboratory: CalScience Columbia Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

## SHE WELL MONITORING DATA SHEET

BTS #: 100812 - IW	Site: 5251 HOPYARD RD., PLEASANTON, CA		
Sampler: IW	Date: 8/12/10		
Well I.D.: EW-1	Well Diameter: 2 3 (4) 6 8		
Total Well Depth (TD): 19.70	Depth to Water (DTW): 8.03		
Depth to Free Product: + <sup>w</sup>	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.37			

Purge Method: Bailer      Waterra      Sampling Method: X Bailer  
 Disposable Bailer      Peristaltic  
 Positive Air Displacement      Extraction Pump  
 X Electric Submersible      Other \_\_\_\_\_  
 Other: \_\_\_\_\_

7.6	(Gals.) X	3	=	22.8	Gals.
1 Case Volume	Specified Volumes		Calculated Volume		

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <del>μS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1228	70.0	6.98	18,370	213	7.6	ODOR
1234	71.0	6.97	17,500	50	15.2	"
1240	71.2	6.96	17,460	36	22.8	" DTW = 17.09
	POST PURGE = 7.13				Fe <sup>2+</sup> = 62 mg/L	

Did well dewater? Yes No      Gallons actually evacuated: 22.8

Sampling Date: 8/12/10      Sampling Time: 1310      Depth to Water: 9.83 WAIVED

Sample I.D.: EW-1      Laboratory: CalScience Columbia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----



DELTÀ

## FIELD WORK LOG

CLIENT: Shell

JOB NO. 5CA52S1H1D

PERSONNEL: Matt Lambert

DATE: 8/17/10

SIGNATURE: 

DATE: 8/7/10 PAGE 1 OF 1

Site: 5251 Hopyard Road

Date 8/17/10

City: Pleasanton, CA

Field Staff Matt Lambert

### MgSO<sub>4</sub> Monitoring

Well	Date	DTW (ft)	pH	Fe+2	Notes
EW-1	8/17		7.71	0.9 mg/L	Time = 11:00
S-3	8/17		7.11	1.0 mg/L	Time = 10:40
S-10					
S-2				→	
S-3				→	

(3 VOAs (HCl), 280ml pay NP, 250ml Poly HNO<sub>3</sub>)

### MgSO<sub>4</sub> Application event

Well	Date	Time		EOS Amount (gal)	Notes
		Start	End		
EW-1					
S-3					

## **Shell Oil Products Chain Of Custody Record**



**LAB (LOCATION)**

- CALSCIENCE \_\_\_\_\_
- SPL \_\_\_\_\_
- XENCO \_\_\_\_\_
- TEST AMERICA \_\_\_\_\_
- OTHER \_\_\_\_\_

**SAMPLING COMPANY:**  
**Delta Consultants**  
**ADDRESS:**  
**312 Piercy Road, San Jose, CA 95138**

**PROJECT CONTACT (Handcopy or PDF Report ID):**

Suzanne McClurkin- Nelson

**TELEPHONE:** 408-826-1875    **FAX:** 408-225-8506    **E-MAIL:** SMcClurkin-Nelson@deltaenv.com

**TURNAROUND TIME (CALENDAR DAYS):**  STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED  
ON WEEKEND

LA - RWQCB REPORT FORMAT

**Check Appropriate Box**

Please Check Appropriate Box:

SITE ADDRESS: Street and City <b>5251 Hopyard Road; Pleasanton</b>		State <b>CA</b>	GLOBAL ID NO.: <b>T0600101267</b>
EDF DELIVERABLE TO (Name, Company, Office Location): <b>Angela Pico</b>		PHONE NO.: <b>408-826-1862</b>	E-MAIL: <b>apico@deltaenv.com</b>
			CONSULTANT PROJECT NO.: <b>SCA5251HID</b>
Sampler Name: <b>MATT LAMBERT</b>		LAB USE ONLY	

**REQUESTED ANALYSIS**

**Container PID Readings  
or Laboratory Notes**

Relinquished by: (Signature) 	Received by: (Signature) GSO	Date: 8/17/10	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

**MgS04 Application and Sampling Schedule**  
**5251 Hopyard Road, Pleasanton, CA**

Date	Samples	Analysis	Notes
4/8/2010	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (125ml or 250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Baseline samples collected prior to initial MgS04 Application
4/8/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	Samples taken 4 hours after MgS04 application
4/21/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	
5/11/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron (see sample containers above)	<i>1 month after application</i>
5/27-28/2010	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Baseline samples collected prior to MgS04 Application (Matt to pick up EOS product 5/26) (Cora@Application Event)
6/9/2010	EW-1 (A) S-3 (A)	Sulfate Only (125ml or 250 ml Poly NP)	2 weeks after application
6/22/2010	EW-1 (A) S-3 (A)	pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron (see sample containers above)	1 month after application
7/15-16/10	EW-1 (A) S-3 (A) S-1 (O) S-2 (O) S-10 (O)	pH TPH-g, BTEX, MTBE (3 VOAs, HCl) sulfate (250 ml Poly NP) ferrous iron - <b>use field kit</b> ferric iron (250 ml poly, HNO3)	Collect gw samples on 7/14 from all wells; apply MgS04 product 7/15
7/30/2010	EW-1 (A) S-3 (A)	<u>Sulfate Only (125ml or 250 ml Poly NP)</u>	<i>2 weeks after application</i>
8/17/2010	EW-1 (A) S-3 (A)	<u>pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron</u>	<i>1 month after application</i>
9/14/2010	EW-1 (A) S-3 (A)	<u>pH, TPH-g, BTEX, MTBE, sulfate, ferrous iron, ferric iron</u>	<i>Monthly; schedule next app when sulfate at EW-1 drops to ~1,000 mg/L</i>

A = Application well

O = Observation well

Ferrous iron can be collected with 250 ml amber (NP) but has a 24-hour hold time; prefer field kit, write reading on COC

Note: Coordinate sampling with Blaine Tech during semiannual monitoring events in August and February, no duplicates

# **SHELL WELLHEAD INSPECTION FORM**

## **(FOR SAMPLE TECHNICIAN)**

Site Address 5251 Hopkins Rd.

Date 8/18/10

Job Number 100818-JPZ

Technician J. PARZEE

Page \_\_\_\_\_ of \_\_\_\_\_

\*Well box must meet all three criteria to be compliant: 1) WELL IS SECURABLE BY DESIGN (12" or less) 2) WELL IS MARKED WITH THE WORDS "MONITORING WELL" (12" or less) 3) WELL TAG IS PRESENT, SECURE, AND CORRECT

## Notes:

## WELL GAUGING DATA

Project # 100818-JP2

Date 8/18/10

Client J. PARKER

Site 5251 HOPYARD RD.

## SHEET WELL MONITORING DATA SHEET

BTS #: 100818-JP2	Site: 5251 Hopyard Rd.		
Sampler: JP	Date: 8/18/10		
Well I.D.: S-1	Well Diameter: 2 3 4 6 8		
Total Well Depth (TD): 26.23	Depth to Water (DTW): 7.92		
Depth to Free Product: —	Thickness of Free Product (feet): —		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.58

Purge Method: Bailer	Waterra	Sampling Method:	X Bailer
Disposable Bailer	Peristaltic		Disposable Bailer
Positive Air Displacement	Extraction Pump		Extraction Port
X Electric Submersible	Other _____		Dedicated Tubing
		Other:	

$$\frac{6.8 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{20.4 \text{ Gals.}}{\text{Specified Volumes}} \text{ Calculated Volume}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu\text{S}$ )	Turbidity (NTUs)	Gals. Removed	Observations
1404	68.8	7.85	1306	201	6.8	ODOR
1406	69.6	7.45	1286	229	13.6	"
1408	69.4	7.49	1261	102	20.4	"
POST		8.05				$\text{Fe}^{2+}: 0.4 \text{ mg/L}$

Did well dewater? Yes (No) Gallons actually evacuated: 20.4

Sampling Date: 8/18/10 Sampling Time: 1435 Depth to Water: 11.55

Sample I.D.: S-1 Laboratory: CalScience Columbia Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

# SHELL WELL MONITORING DATA SHEET

BTS #: 100818-JP2	Site: 5251 Hopyard Rd.		
Sampler: JP	Date: 8/18/10		
Well I.D.: S-2	Well Diameter: 2 (3) 4 6 8		
Total Well Depth (TD): 24.10	Depth to Water (DTW): 8.40		
Depth to Free Product: —	Thickness of Free Product (feet): —		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.54			

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  
 Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

5.8 (Gals.) X 3 = 17.4 Gals.  
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or $\mu\text{S}$ )	Turbidity (NTUs)	Gals. Removed	Observations
13:3	68.7	7.19	3011	64	5.8	
13:5	68.9	7.45	3119	38	11.6	
13:7	68.4	7.47	3128	59	17.4	
						Fe <sup>2+</sup> : 0.00 mg/L
POST		7.51				

Did well dewater? Yes  No Gallons actually evacuated: 17.4

Sampling Date: 8/18/10 Sampling Time: 1325 Depth to Water: 10.74

Sample I.D.: S-2 Laboratory: CalScience Columbia Other

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----

## SHE WELL MONITORING DATA SHEET

BTS #: 100818-JP2	Site: 5251 HOPYARD RD.		
Sampler: JP	Date: 8/18/10		
Well I.D.: S-12	Well Diameter: 2 3 (4) 6 8		
Total Well Depth (TD): 20.20	Depth to Water (DTW): 8.33		
Depth to Free Product: —	Thickness of Free Product (feet): —		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.70			

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
Other \_\_\_\_\_

Sampling Method:  
 Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

7.7	(Gals.) X	3	=	23.1	Gals.
1 Case Volume	Specified Volumes		Calculated Volume		

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1251	69.6	8.03	1712	114	7.7	
1253	69.0	7.77	1781	198	15.4	
1255	68.7	7.74	1804	181	23.1	
Post:		7.67				

Did well dewater? Yes  No Gallons actually evacuated: 23.1

Sampling Date: 8/18/10 Sampling Time: 1305 Depth to Water: 10.66

Sample I.D.: S-12 Laboratory: CalScience Columbia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV



## FIELD WORK LOG

CLIENT: SHELL  
PERSONNEL: Matt Lamber

JOB NO. SCAS2S1H1D  
DATE: 9/9/10

SIGNATURE:

DATE:

PAGE 4 QF

Site: 5251 Hopyard Road  
City: Pleasanton, CA

Date 9/9/10  
Field Staff Matt Lambert

MgS04 Monitoring

Well	Date	DTW (ft)	pH	Fe+2	Notes
EW-1					
S-3					
S-1					
S-2					
S-10					

MgS04 Application event

Well	Date	Time		EOS Amount (gal)	Notes
		Start	End		
EW-1	9/9/10	11:30	12:30	55	1 hr total app time.
S-3	9/9/10	10:30 12:30	11:30 4:00	55	4.5 hr total app time.

