



**Shell Oil Products US**

**RECEIVED**

9:50 am, Aug 12, 2010

Alameda County  
Environmental Health

August 11, 2010

**Re: Second Quarter 2010 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 that reads "Denis L. Brown". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Denis L. Brown  
Project Manager

August 11, 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: **SECOND QUARTER 2010 QUARTERLY MgSO<sub>4</sub>  
FEASIBILITY 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 *Second Quarter 2010 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 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. The agency approval letter and work plan (text, tables and figures only) are included as Appendix A.

#### **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 site evaluation 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 pilot study