DELTA

## FIELD WORK LOG

CLIENT: Shell  
PERSONNEL: Matt Lambert

JOB NO. SCAS2S1H1D  
DATE: 10/1/10

SIGNATURE:

DATE: 10/1/10

PAGE 1 OF 1

Site: 5251 Hopyard Road  
City: Pleasanton, CA

Date 10/1/10  
Field Staff Matt Lambert

MgSO<sub>4</sub> Monitoring

Well	Date	DTW (ft)	pH	Fe+2	Notes
EW-1	10/1/10	8.55	6.89	6.5	
S-3	10/1/10	8.88	6.68	6.8	
S-1					
S-2					
S-10					

MgSO<sub>4</sub> Application event

Well	Date	Time		EOS Amount (gal)	Notes
		Start	End		
EW-1					
S-3					



# Shell Oil Products Chain Of Custody Record

## LAB (LOCATION)

CALSCIENCE \_\_\_\_\_  
 SPL \_\_\_\_\_  
 XENCO \_\_\_\_\_  
 TEST AMERICA \_\_\_\_\_  
 OTHER \_\_\_\_\_

Please Check Appropriate Box:		
<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name:										INCIDENT #/(ENV. SERVICES):					<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES				
Suzanne McClurkin-Nelson/Delta Consultants										9	8	9	9	5	8	4	3		
PO #:										SAP #:					DATE: 10/1/10				
										1	3	5	7	8	5	PAGE: 1 of 1			

SAMPLING COMPANY: Delta Consultants			LOG CODE:		
ADDRESS: 312 Piercy Road, San Jose, CA 95138					
PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin- Nelson					
TELEPHONE: 408-826-1875		FAX: 408-225-8506		E-MAIL: SMcClurkin-Nelson@deltaenv.com	

SITE ADDRESS: Street and City 5251 Hopyard Road, Pleasanton			State CA	GLOBAL ID NO.: T0600101267		
EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico			PHONE NO.: 408-826-1862		E-MAIL: apico@deltaenv.com	
CONSULTANT PROJECT NO.: SCA5251H1D			LAB USE ONLY:			
Sampler Name: <i>WAT LAMBERT</i>						

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT     UST AGENCY:

- SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS																	
Gasoline Hydrocarbons										Sulfate Indicators			Waste Characterization			TEMPERATURE ON RECEIPT C°	
Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.	pH	Sulfate	Ferrous Iron	Ferric Iron				
		DATE	TIME		HCl	HNO3	H2SO4	NONE								OTHER	TPH-Gasoline (8260B)
EW-1		10/1/10	14:20	Water	3	1	1	5	X	X	X	X	X	X			
S-3		10/1/10	14:40	Water	3	1	1	5	X	X	X	X	X	X			
Container PID Readings or Laboratory Notes																	

Received by: (Signature) <i>(Signature)</i>		Received by: (Signature) <i>(Signature)</i>										Date: 10/1/10	Time:
Relinquished by: (Signature)		Received by: (Signature)										Date:	Time:
Relinquished by: (Signature)		Received by: (Signature)										Date:	Time:

Site: 5251 Hopyard Road  
 City: Pleasanton, CA

Date 10/19/10  
 Field Staff Matt Lambert

### MgSO<sub>4</sub> Monitoring

Well	Date	DTW (ft)	pH	Fe+2	Notes
EW-1	10/19/10	N/A	7.49	4.8	
S-3			7.20	5.6	
S-1			8.00	0.8	
S-2			7.68	0.0	
S-10	↓	↓	8.16	0.0	

10/29/10 pH TPH-g, BTEX, MTBE (3 VOA, HCl) sulfate (250 ml Poly NP) ferrous iron - use field kit ferric iron (250 ml poly, HNO<sub>3</sub>)

### MgSO<sub>4</sub> Application event

Well	Date	Time		EOS Amount (gal)	Notes
		Start	End		
EW-1					
S-3					

1

## **Shell Oil Products Chain Of Custody Record**

**LAB (LOCATION)**

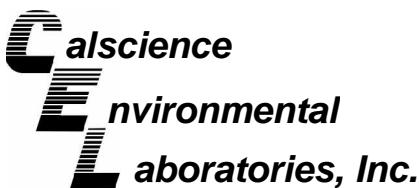
- CALSCIENCE ( \_\_\_\_\_ )
- SPL ( \_\_\_\_\_ )
- XENCO ( \_\_\_\_\_ )
- TEST AMERICA ( \_\_\_\_\_ )
- OTHER ( \_\_\_\_\_ )

Please Check Appropriate Box:				Print Bill To Contact Name:				INCIDENT #. (ENV. SERVICES)							<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES			
<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL		Suzanne McClurkin-Nelson/Delta Consultants				9	8	9	9	5	8	4	3	DATE: <u>10/19/10</u>		
<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES		P.O. #				SAP #								PAGE: <u>1</u> of <u>1</u>		
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER											1	3	5	7	8	5	
LOG CODE:				SITE ADDRESS: Street and City				State				GLOBAL ID NO.:						
				5251 Hopyard Road; Pleasanton				CA				T0600101267						
				EDF DELIVERABLE TO (Name, Company, Office Location):				PHONE NO.:				E-MAIL:				CONSULTANT PROJECT NO.:		
				Angela Pico				408-826-1862				apico@deltaenv.com				SCA5251H1D		
				Sampler Name:				<u>Matt Lambert</u>								LAB USE ONLY		
<input type="checkbox"/> 2 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON WEEKEND				REQUESTED ANALYSIS														
<input checked="" type="checkbox"/> SHELL CONTRACT RATE APPLIES <input type="checkbox"/> STATE REIMBURSEMENT RATE APPLIES <input type="checkbox"/> EDD NOT NEEDED <input type="checkbox"/> RECEIPT VERIFICATION REQUESTED				Gasoline Hydrocarbons				Sulfate Indicators				Waste Characterization				TEMPERATURE ON RECEIPT C°		
SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.	TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous ION	Ferric ION				
DATE	TIME		HCl	HNO3	H2SO4	NONE												OTHER
10/19/10	1415	Water	3	1	1		5	X	X	X	7.49	X	4.8	X				
	1350	Water	3	1	1		.5	X	X	X	7.20	X	7.2	X	5.6	5.6		
	1440	Water	3	1	1		5	X	X	X	8.00	X	0.8	X				
	1520	Water	3	1	1		5	X	X	X	7.62	X	0.0	X				
	1500	Water	3	1	1		5	X	X	X	8.16	X	0.0	X				
Received by: (Signature) <u>680</u>																Date: <u>10/19/10</u>	Time: <u></u>	
Received by: (Signature)																Date: <u>10/19/10</u>	Time: <u></u>	
Received by: (Signature)																Date: <u></u>	Time: <u></u>	

05/2008 Revision

**APPENDIX D**

**CERTIFIED ANALYTICAL REPORTS**  
**WITH CHAIN-OF-CUSTODY DOCUMENTATION**



August 12, 2010

Suzanne McClurkin-Nelson  
Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Subject: **Calscience Work Order No.: 10-08-0086**

**Client Reference: 5251 Hopyard Rd., Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/3/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Xuan H. Dang".

Calscience Environmental  
Laboratories, Inc.  
Xuan H. Dang  
Project Manager



CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 . TEL:(714) 895-5494 . FAX: (714) 894-7501



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 08/03/10  
Work Order No: 10-08-0086  
Preparation: N/A  
Method: EPA 300.0

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-08-0086-1-A	08/02/10 13:50	Aqueous	IC 7	N/A	08/03/10 21:02	100803L02

Parameter	Result	RL	DF	Qual	Units
Sulfate	2100	40	40		mg/L

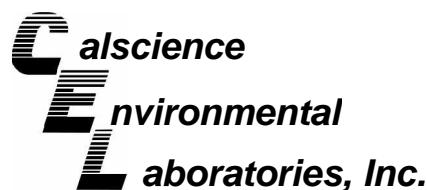
S-3	10-08-0086-2-A	08/02/10 13:20	Aqueous	IC 7	N/A	08/03/10 21:17	100803L02
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	4300	100	100		mg/L

Method Blank	099-12-906-1,182	N/A	Aqueous	IC 7	N/A	08/03/10 19:45	100803L02
--------------	------------------	-----	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

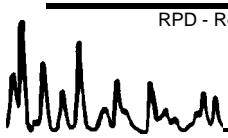
Date Received: 08/03/10  
Work Order No: 10-08-0086  
Preparation: N/A  
Method: EPA 300.0

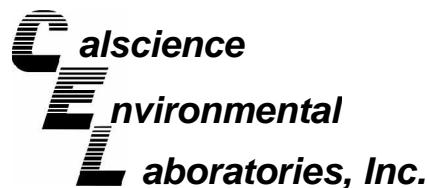
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
EW-1	Aqueous	IC 7	N/A	08/03/10	100803S02

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	4X	4X	80-120	4X	0-20	Q

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

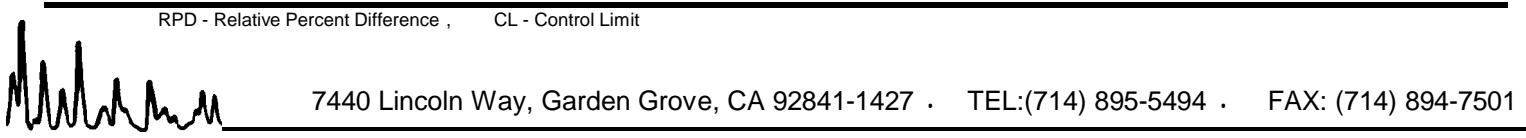
Date Received: N/A  
Work Order No: 10-08-0086  
Preparation: N/A  
Method: EPA 300.0

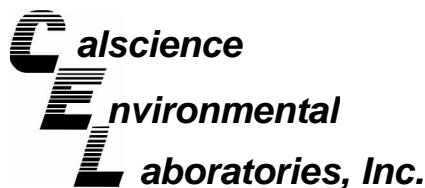
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-1,182	Aqueous	IC 7	N/A	08/03/10	100803L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	102	102	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Glossary of Terms and Qualifiers



Work Order Number: 10-08-0086

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



LAB (LOCATION)

- CALSCIENCE ( )  
 SPL ( )  
 XENCO ( )  
 TEST AMERICA ( )  
 OTHER ( )



## Shell Oil Products Chain Of Custody Record

## Please Check Appropriate Box:

<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input checked="" type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER _____	

## Print Bill To Contact Name:

Suzanne McClurkin-Nelson/Delta Consultants

## PO #

## INCIDENT # (ENV SERVICES):

9 8 9 9 5 8 4 3

 CHECK IF NO INCIDENT # APPLIES

DATE: 8/2/10

## SAP #

1 3 5 7 8 5

PAGE: 1 of 1

SAMPLING COMPANY:

Delta Consultants

ADDRESS: 312 Piercy Road, San Jose, CA 95138

PROJECT CONTACT (Hardcopy or PDF Report to):

Suzanne McClurkin- Nelson

TELEPHONE:

408-826-1875 FAX: 408-225-8506

LOG CODE:

TURNAROUND TIME (CALENDAR DAYS):

- STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

 LA - RWQCB REPORT FORMAT  UST AGENCY:

## SPECIAL INSTRUCTIONS OR NOTES :

- SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED

SITE ADDRESS: Street and City

5251 Hopyard Road; Pleasanton

State

CA

GLOBAL ID NO.:

T0600101267

EDF DELIVERABLE TO (Name, Company, Office, Location):

Matt Lambert

PHONE NO.:

1872

Sara Olson

408-826-1872

E-MAIL:

m.lambert@deltaenv.com

Sampler Name:

Matt Lambert

CONSULTANT PROJECT NO.:

SCA5261HD

LAB USE ONLY:

10-08-0086

## REQUESTED ANALYSIS

		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	Gasoline Hydrocarbons		Sulfate Indicators	Waste Characterization	TEMPERATURE ON RECEIPT C°		
LAB USE ONLY	Field Sample Identification	DATE	TIME		HCl	HNO3	H2SO4	NONE	OTHER		TPH-Gasoline (8260B)	BTX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous Iron	Ferric Iron
1	EW-1 8/2/10 13:50 ←	Water					1		1					x 7.55	x 2.6		
2	S-3 8/2/10 13:20 ←	Water					1		1					x 7.01	x 3.6		
Container PID Readings or Laboratory Notes																	

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

GSO

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date: 8/3/10

Time: 1030

0086

DATE	8/17	STREET	1000 S. 10TH ST.
COMPANY	CHI	ROOM	
ADDRESS	300	ZIP	90041
ADDRESS		CODE	
CITY	TORRANCE	PHONE	1-800-322-5555
SENDER'S NAME	MATT	NUMBER	674
COMPANY	CAL SCIENCE	PHONE	
NAME		NUMBER	714.895.5494
ADDRESS	7440 LINCOLN WAY	STREET	
ADDRESS		ROOM	
CITY	GARDEN GROVE	ZIP	92841
CODE		PHONE	
YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE			
SPECIAL INSTRUCTIONS			



GOLDEN STATE OVERNIGHT

**1-800-322-5555****WWW.GSO.COM****SHIPPING AIR BILL****4 PACKAGE INFORMATION**

- LETTER (MAX 8 OZ)  
 PACKAGE (WT) \_\_\_\_\_  
 DECLARED VALUE \$ \_\_\_\_\_  
 COD AMOUNT \$ \_\_\_\_\_  
(CASH NOT ACCEPTED)

**5 DELIVERY SERVICE**  PRIORITY OVERNIGHT BY 10:30 AM  EARLY PRIORITY BY 8:00 AM  SATURDAY DELIVERY

\*DELIVERY TIMES MAY BE LATER IN SOME AREAS. CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

**6 RELEASE SIGNATURE**  
\_\_\_\_\_  
SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

**7**

**8 PICK UP INFORMATION** TIME DRIVER # ROUTE #

105866709

PEEL  
OFF  
HERE

**9 GSO TRACKING NUMBER** 105866709  
386 8116

 PACKAGE  
 LABEL

**SAMPLE RECEIPT FORM** Cooler 1 of 1

CLIENT: Delta Consultants

DATE: 08/03/10

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.7 °C + 0.5 °C (CF) = 2.2 °C  Blank  Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).  
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter  Metals Only  PCBs Only

Initial: WB

**CUSTODY SEALS INTACT:**

<input type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>WB</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/>	Initial: <u>SC</u>

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/> <i>WB 03/10</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input checked="" type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

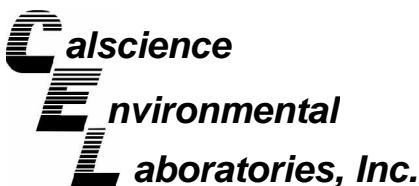
500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna

250PB  250PBn  125PB  125PBznna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** SC

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** PSS

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znna: ZnAc<sub>2</sub>+NaOH f: Field-filtered **Scanned by:** WNL



August 26, 2010

Michael Ninokata  
Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Subject: **Calscience Work Order No.: 10-08-1198**

**Client Reference: 5251 Hopyard Rd., Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/14/2010 and analyzed in accordance with the attached chain-of-custody.

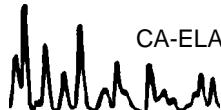
Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that appears to read "Xuan H. Dang". Below the signature, the word "for" is handwritten in a smaller, cursive font.

Calscience Environmental  
Laboratories, Inc.  
Xuan H. Dang  
Project Manager



CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 . TEL:(714) 895-5494 . FAX: (714) 894-7501



## Analytical Report



Blaine Tech Services, Inc. Date Received: 08/14/10  
 1680 Rogers Avenue Work Order No: 10-08-1198  
 San Jose, CA 95112-1105 Preparation: N/A  
 Method: EPA 300.0

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-08-1198-1-D	08/12/10 13:00	Aqueous	IC 9	N/A	08/17/10 01:30	100816L02

Parameter	Result	RL	DF	Qual	Units
Sulfate	2700	50	50		mg/L

S-10	10-08-1198-4-D	08/12/10 11:25	Aqueous	IC 9	N/A	08/17/10 01:45	100816L02
------	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	110	2.0	2		mg/L

EW-1	10-08-1198-6-D	08/12/10 13:10	Aqueous	IC 9	N/A	08/17/10 02:00	100816L02
------	----------------	----------------	---------	------	-----	----------------	-----------

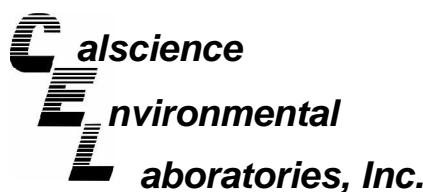
Parameter	Result	RL	DF	Qual	Units
Sulfate	730	20	20		mg/L

Method Blank	099-12-906-1,202	N/A	Aqueous	IC 9	N/A	08/16/10 19:20	100816L02
--------------	------------------	-----	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501



## Analytical Report



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-08-1198-1-A	08/12/10 13:00	Aqueous	GC/MS QQ	08/19/10	08/20/10 08:34	100819L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	270	1.0	2		o-Xylene	ND	2.0	2	
Ethylbenzene	47	2.0	2		Methyl-t-Butyl Ether (MTBE)	4.5	2.0	2	
Toluene	3.5	2.0	2		Tert-Butyl Alcohol (TBA)	21	20	2	
p/m-Xylene	46	2.0	2		TPPH	1300	100	2	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
Dibromofluoromethane	97	80-126			1,2-Dichloroethane-d4	98	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	94	80-120							

S-5	10-08-1198-2-A	08/12/10 12:00	Aqueous	GC/MS QQ	08/19/10	08/20/10 09:02	100819L02
-----	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.3	0.50	1		o-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	2.8	1.0	1	
Toluene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
p/m-Xylene	ND	1.0	1		TPPH	220	50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
Dibromofluoromethane	100	80-126			1,2-Dichloroethane-d4	99	80-131		
Toluene-d8	96	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	85	80-120							

S-7	10-08-1198-3-A	08/12/10 09:40	Aqueous	GC/MS QQ	08/19/10	08/20/10 09:28	100819L02
-----	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		o-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
p/m-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	105	80-131		
Toluene-d8	96	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	85	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10	10-08-1198-4-A	08/12/10 11:25	Aqueous	GC/MS QQ	08/19/10	08/20/10 09:55	100819L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	2		o-Xylene	ND	2.0	2	
Ethylbenzene	ND	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2	
Toluene	ND	2.0	2		Tert-Butyl Alcohol (TBA)	610	20	2	
p/m-Xylene	ND	2.0	2		TPPH	ND	100	2	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
		Limits					Limits		
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	102	80-131		
Toluene-d8	95	80-120			Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	87	80-120							

S-11	10-08-1198-5-A	08/12/10 10:40	Aqueous	GC/MS QQ	08/19/10	08/20/10 10:22	100819L02
------	----------------	----------------	---------	----------	----------	----------------	-----------

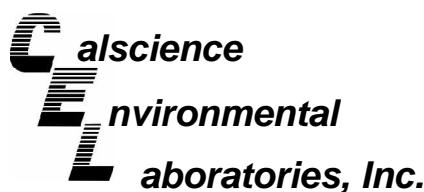
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		o-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
p/m-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
		Limits					Limits		
Dibromofluoromethane	105	80-126			1,2-Dichloroethane-d4	108	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	86	80-120							

EW-1	10-08-1198-6-A	08/12/10 13:10	Aqueous	GC/MS QQ	08/19/10	08/20/10 10:49	100819L02
------	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.9	1.0	2		o-Xylene	3.4	2.0	2	
Ethylbenzene	370	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2	
Toluene	17	2.0	2		Tert-Butyl Alcohol (TBA)	ND	20	2	
p/m-Xylene	110	2.0	2		TPPH	11000	250	5	
Surrogates:	REC (%)	Control		Qual	Surrogates:	REC (%)	Control		Qual
		Limits					Limits		
Dibromofluoromethane	90	80-126			1,2-Dichloroethane-d4	93	80-131		
Toluene-d8	100	80-120			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	95	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,487	N/A	Aqueous	GC/MS QQ	08/19/10	08/20/10 03:33	100819L02

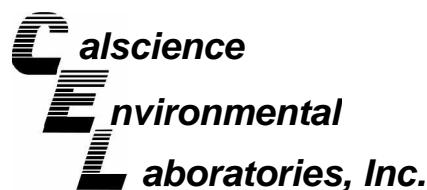
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		o-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
p/m-Xylene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	105	80-131		
Toluene-d8	96	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	85	80-120							

Method Blank	099-12-767-4,494	N/A	Aqueous	GC/MS CC	08/23/10	08/23/10 13:07	100823L02
--------------	------------------	-----	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		o-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
p/m-Xylene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	99	80-126			1,2-Dichloroethane-d4	102	80-131		
Toluene-d8	90	80-120			Toluene-d8-TPPH	93	88-112		
1,4-Bromofluorobenzene	91	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

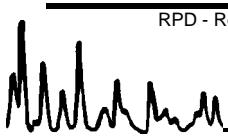
Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: N/A  
Method: EPA 300.0

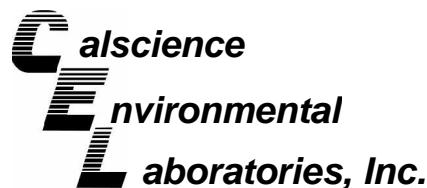
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1042-1	Aqueous	IC 9	N/A	08/17/10	100816S02

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	106	106	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

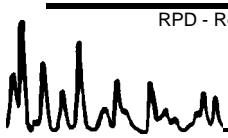
Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

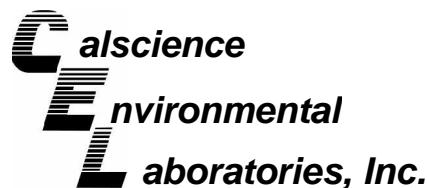
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1196-2	Aqueous	GC/MS QQ	08/19/10	08/20/10	100819S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	88	97	80-120	9	0-20	
Ethylbenzene	94	103	73-127	9	0-20	
Toluene	86	95	80-120	10	0-20	
Methyl-t-Butyl Ether (MTBE)	91	98	65-131	7	0-22	
Tert-Butyl Alcohol (TBA)	101	102	62-134	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

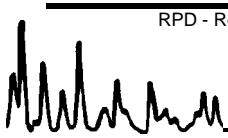
Date Received: 08/14/10  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

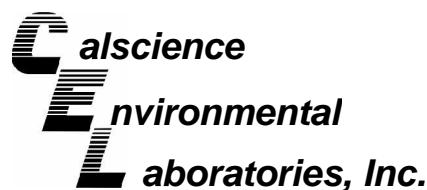
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1549-1	Aqueous	GC/MS CC	08/23/10	08/23/10	100823S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	84	86	80-120	2	0-20	
Ethylbenzene	110	113	73-127	3	0-20	
Toluene	85	88	80-120	4	0-20	
Methyl-t-Butyl Ether (MTBE)	77	81	65-131	3	0-22	
Tert-Butyl Alcohol (TBA)	114	117	62-134	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

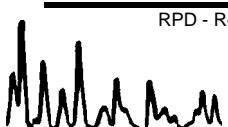
Date Received:	N/A
Work Order No:	10-08-1198
Preparation:	N/A
Method:	EPA 300.0

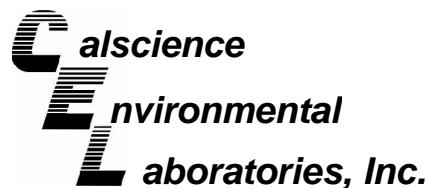
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>099-12-906-1,202</b>	<b>Aqueous</b>	<b>IC 9</b>	<b>N/A</b>	<b>08/16/10</b>	<b>100816L02</b>

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	104	104	90-110	1	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

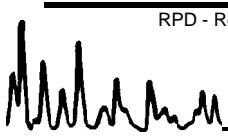
Date Received: N/A  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

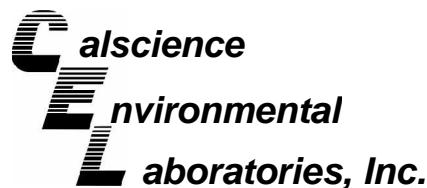
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,487	Aqueous	GC/MS QQ	08/19/10	08/20/10	100819L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	96	80-120	2	0-20	
Ethylbenzene	107	105	80-123	2	0-20	
Toluene	94	94	80-120	0	0-20	
Methyl-t-Butyl Ether (MTBE)	98	96	75-123	2	0-25	
Tert-Butyl Alcohol (TBA)	95	92	72-126	3	0-20	
TPPH	98	97	65-135	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

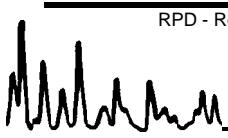
Date Received: N/A  
Work Order No: 10-08-1198  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

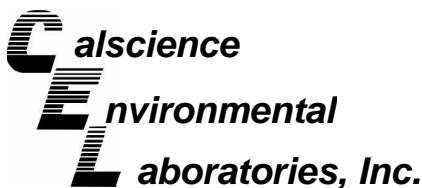
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,494	Aqueous	GC/MS CC	08/23/10	08/23/10	100823L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	116	112	80-120	3	0-20	
Ethylbenzene	109	114	80-123	5	0-20	
Toluene	117	114	80-120	3	0-20	
Methyl-t-Butyl Ether (MTBE)	120	114	75-123	5	0-25	
Tert-Butyl Alcohol (TBA)	94	96	72-126	2	0-20	
TPPH	97	87	65-135	12	0-30	

RPD - Relative Percent Difference , CL - Control Limit



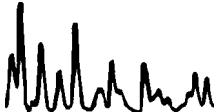


## Glossary of Terms and Qualifiers



Work Order Number: 10-08-1198

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



## LAB (LOCATION)

- CALSCIENCE ( )  
 SPL ( )  
 XENCO ( )  
 TEST AMERICA ( )  
 OTHER ( )



## Shell Oil Products Chain Of Custody Record

<b>Please Check Appropriate Box:</b> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><input type="checkbox"/> ENV. SERVICES</td> <td><input type="checkbox"/> MOTIVA RETAIL</td> <td><input type="checkbox"/> SHELL RETAIL</td> </tr> <tr> <td><input type="checkbox"/> MOTIVA SD&amp;CM</td> <td><input checked="" type="checkbox"/> CONSULTANT</td> <td><input type="checkbox"/> LUBES</td> </tr> <tr> <td><input type="checkbox"/> SHELL PIPELINE</td> <td><input type="checkbox"/> OTHER</td> <td></td> </tr> </table>			<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL	<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES	<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER		Print Bill To Contact Name:		INCIDENT # (ENV SERVICES)							<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES
<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL																			
<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES																			
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER																				
			Suzanne McClurkin-Nelson		9	8	9	9	5	8	4	3	DATE: 8/12/10								
			PO #		SAP #							PAGE: 1 of 1									
			SITE ADDRESS: Street and City 5251 Hopyard Rd., Pleasanton		State CA		GLOBAL ID NO: T0600101267														
			EDF DELIVERABLE TO (Name, Company, Office Location) Angela Pico, Delta, San Jose Office		PHONE NO. 408.826.1862		E-MAIL: apico@deltaenv.com							CONSULTANT PROJECT NO: 100812-IW1							
			SAMPLER NAME(S) (Print) IAN WILLIAMS									LAB USE ONLY 10-08-1198									
												TEMPERATURE ON RECEIPI C°									

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.	REQUESTED ANALYSIS												Container PID Readings or Laboratory Notes	
		DATE	TIME		HCL	HNO3	H2SO4	NONE		TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DPPE (8260B)	TAME (8260B)	ETBEE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	Sulfate (EPA 300.0)
1	S-3	8/12/10	1300	W	X			X	4	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	S-5		1200		X				3	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	S-7		0940		X				3	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	S-10		1125		X			X	4	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	S-11		1040		X				3	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	EW-1		1310	↓	X			X	4	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished by: (Signature)

Received by: (Signature)

Date:

8/12/10

Time:

1630

Relinquished by: (Signature)

Received by: (Signature)

Date:

8/13/10

Time:

1115

Relinquished by: (Signature)

Received by: (Signature)

Date:

8/14/10

Time:

0930

05/26 Revision



1198

Page 4 of 16



< WebShip > > > >  
800-322-5555 www.gso.com

**Ship From:**  
ALAN KEMP  
CAL SCIENCE- CONCORD  
5063 COMMERCIAL CIRCLE #H  
CONCORD, CA 94520

**Ship To:**  
SAMPLE RECEIVING  
CEL  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

COD:  
\$0.00

Reference:  
BTS

Delivery Instructions:

**Signature Type:**  
SIGNATURE REQUIRED

Tracking #: 514748284



SDS

ORC

D

GARDEN GROVE

D92843A



83909349

Print Date : 08/13/10 15:44 PM

Package 1 of 1

 Print All

## LABEL INSTRUCTIONS:

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

## ADDITIONAL OPTIONS:

## TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

WORK ORDER #: 10-08-

## SAMPLE RECEIPT FORM

Cooler / of /

CLIENT: BTS

DATE: 08/14/10

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.5 °C + 0.5°C (CF) = 3.0 °C  Blank  Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter  Metals Only  PCBs Only

Initial: KP

### CUSTODY SEALS INTACT:

<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>KP</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>KP</u>

### SAMPLE CONDITION:

Yes      No      N/A

Chain-Of-Custody (COC) document(s) received with samples.....

COC document(s) received complete.....

Collection date/time, matrix, and/or # of containers logged in based on sample labels.

No analysis requested.     Not relinquished.     No date/time relinquished.

Sampler's name indicated on COC.....

Sample container label(s) consistent with COC.....

Sample container(s) intact and good condition.....

Proper containers and sufficient volume for analyses requested.....

Analyses received within holding time.....

pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....

Proper preservation noted on COC or sample container.....

Unpreserved vials received for Volatiles analysis

Volatile analysis container(s) free of headspace.....

Tedlar bag(s) free of condensation.....

### CONTAINER TYPE:

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna

250PB  250PBn  125PB  125PBznna  100PJ  100PJna<sub>2</sub>  250PJ  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** KP

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** WSC

Preservative: h: HCl n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znna: ZnAc<sub>2</sub>+NaOH f: Field-filtered **Scanned by:** WSC

**WORK ORDER #:** 10-08-**1** **1** **9** **8**

## **SAMPLE ANOMALY FORM**

## SAMPLES - CONTAINERS & LABELS:

- Sample(s)/Container(s) NOT RECEIVED but listed on COC**
  - Sample(s)/Container(s) received but NOT LISTED on COC**
  - Holding time expired – list sample ID(s) and test**
  - Insufficient quantities for analysis – list test**
  - Improper container(s) used – list test**
  - Improper preservative used – list test**
  - No preservative noted on COC or label – list test & notify lab**
  - Sample labels illegible – note test/container type**
  - Sample label(s) do not match COC – Note in comments**

**Comments:**

- Sample ID
  - Date and/or Time Collected
  - Project Information
  - # of Container(s)
  - Analysis

(-4) Collection time per label  
is 10:20

- Sample container(s) compromised – Note in comments**
    - Water present in sample container
    - Broken
    - Without Label(s)

- Air sample container(s) compromised – Note in comments

  - Flat
  - Very low in volume
  - Leaking (Not transferred - duplicate bag submitted)
  - Leaking (transferred into Calscience Tedlar® Bag\*)
  - Leaking (transferred into Client's Tedlar® Bag\*)

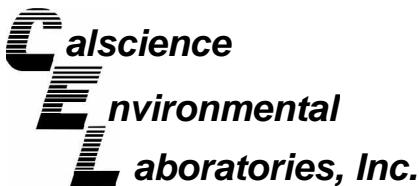
Other:

#### **HEADSPACE – Containers with Bubble > 6mm or $\frac{1}{4}$ inch:**

**Comments:**

\*Transferred at Client's request.

Initial / Date: KP 08 / 14 / 10



September 02, 2010

Michael Ninokata  
Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Subject: **Calscience Work Order No.: 10-08-1719**

**Client Reference: 5251 Hopyard Rd., Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/21/2010 and analyzed in accordance with the attached chain-of-custody.

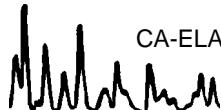
Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that appears to read "Xuan H. Dang". Below the signature, the word "for" is written in a smaller, cursive font.

Calscience Environmental  
Laboratories, Inc.  
Xuan H. Dang  
Project Manager



CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 . TEL:(714) 895-5494 . FAX: (714) 894-7501



## Analytical Report



Blaine Tech Services, Inc. 1680 Rogers Avenue San Jose, CA 95112-1105	Date Received: Work Order No: Preparation: Method:	08/21/10 10-08-1719 N/A EPA 300.0
---	---	--

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	10-08-1719-1-D	08/18/10 14:35	Aqueous	IC 10	N/A	08/21/10 16:08	100821L01

Parameter	Result	RL	DF	Qual	Units
Sulfate	3.3	1.0	1		mg/L

S-2	10-08-1719-2-G	08/18/10 13:25	Aqueous	IC 10	N/A	08/21/10 16:25	100821L01
-----	----------------	----------------	---------	-------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	450	10	10		mg/L

Method Blank	099-12-906-1,219	N/A	Aqueous	IC 10	N/A	08/21/10 10:56	100821L01
--------------	------------------	-----	---------	-------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 08/21/10  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	10-08-1719-1-B	08/18/10 14:35	Aqueous	GC/MS QQ	08/31/10	08/31/10 17:03	100831L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	15	0.50	1		Xylenes (total)	34	1.0	1	
Ethylbenzene	87	1.0	1		Methyl-t-Butyl Ether (MTBE)	10	1.0	1	
Toluene	26	1.0	1		TPPH	4000	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	103	80-126			1,2-Dichloroethane-d4	99	80-131		
Toluene-d8	100	80-120			Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	99	80-120							

S-2	10-08-1719-2-A	08/18/10 13:25	Aqueous	GC/MS QQ	08/28/10	08/29/10 02:04	100828L02
-----	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	24	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	105	80-126			1,2-Dichloroethane-d4	104	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	98	80-120							

S-12	10-08-1719-3-A	08/18/10 13:05	Aqueous	GC/MS QQ	08/28/10	08/29/10 01:37	100828L02
------	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	20	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	107	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	98	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 08/21/10  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-767-4,526</b>	N/A	Aqueous	GC/MS QQ	08/28/10	08/28/10 23:50	100828L02

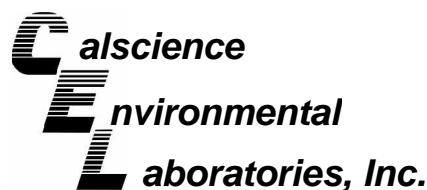
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	105	80-131		
Toluene-d8	100	80-120			Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	97	80-120							

Method Blank	099-12-767-4,528	N/A	Aqueous	GC/MS QQ	08/31/10	08/31/10 13:56	100831L01
--------------	------------------	-----	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	99	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	97	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

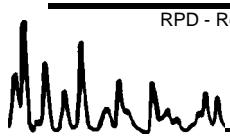
Date Received: 08/21/10  
Work Order No: 10-08-1719  
Preparation: N/A  
Method: EPA 300.0

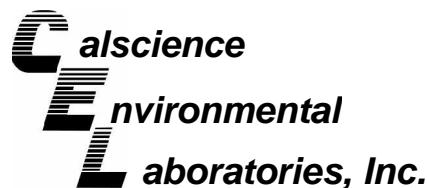
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1738-1	Aqueous	IC 10	N/A	08/21/10	100821S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	96	96	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

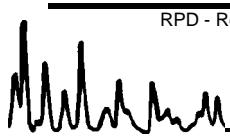
Date Received: 08/21/10  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

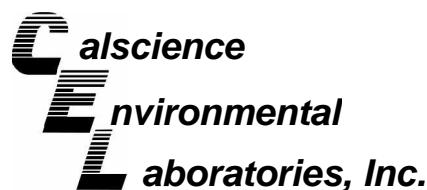
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1720-5	Aqueous	GC/MS QQ	08/28/10	08/29/10	100828S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	94	80-120	3	0-20	
Ethylbenzene	95	94	73-127	1	0-20	
Toluene	94	92	80-120	2	0-20	
Methyl-t-Butyl Ether (MTBE)	93	94	65-131	2	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

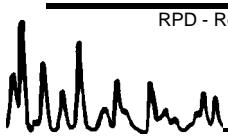
Date Received: 08/21/10  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

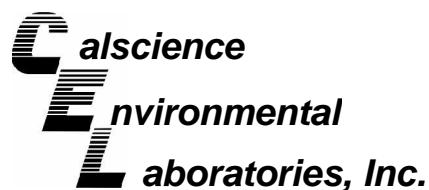
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1693-18	Aqueous	GC/MS QQ	08/31/10	08/31/10	100831S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	88	99	80-120	11	0-20	
Ethylbenzene	88	99	73-127	13	0-20	
Toluene	87	97	80-120	11	0-20	
Methyl-t-Butyl Ether (MTBE)	85	90	65-131	6	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received:	N/A
Work Order No:	10-08-1719
Preparation:	N/A
Method:	EPA 300.0

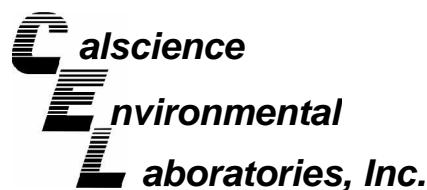
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>099-12-906-1,219</b>	<b>Aqueous</b>	<b>IC 10</b>	<b>N/A</b>	<b>08/21/10</b>	<b>100821L01</b>

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	101	101	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

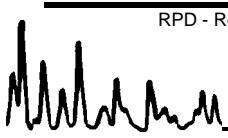
Date Received: N/A  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

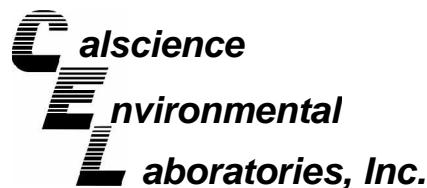
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,526	Aqueous	GC/MS QQ	08/28/10	08/28/10	100828L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	99	80-120	1	0-20	
Ethylbenzene	97	98	80-123	2	0-20	
Toluene	96	97	80-120	1	0-20	
Methyl-t-Butyl Ether (MTBE)	95	96	75-123	1	0-25	
TPPH	84	82	65-135	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

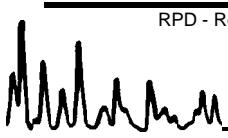
Date Received: N/A  
Work Order No: 10-08-1719  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

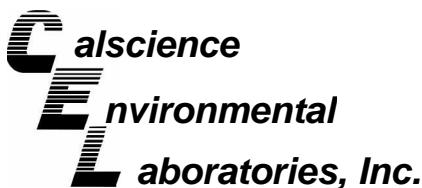
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,528	Aqueous	GC/MS QQ	08/31/10	08/31/10	100831L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	88	98	80-120	10	0-20	
Ethylbenzene	88	96	80-123	9	0-20	
Toluene	86	96	80-120	11	0-20	
Methyl-t-Butyl Ether (MTBE)	85	90	75-123	6	0-25	
TPPH	78	80	65-135	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Glossary of Terms and Qualifiers



Work Order Number: 10-08-1719

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.







1719  
 WebShip >>>  
 800-322-5555 www.gso.com

**Ship From:**  
 ALAN KEMP  
 CAL SCIENCE- CONCORD  
 5063 COMMERCIAL CIRCLE #H  
 CONCORD, CA 94520

**Ship To:**  
 SAMPLE RECEIVING  
 CEL  
 7440 LINCOLN WAY  
 GARDEN GROVE, CA 92841

COD:  
 \$0.00

**Reference:**  
 CONOCO PHILLIPS, BTS, STANTEC

**Delivery Instructions:**

**Signature Type:**  
 SIGNATURE REQUIRED

Tracking #: 514791974



SDS

D

ORC  
 GARDEN GROVE

D92843A



84080197

Print Date : 08/20/10 14:39 PM

**Package 1 of 1**

Print All

### LABEL INSTRUCTIONS:

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

### ADDITIONAL OPTIONS:

### TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

WORK ORDER #: 10-08-

**SAMPLE RECEIPT FORM** Cooler 1 of 1

CLIENT: Blaine Tech

DATE: 08/21/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.9 °C + 0.5°C (CF) = 2.4 °C  Blank  Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter  Metals Only  PCBs Only

Initial: YL

**CUSTODY SEALS INTACT:**

<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>YL</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present		Initial: <u>TW</u>

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

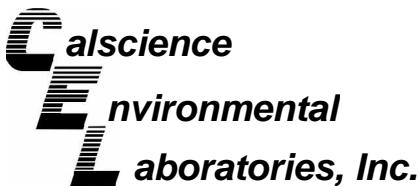
**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs  
 500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna  
 250PB  250PBn  125PB  125PBznna  100PJ  100PJna<sub>2</sub>  250PJ  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** TW

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** YL

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znna: ZnAc<sub>2</sub>+NaOH f: Field-filtered **Scanned by:** YL



August 26, 2010

Suzanne McClurkin-Nelson  
 Delta Environmental Consultants, Inc.  
 312 Piercy Rd.  
 San Jose, CA 95138-1401

**Subject: Calscience Work Order No.: 10-08-1381**

**Client Reference: 5251 Hopyard Rd., Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/18/2010 and analyzed in accordance with the attached chain-of-custody.

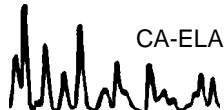
Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that appears to read "Xuan H. Dang" followed by "for".

Calscience Environmental  
 Laboratories, Inc.  
 Xuan H. Dang  
 Project Manager



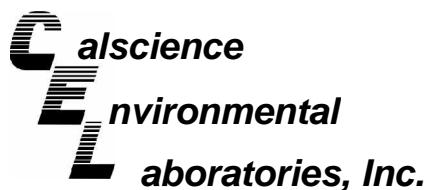
CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 . TEL:(714) 895-5494 . FAX: (714) 894-7501



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: N/A  
Method: EPA 300.0

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-08-1381-1-E	08/17/10 11:00	Aqueous	IC 9	N/A	08/18/10 16:17	100818L01

Parameter	Result	RL	DF	Qual	Units
Sulfate	740	20	20		mg/L

S-3	10-08-1381-2-E	08/17/10 10:40	Aqueous	IC 9	N/A	08/18/10 16:33	100818L01
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	1700	25	25		mg/L

Method Blank	099-12-906-1,207	N/A	Aqueous	IC 9	N/A	08/18/10 11:25	100818L01
--------------	------------------	-----	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-08-1381-1-A	08/17/10 11:00	Aqueous	GC/MS R	08/20/10	08/21/10 06:17	100820L02

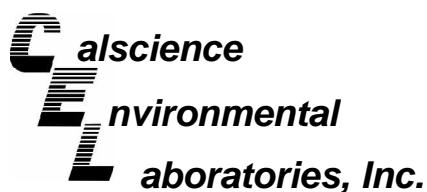
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual		
Benzene	5.0	1.0	2		Xylenes (total)	52	2.0	2			
Ethylbenzene	2.9	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2			
Toluene	3.8	2.0	2		TPPH	4000	100	2			
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>			
Dibromofluoromethane	100	80-126			1,2-Dichloroethane-d4	107	80-131				
Toluene-d8	103	80-120			Toluene-d8-TPPH	99	88-112				
1,4-Bromofluorobenzene	102	80-120									
S-3					10-08-1381-2-B	08/17/10 10:40	Aqueous	GC/MS R	08/23/10	08/23/10 23:19	100823L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual		
Benzene	90	0.50	1		Xylenes (total)	15	1.0	1			
Ethylbenzene	17	1.0	1		Methyl-t-Butyl Ether (MTBE)	4.9	1.0	1			
Toluene	1.3	1.0	1		TPPH	870	50	1			
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>			
Dibromofluoromethane	102	80-126			1,2-Dichloroethane-d4	112	80-131				
Toluene-d8	103	80-120			Toluene-d8-TPPH	98	88-112				
1,4-Bromofluorobenzene	101	80-120									
Method Blank					099-12-767-4,493	N/A	Aqueous	GC/MS R	08/20/10	08/21/10 04:22	100820L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	99	80-126			1,2-Dichloroethane-d4	106	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	95	88-112		
1,4-Bromofluorobenzene	97	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





# Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,495	N/A	Aqueous	GC/MS R	08/23/10	08/23/10 15:04	100823L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	110	80-131		
Toluene-d8	102	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	101	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-08-1381-1-D	08/17/10 11:00	Aqueous	ICP 5300	08/18/10	08/19/10 12:02	100818LA4

Parameter	Result	RL	DF	Qual	Units
Iron	1.07	0.100	1		mg/L

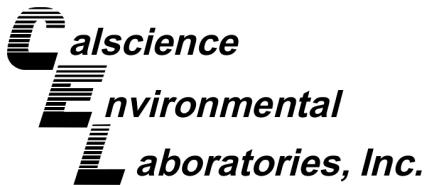
S-3	10-08-1381-2-D	08/17/10 10:40	Aqueous	ICP 5300	08/18/10	08/19/10 12:10	100818LA4
-----	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Iron	1.07	0.100	1		mg/L

Method Blank	097-01-003-10,890	N/A	Aqueous	ICP 5300	08/18/10	08/19/10 11:56	100818LA4
--------------	-------------------	-----	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



**LABORATORY ID: 10-08-1381**

**Method: EPA 6010B (Calculation)**

**Matrix: Water/Aqueous**

**CLIENT:** Delta Environmental Consultants, Inc.

**PROJECT:** 5251 Hopyard Rd., Pleasanton, CA

### Results

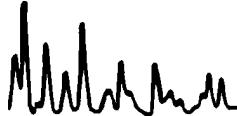
Sample ID	Ferric Iron (Fe+3) mg/L	Dilution Factor	Reporting Limit	Date Extracted	Date Analyzed
EW-1	0.17	1	0.10	08/18/10	08/19/10
S-3	ND	1	0.10	08/18/10	08/19/10

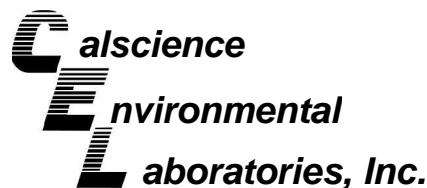
Reporting Limit: 0.10

### Laboratory Notes

Ferrous Iron results were done in the field.

Key: ND=Not Detected at the reporting level, NA=Not applicable





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

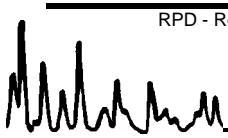
Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 3010A Total  
Method: EPA 6010B

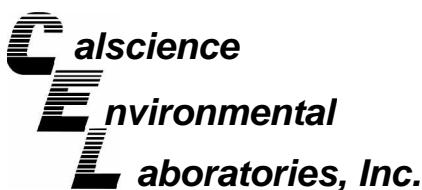
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
EW-1	Aqueous	ICP 5300	08/18/10	08/19/10	100818SA4

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	104	114	65-149	3	0-21	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - PDS / PDSD



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

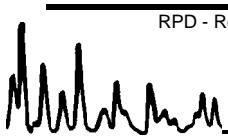
Date Received 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 3010A Total  
Method: EPA 6010B

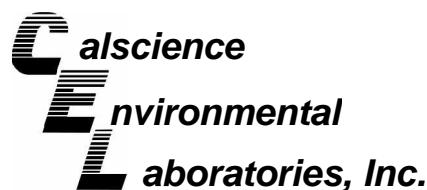
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
EW-1	Aqueous	ICP 5300	08/18/10	08/19/10	100818SA4

Parameter	<u>PDS %REC</u>	<u>PDSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	101	106	75-125	2	0-21	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

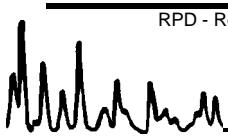
Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: N/A  
Method: EPA 300.0

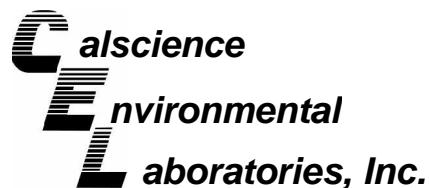
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-3	Aqueous	IC 9	N/A	08/18/10	100818S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	100	101	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

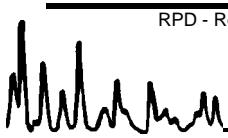
Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

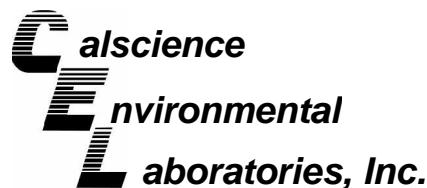
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1387-6	Aqueous	GC/MS R	08/20/10	08/21/10	100820S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	90	80-120	19	0-20	
Ethylbenzene	117	95	73-127	21	0-20	4
Toluene	113	94	80-120	18	0-20	
Methyl-t-Butyl Ether (MTBE)	101	103	65-131	2	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

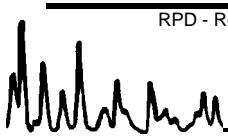
Date Received: 08/18/10  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

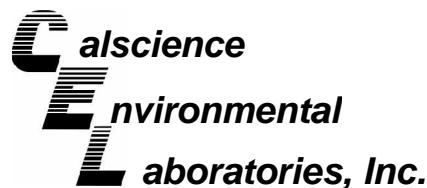
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-08-1364-1	Aqueous	GC/MS R	08/23/10	08/23/10	100823S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	91	100	80-120	10	0-20	
Ethylbenzene	94	107	73-127	13	0-20	
Toluene	96	102	80-120	6	0-20	
Methyl-t-Butyl Ether (MTBE)	102	117	65-131	11	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

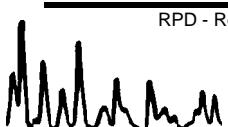
Date Received: N/A  
Work Order No: 10-08-1381  
Preparation: EPA 3010A Total  
Method: EPA 6010B

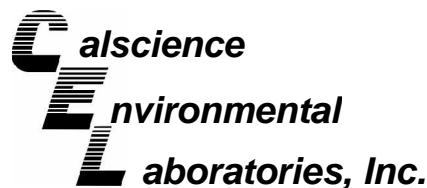
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>097-01-003-10,890</b>	<b>Aqueous</b>	<b>ICP 5300</b>	<b>08/18/10</b>	<b>08/19/10</b>	<b>100818LA4</b>

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	104	105	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

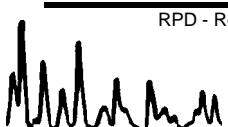
Date Received: N/A  
Work Order No: 10-08-1381  
Preparation: N/A  
Method: EPA 300.0

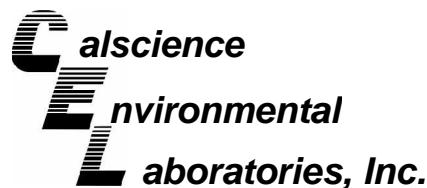
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-1,207	Aqueous	IC 9	N/A	08/18/10	100818L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	104	103	90-110	1	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

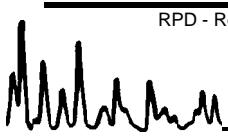
Date Received: N/A  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

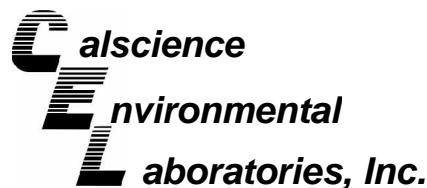
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,493	Aqueous	GC/MS R	08/20/10	08/21/10	100820L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	92	80-120	15	0-20	
Ethylbenzene	114	97	80-123	15	0-20	
Toluene	110	96	80-120	14	0-20	
Methyl-t-Butyl Ether (MTBE)	111	105	75-123	6	0-25	
TPPH	75	67	65-135	11	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

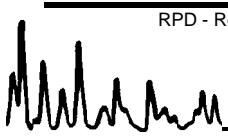
Date Received: N/A  
Work Order No: 10-08-1381  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

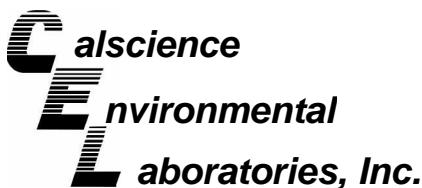
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,495	Aqueous	GC/MS R	08/23/10	08/23/10	100823L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	99	80-120	4	0-20	
Ethylbenzene	103	103	80-123	1	0-20	
Toluene	100	102	80-120	2	0-20	
Methyl-t-Butyl Ether (MTBE)	113	96	75-123	16	0-25	
TPPH	70	74	65-135	5	0-30	

RPD - Relative Percent Difference , CL - Control Limit



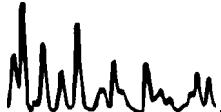


## Glossary of Terms and Qualifiers



Work Order Number: 10-08-1381

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



**LAB (LOCATION)**



## **Shell Oil Products Chain Of Custody Record**

<input checked="" type="checkbox"/> CALSCIENCE ( ) <input type="checkbox"/> SPL ( ) <input type="checkbox"/> XENCO ( ) <input type="checkbox"/> TEST AMERICA ( ) <input type="checkbox"/> OTHER ( )				<b>Please Check Appropriate Box:</b> <input type="checkbox"/> ENV. SERVICES <input type="checkbox"/> MOTIVA RETAIL <input type="checkbox"/> SHELL RETAIL <input type="checkbox"/> MOTIVA SD&CM <input checked="" type="checkbox"/> CONSULTANT <input type="checkbox"/> LUBES <input type="checkbox"/> SHELL PIPELINE <input type="checkbox"/> OTHER				<b>Print Bill To Contact Name:</b> Suzanne McClurkin-Nelson/Delta Consultants <b>PO #</b> 5251 Hopyard Road; Pleasanton				<b>INCIDENT # (ENV. SERVICES)</b> 9 8 9 9 5 8 4 3 <b>SAP #</b> 1 3 5 7 8 5				<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES DATE: 8/17/10 PAGE: 1 of 1							
SAMPLING COMPANY: <b>Delta Consultants</b>				LOG CODE:				SITE ADDRESS: Street and City <b>5251 Hopyard Road; Pleasanton</b>				State <b>CA</b>		GLOBAL ID NO.: <b>T0600101267</b>									
ADDRESS: <b>312 Piercy Road, San Jose, CA 95138</b>								EDF DELIVERABLE TO (Name, Company, Office Location): <b>Angela Pico</b>				PHONE NO.: <b>408-826-1862</b>		E-MAIL: <b>apico@deltaenv.com</b>		CONSULTANT PROJECT NO.: <b>SCA5251H1D</b>							
PROJECT CONTACT (Handcopy or PDF Report to): <b>Suzanne McClurkin- Nelson</b>								Sampler Name: <b>MATT LAMBERT</b>								<b>LAB USE ONLY</b>							
TELEPHONE: <b>408-826-1875</b>				FAX: <b>408-225-8506</b>				E-MAIL: <b>SMcClurkin-Nelson@deltaenv.com</b>				REQUESTED ANALYSIS											
TURNAROUND TIME (CALENDAR DAYS): <input checked="" type="checkbox"/> STANDARD (14 DAY) <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 3 DAYS <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON WEEKEND																							
<input type="checkbox"/> LA - RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY:				<input checked="" type="checkbox"/> SHELL CONTRACT RATE APPLIES <input type="checkbox"/> STATE REIMBURSEMENT RATE APPLIES <input type="checkbox"/> EDD NOT NEEDED <input type="checkbox"/> RECEIPT VERIFICATION REQUESTED				Gasoline Hydrocarbons TPH-Gasoline (8260B)				Sulfate Indicators Ferrous Iron (mg/l)				Waste Characterization				TEMPERATURE ON RECEIPT C°			
<b>SPECIAL INSTRUCTIONS OR NOTES :</b>																							
<b>LAB USE ONLY</b>	<b>Field Sample Identification</b>	<b>SAMPLING</b>		<b>MATRIX</b>	<b>PRESERVATIVE</b>				<b>NO. OF CONT.</b>	pH	Sulfate	Ferrous Iron					<b>Container PID Readings or Laboratory Notes</b>						
		<b>DATE</b>	<b>TIME</b>		HCL	HNO3	H2SO4	NONE					OTHER										
1	EW-1	8/17/10	11:00	Water	3	1		1	5	X X X	7.71	x 0.9	x										
2	S-3	8/17/10	10:40	Water	3	1		1	5	X X X	7.11	x 1.0	x										
Relinquished by: (Signature) 				Received by: (Signature) <b>GSO</b>												Date: 8/17/10 Time:							
Relinquished by: (Signature)				Received by: (Signature)												Date: 8/18/10 Time: 0930							
Relinquished by: (Signature)				Received by: (Signature)												Date: 8/18/10 Time:							

(1381)

**1 FROM**

DATE	8/7/10
COMPANY	Delta Consultants
ADDRESS	3120 Valley Rd
ADDRESS	
CITY	San Jose
SENDER'S NAME	Mark Lambert
COMPANY	CAL SCIENCE
NAME	
ADDRESS	7440 LINCOLN WAY
ADDRESS	
CITY	GARDEN GROVE
YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE	
ESPECIAL STRUCTURES	

**1-800-322-5555****WWW.GSO.COM****SHIPPING AIR BILL****4 PACKAGE INFORMATION**

- LETTER (MAX 8 OZ)  
 PACKAGE (WT) \_\_\_\_\_  
 DECLARED VALUE \$ \_\_\_\_\_  
 COD AMOUNT \$ \_\_\_\_\_  
 (CASH NOT ACCEPTED)

- 5 DELIVERY SERVICE**  PRIORITY OVERNIGHT BY 10:30 AM  EARLY PRIORITY BY 8:00 AM  SATURDAY DELIVERY BY 8:00 AM

\*DELIVERY TIMES MAY BE LATER IN SOME AREAS - CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT

**6 RELEASE SIGNATURE**

SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

**7****8 PICK UP INFORMATION**

TIME DRIVER # ROUTE #

105866710

PEEL  
OFF  
HERE**9 GSO TRACKING NUMBER**

105866710



PACKAGE

## SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Delta

DATE: 08/18/10

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.8 °C + 0.5°C (CF) = 4.3 °C  Blank  Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
- Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter  Metals Only  PCBs Only

Initial: H

### CUSTODY SEALS INTACT:

<input type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>H</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/>	Initial: <u>b</u>

### SAMPLE CONDITION:

Yes      No      N/A

- Chain-Of-Custody (COC) document(s) received with samples.....
- COC document(s) received complete.....
- Collection date/time, matrix, and/or # of containers logged in based on sample labels. 8/18/10
- No analysis requested.  Not relinquished.  No date/time relinquished.
- Sampler's name indicated on COC.....
- Sample container label(s) consistent with COC.....
- Sample container(s) intact and good condition.....
- Proper containers and sufficient volume for analyses requested.....
- Analyses received within holding time.....
- pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....
- Proper preservation noted on COC or sample container.....

- Unpreserved vials received for Volatiles analysis
- Volatile analysis container(s) free of headspace.....
- Tedlar bag(s) free of condensation.....

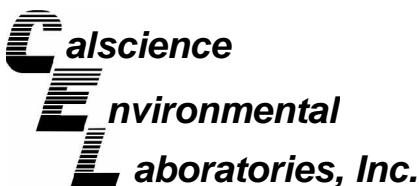
### CONTAINER TYPE:

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_  
**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs  
 500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna  
 250PB  250PBn  125PB  125PBznna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** A/L

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** A/L

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znna: ZnAc<sub>2</sub>+NaOH f: Field-filtered **Scanned by:** P.L.



October 13, 2010

Suzanne McClurkin-Nelson  
Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Subject: **Calscience Work Order No.: 10-10-0122**

**Client Reference: 5251 Hopyard Rd., Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/2/2010 and analyzed in accordance with the attached chain-of-custody.

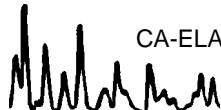
Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that appears to read "Xuan H. Dang". Below the signature, the word "for" is handwritten in a smaller, cursive script.

Calscience Environmental  
Laboratories, Inc.  
Xuan H. Dang  
Project Manager



CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 . TEL:(714) 895-5494 . FAX: (714) 894-7501



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: N/A  
Method: EPA 300.0

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-0122-1-D	10/01/10 14:20	Aqueous	IC 7	N/A	10/04/10 13:55	101004L01

Parameter	Result	RL	DF	Qual	Units
Sulfate	14000	200	200		mg/L

S-3	10-10-0122-2-D	10/01/10 14:40	Aqueous	IC 7	N/A	10/04/10 14:11	101004L01
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	14000	200	200		mg/L

Method Blank	099-12-906-1,300	N/A	Aqueous	IC 7	N/A	10/04/10 11:51	101004L01
--------------	------------------	-----	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-0122-1-B	10/01/10 14:20	Aqueous	GC/MS R	10/11/10	10/11/10 16:58	101011L01

Comment(s): Sample taken from VOA vial with air bubble &gt; 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.4	0.50	1		Xylenes (total)	3.2	1.0	1	
Ethylbenzene	2.2	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	1.4	1.0	1		TPPH	3100	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	102	80-126			1,2-Dichloroethane-d4	106	80-131		
Toluene-d8	108	80-120			Toluene-d8-TPPH	106	88-112		
1,4-Bromofluorobenzene	104	80-120							

S-3	10-10-0122-2-A	10/01/10 14:40	Aqueous	GC/MS R	10/09/10	10/10/10 04:15	101009L02
-----	----------------	----------------	---------	---------	----------	----------------	-----------

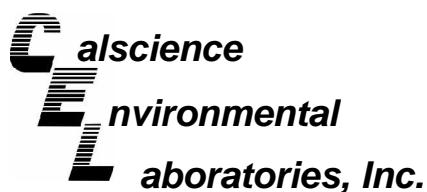
Comment(s): Sample taken from VOA vial with air bubble &gt; 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	240	1.0	2		Xylenes (total)	65	1.0	1	
Ethylbenzene	140	1.0	1		Methyl-t-Butyl Ether (MTBE)	4.5	1.0	1	
Toluene	5.1	1.0	1		TPPH	2000	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	116	80-131		
Toluene-d8	101	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	103	80-120							

Method Blank	099-12-767-4,685	N/A	Aqueous	GC/MS R	10/09/10	10/10/10 01:49	101009L02
--------------	------------------	-----	---------	---------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	107	80-126			1,2-Dichloroethane-d4	105	80-131		
Toluene-d8	102	80-120			Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	99	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-767-4,688</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS R</b>	<b>10/11/10</b>	<b>10/11/10 14:59</b>	<b>101011L01</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	105	80-131		
Toluene-d8	105	80-120			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	102	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-0122-1-E	10/01/10 14:20	Aqueous	ICP 5300	10/04/10	10/05/10 12:29	101004LA4

Parameter	Result	RL	DF	Qual	Units
Iron	7.19	0.100	1		mg/L

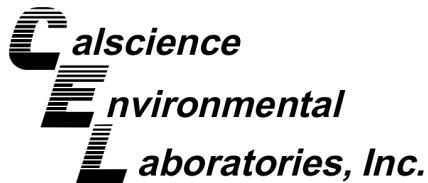
S-3	10-10-0122-2-E	10/01/10 14:40	Aqueous	ICP 5300	10/04/10	10/05/10 12:31	101004LA4
-----	----------------	----------------	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Iron	17.2	0.100	1		mg/L

Method Blank	097-01-003-11,021	N/A	Aqueous	ICP 5300	10/04/10	10/05/10 12:02	101004LA4
--------------	-------------------	-----	---------	----------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



**LABORATORY ID: 10-10-0122**

**Method: EPA 6010B (Calculation)**

**Matrix: Water/Aqueous**

**CLIENT:** Delta Environmental Consultants, Inc.

**PROJECT:** 5251 Hopyard Rd., Pleasanton, CA

### Results

Sample ID	Ferric Iron (Fe+3) mg/L	Dilution Factor	Reporting Limit	Date Extracted	Date Analyzed
EW-1	0.69	1	0.10	10/04/10	10/05/10
S-3	10.4	1	0.10	10/04/10	10/05/10

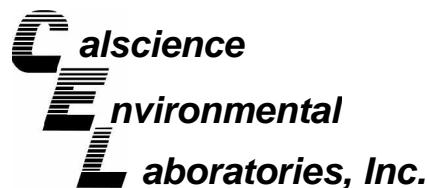
Reporting Limit: 0.10

### Laboratory Notes

Ferrous Iron results were done in the field.

Key: ND=Not Detected at the reporting level, NA=Not applicable





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 3005A Filt.  
Method: EPA 6010B

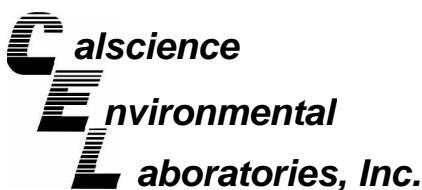
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0185-4	Aqueous	ICP 5300	10/04/10	10/05/10	101004SA4

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	108	105	65-149	3	0-21	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - PDS / PDSD



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

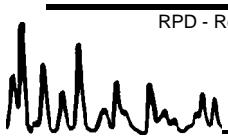
Date Received 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 3005A Filt.  
Method: EPA 6010B

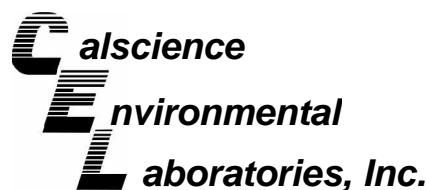
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
10-10-0185-4	Aqueous	ICP 5300	10/04/10	10/05/10	101004SA4

Parameter	<u>PDS %REC</u>	<u>PDSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	107	106	75-125	0	0-21	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

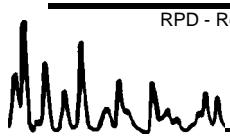
Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: N/A  
Method: EPA 300.0

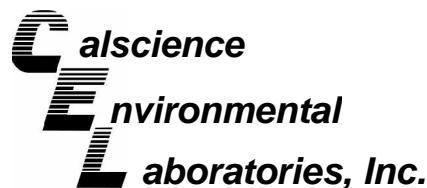
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0146-2	Aqueous	IC 7	N/A	10/04/10	101004S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	98	98	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

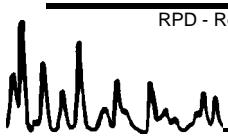
Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

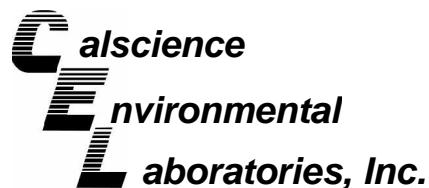
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0258-9	Aqueous	GC/MS R	10/09/10	10/10/10	101009S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	107	80-120	11	0-20	
Ethylbenzene	95	111	73-127	15	0-20	
Toluene	101	112	80-120	11	0-20	
Methyl-t-Butyl Ether (MTBE)	91	99	65-131	8	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

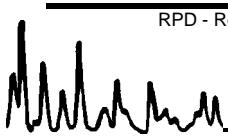
Date Received: 10/02/10  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

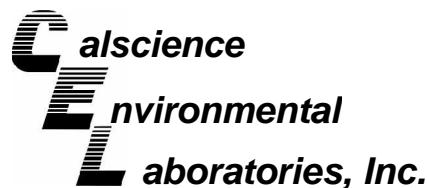
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0192-5	Aqueous	GC/MS R	10/11/10	10/11/10	101011S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	110	95	80-120	14	0-20	
Ethylbenzene	109	97	73-127	11	0-20	
Toluene	112	98	80-120	14	0-20	
Methyl-t-Butyl Ether (MTBE)	106	80	65-131	28	0-22	4

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

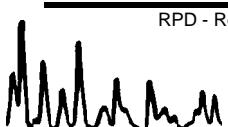
Date Received: N/A  
Work Order No: 10-10-0122  
Preparation: EPA 3010A Total  
Method: EPA 6010B

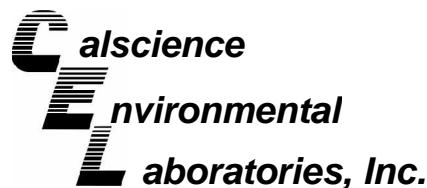
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>097-01-003-11,021</b>	<b>Aqueous</b>	<b>ICP 5300</b>	<b>10/04/10</b>	<b>10/05/10</b>	<b>101004LA4</b>

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	102	100	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

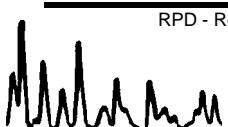
Date Received: N/A  
Work Order No: 10-10-0122  
Preparation: N/A  
Method: EPA 300.0

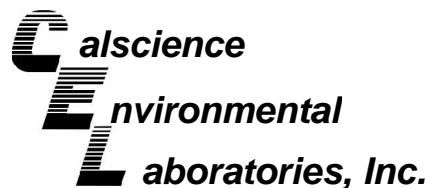
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-1,300	Aqueous	IC 7	N/A	10/04/10	101004L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	104	104	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

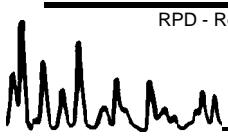
Date Received: N/A  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

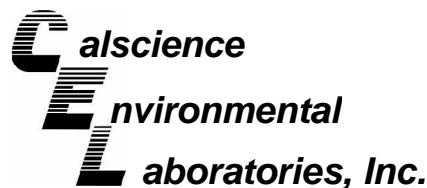
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,685	Aqueous	GC/MS R	10/09/10	10/10/10	101009L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	98	80-120	11	0-20	
Ethylbenzene	109	100	80-123	8	0-20	
Toluene	111	100	80-120	10	0-20	
Methyl-t-Butyl Ether (MTBE)	104	84	75-123	21	0-25	
TPPH	94	86	65-135	10	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

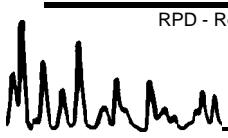
Date Received: N/A  
Work Order No: 10-10-0122  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

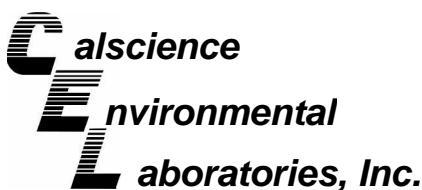
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,688	Aqueous	GC/MS R	10/11/10	10/11/10	101011L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	99	80-120	7	0-20	
Ethylbenzene	107	97	80-123	10	0-20	
Toluene	112	102	80-120	10	0-20	
Methyl-t-Butyl Ether (MTBE)	99	84	75-123	16	0-25	
TPPH	104	90	65-135	15	0-30	

RPD - Relative Percent Difference , CL - Control Limit



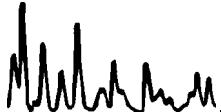


## Glossary of Terms and Qualifiers



Work Order Number: 10-10-0122

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



**LAB (LOCATION)**

## **Shell Oil Products Chain Of Custody Record**

05/2/06 Revision



GOLDEN STATE OVERNIGHT

**1-800-322-5555****WWW.GSO.COM**PACKAGE  
LABEL**SHIPPING AIR BILL****4 PACKAGE INFORMATION**

- LETTER (MAX 8 OZ)  
 PACKAGE (WT) \_\_\_\_\_  
 DECLARED VALUE \$ \_\_\_\_\_  
 COD AMOUNT \$ \_\_\_\_\_  
(CASH NOT ACCEPTED)

- DELIVERY SERVICE     PRIORITY OVERNIGHT BY 10:30 AM  
 EARLY PRIORITY BY 8:00 AM     SATURDAY DELIVERY

\*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

**5 RELEASE SIGNATURE**

SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

**6****7****8 PICK UP INFORMATION**

TIME

DRIVER #

ROUTE #

106280192

PEEL  
OFF  
HERE

106280192

**9 GSO TRACKING NUMBER**

0122

**SAMPLE RECEIPT FORM** Cooler 1 of 1

CLIENT: Delta Consultants

DATE: 10/02/10

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.3 °C + 0.5 °C (CF) = 3.8 °C  Blank  Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
- Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter

Initial: TN

**CUSTODY SEALS INTACT:**

<input type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>TN</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/>	Initial: <u>KM</u>

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/> <i>WBC 10-02-10</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input checked="" type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

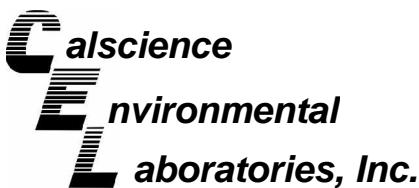
500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna

250PB  250PBn  125PB  125PBznnna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** KM

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: WBC

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znnna: ZnAc<sub>2</sub>+NaOH f: Field-filtered Scanned by: WBC



October 26, 2010

Suzanne McClurkin-Nelson  
 Delta Environmental Consultants, Inc.  
 312 Piercy Rd.  
 San Jose, CA 95138-1401

**Subject: Calscience Work Order No.: 10-10-1529**

**Client Reference: 5251 Hopyard Road, Pleasanton, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/20/2010 and analyzed in accordance with the attached chain-of-custody.

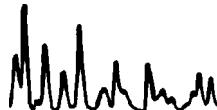
Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that appears to read "Xuan H. Dang". Below the signature, the word "for" is handwritten in a smaller, cursive font.

Calscience Environmental  
 Laboratories, Inc.  
 Xuan H. Dang  
 Project Manager



NELAP ID: 03220CA · DoD-ELAP ID: L10-41 · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: N/A  
Method: EPA 300.0

Project: 5251 Hopyard Road, Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-1529-1-D	10/19/10 14:15	Aqueous	IC 9	N/A	10/20/10 14:57	101020L01

Parameter	Result	RL	DF	Qual	Units
Sulfate	5800	100	100		mg/L

S-3	10-10-1529-2-D	10/19/10 13:50	Aqueous	IC 9	N/A	10/20/10 15:12	101020L01
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	9300	200	200		mg/L

S-1	10-10-1529-3-D	10/19/10 14:40	Aqueous	IC 9	N/A	10/20/10 15:28	101020L01
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	1.7	1.0	1		mg/L

S-2	10-10-1529-4-D	10/19/10 15:20	Aqueous	IC 9	N/A	10/20/10 15:43	101020L01
-----	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	510	10	10		mg/L

S-10	10-10-1529-5-D	10/19/10 15:00	Aqueous	IC 9	N/A	10/20/10 17:16	101020L01
------	----------------	----------------	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	140	2.0	2		mg/L

Method Blank	099-12-906-1,334	N/A	Aqueous	IC 9	N/A	10/20/10 11:52	101020L01
--------------	------------------	-----	---------	------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Road, Pleasanton, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-1529-1-A	10/19/10 14:15	Aqueous	GC/MS T	10/21/10	10/22/10 07:16	101021L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.8	0.50	1		Xylenes (total)	9.0	1.0	1	
Ethylbenzene	6.3	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	1.4	1.0	1		TPPH	5600	250	5	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	95	80-126			1,2-Dichloroethane-d4	96	80-131		
Toluene-d8	101	80-120			Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	98	80-120							

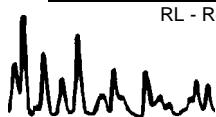
S-3	10-10-1529-2-A	10/19/10 13:50	Aqueous	GC/MS T	10/21/10	10/22/10 07:46	101021L02
-----	----------------	----------------	---------	---------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	190	1.0	2		Xylenes (total)	24	2.0	2	
Ethylbenzene	80	2.0	2		Methyl-t-Butyl Ether (MTBE)	6.9	2.0	2	
Toluene	ND	2.0	2		TPPH	3000	100	2	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	94	80-126			1,2-Dichloroethane-d4	96	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	96	80-120							

S-1	10-10-1529-3-A	10/19/10 14:40	Aqueous	GC/MS T	10/21/10	10/22/10 08:15	101021L02
-----	----------------	----------------	---------	---------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	20	2.5	5		Xylenes (total)	29	5.0	5	
Ethylbenzene	92	5.0	5		Methyl-t-Butyl Ether (MTBE)	7.2	5.0	5	
Toluene	33	5.0	5		TPPH	13000	250	5	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	95	80-126			1,2-Dichloroethane-d4	95	80-131		
Toluene-d8	98	80-120			Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	96	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Road, Pleasanton, CA

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-2	10-10-1529-4-A	10/19/10 15:20	Aqueous	GC/MS T	10/21/10	10/22/10 08:45	101021L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	17	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	101	80-126			1,2-Dichloroethane-d4	102	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	95	88-112		
1,4-Bromofluorobenzene	93	80-120							

S-10	10-10-1529-5-A	10/19/10 15:00	Aqueous	GC/MS T	10/21/10	10/22/10 09:15	101021L02
------	----------------	----------------	---------	---------	----------	----------------	-----------

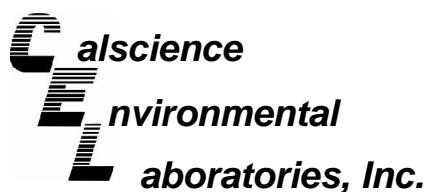
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	104	80-126			1,2-Dichloroethane-d4	104	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	95	88-112		
1,4-Bromofluorobenzene	93	80-120							

Method Blank	099-12-767-4,761	N/A	Aqueous	GC/MS T	10/21/10	10/22/10 00:50	101021L02
--------------	------------------	-----	---------	---------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	109	80-126			1,2-Dichloroethane-d4	111	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	89	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Road, Pleasanton, CA

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,770	N/A	Aqueous	GC/MS R	10/23/10	10/23/10 12:57	101023L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>	<u>Qual</u>	
Dibromofluoromethane	108	80-126			1,2-Dichloroethane-d4	119	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	109	80-120							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Analytical Report



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project: 5251 Hopyard Road, Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-1	10-10-1529-1-E	10/19/10 14:15	Aqueous	ICP 5300	10/20/10	10/21/10 13:04	101020LA5

Parameter	Result	RL	DF	Qual	Units		
Iron	6.36	0.100	1		mg/L		
S-3	10-10-1529-2-E	10/19/10 13:50	Aqueous	ICP 5300	10/20/10	10/21/10 13:06	101020LA5

Parameter	Result	RL	DF	Qual	Units		
Iron	16.3	0.100	1		mg/L		
S-1	10-10-1529-3-E	10/19/10 14:40	Aqueous	ICP 5300	10/20/10	10/21/10 13:08	101020LA5

Parameter	Result	RL	DF	Qual	Units		
Iron	0.583	0.100	1		mg/L		
S-2	10-10-1529-4-E	10/19/10 15:20	Aqueous	ICP 5300	10/20/10	10/21/10 13:10	101020LA5

Parameter	Result	RL	DF	Qual	Units		
Iron	ND	0.100	1		mg/L		
S-10	10-10-1529-5-E	10/19/10 15:00	Aqueous	ICP 5300	10/20/10	10/21/10 13:12	101020LA5

Parameter	Result	RL	DF	Qual	Units		
Iron	0.261	0.100	1		mg/L		
Method Blank	097-01-003-11,068	N/A	Aqueous	ICP 5300	10/20/10	10/21/10 11:25	101020LA5

Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**LABORATORY ID: 10-10-1529**

**Method: EPA 6010B (Calculation)**

**Matrix: Water/Aqueous**

**CLIENT:** Delta Environmental Consultants, Inc.  
**PROJECT:** 5251 Hopyard Road, Pleasanton, CA

## Results

Sample ID	Ferric Iron (Fe+3) mg/L	Dilution Factor	Reporting Limit	Date Extracted	Date Analyzed
EW-1	1.56	1	0.10	10/20/10	10/21/10
S-3	10.7	1	0.10	10/20/10	10/21/10
S-1	ND *	1	0.10	10/20/10	10/21/10
S-2	ND	1	0.10	10/20/10	10/21/10
S-10	0.26	1	0.10	10/20/10	10/21/10

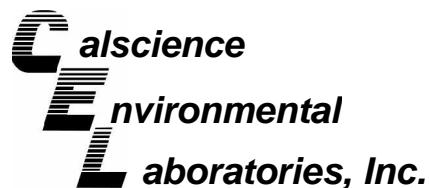
Reporting Limit: 0.10

## Laboratory Notes

Ferrous Iron results were done in the field.

\* Total Iron concentration is less than Ferrous Iron concentration

Key: ND=Not Detected at the reporting level, NA=Not applicable



## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

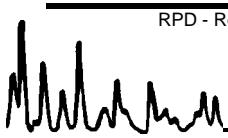
Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 3005A Filt.  
Method: EPA 6010B

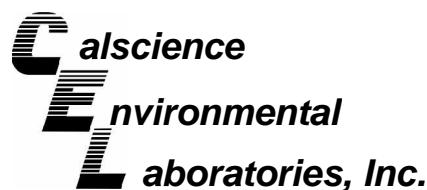
Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-1501-12	Aqueous	ICP 5300	10/20/10	10/21/10	101020SA5

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	4X	4X	65-149	4X	0-21	Q

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - PDS / PDSD



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

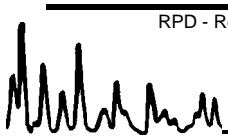
Date Received 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 3005A Filt.  
Method: EPA 6010B

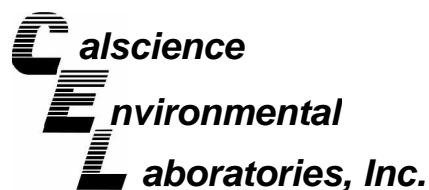
Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
10-10-1501-12	Aqueous	ICP 5300	10/20/10	10/21/10	101020SA5

Parameter	<u>PDS %REC</u>	<u>PDSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	4X	4X	75-125	4X	0-21	Q

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

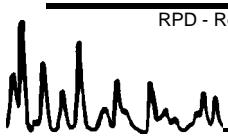
Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: N/A  
Method: EPA 300.0

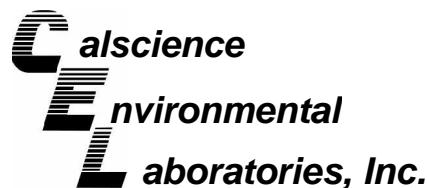
Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-2	Aqueous	IC 9	N/A	10/20/10	101020S01

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	98	98	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

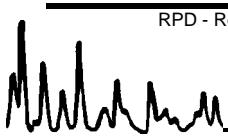
Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

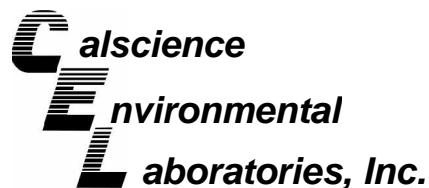
Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-1323-1	Aqueous	GC/MS T	10/21/10	10/22/10	101021S02

Parameter	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	97	94	80-120	3	0-20	
Ethylbenzene	97	95	73-127	2	0-20	
Toluene	94	93	80-120	1	0-20	
Methyl-t-Butyl Ether (MTBE)	91	91	65-131	0	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

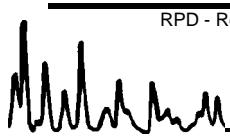
Date Received: 10/20/10  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

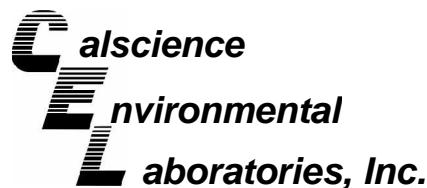
Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-1403-22	Aqueous	GC/MS R	10/23/10	10/23/10	101023S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	96	80-120	3	0-20	
Ethylbenzene	107	99	73-127	7	0-20	
Toluene	106	105	80-120	1	0-20	
Methyl-t-Butyl Ether (MTBE)	107	94	65-131	13	0-22	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

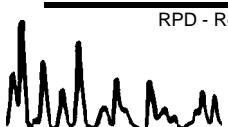
Date Received: N/A  
Work Order No: 10-10-1529  
Preparation: EPA 3010A Total  
Method: EPA 6010B

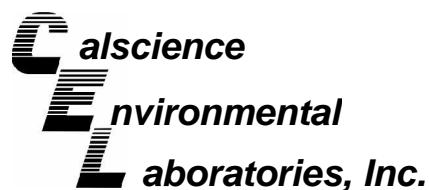
Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>097-01-003-11,068</b>	<b>Aqueous</b>	<b>ICP 5300</b>	<b>10/20/10</b>	<b>10/21/10</b>	<b>101020LA5</b>

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	110	110	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

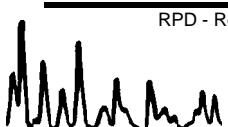
Date Received: N/A  
Work Order No: 10-10-1529  
Preparation: N/A  
Method: EPA 300.0

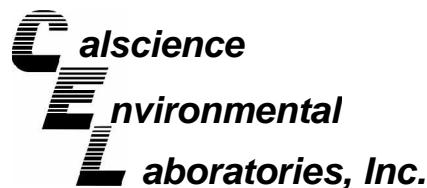
Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-1,334	Aqueous	IC 9	N/A	10/20/10	101020L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	100	99	90-110	1	0-15	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

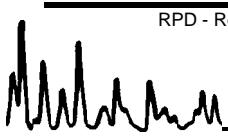
Date Received: N/A  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

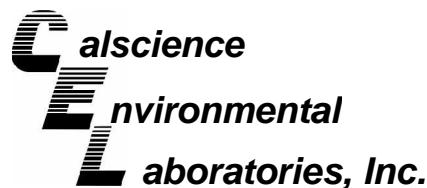
Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,761	Aqueous	GC/MS T	10/21/10	10/22/10	101021L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	95	80-120	1	0-20	
Ethylbenzene	96	96	80-123	0	0-20	
Toluene	92	92	80-120	0	0-20	
Methyl-t-Butyl Ether (MTBE)	92	92	75-123	1	0-25	
TPPH	90	91	65-135	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Delta Environmental Consultants, Inc.  
312 Piercy Rd.  
San Jose, CA 95138-1401

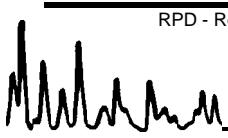
Date Received: N/A  
Work Order No: 10-10-1529  
Preparation: EPA 5030C  
Method: LUFT GC/MS / EPA 8260B

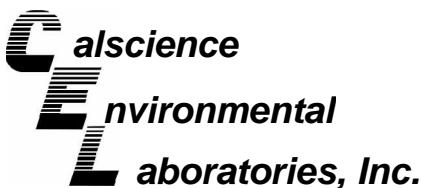
Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-4,770	Aqueous	GC/MS R	10/23/10	10/23/10	101023L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	99	80-120	7	0-20	
Ethylbenzene	109	107	80-123	2	0-20	
Toluene	110	108	80-120	2	0-20	
Methyl-t-Butyl Ether (MTBE)	115	96	75-123	18	0-25	
TPPH	122	127	65-135	5	0-30	

RPD - Relative Percent Difference , CL - Control Limit





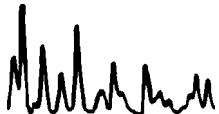
## Glossary of Terms and Qualifiers



Work Order Number: 10-10-1529

---

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.





1529

COMPANY <b>CAL SCIENCE</b>	SHIPPER'S GSO ACCOUNT NO. <b>4225</b>
ADDRESS <b>7440 LINCOLN WAY</b>	STE/ ROOM ZIP CODE
CITY <b>GARDEN GROVE</b>	PHONE NUMBER <b>714-295-5494</b>
YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE	
ECIAL STRUCTIONS	

**1-800-322-5555****WWW.GSO.COM****SHIPPING AIR BILL****4 PACKAGE INFORMATION**

- LETTER (MAX 8 OZ)  
 PACKAGE (WT) \_\_\_\_\_  
 DECLARED VALUE \$ \_\_\_\_\_  
 COD AMOUNT \$ \_\_\_\_\_  
(CASH NOT ACCEPTED)

- 5 DELIVERY SERVICE**  PRIORITY OVERNIGHT  EARLY PRIORITY BY 8:00 AM  SATURDAY DELIVERY BY 10:30 AM

\*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT

- 6 RELEASE SIGNATURE** SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

- 7 CREDIT CARD** CREDIT CARD NUMBER EXP. D.  
 M/C  VISA  AM EX

- 8 PICK UP INFORMATION** TIME DRIVER # ROUTE #

**106280194**

- 9 GSO TRACKING NUMBER**



394 106280194  
394 3557

GSO

WORK ORDER #: 10-10-

## SAMPLE RECEIPT FORM

Cooler    of   

CLIENT: Delta Consultants

DATE: 10/20/10

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.3 °C + 0.5°C (CF) = 2.8 °C  Blank  Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
- Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:  Air  Filter

Initial: WB

### CUSTODY SEALS INTACT:

<input type="checkbox"/> Cooler	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>WB</u>
<input type="checkbox"/> Sample	<input type="checkbox"/> _____	<input type="checkbox"/> No (Not Intact)	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Initial: <u>WB</u>

### SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Collection date/time, matrix, and/or # of containers logged in based on sample labels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No analysis requested. <input type="checkbox"/> Not relinquished. <input checked="" type="checkbox"/> No date/time relinquished.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved vials received for Volatiles analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTAINER TYPE:

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Water:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs  500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  500PB  500PBna  250PB  250PBn  125PB  125PBznna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Summa® **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** WB

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: PS

Preservative: h: HCl n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> znna: ZnAc<sub>2</sub>+NaOH f: Field-filtered Scanned by: PS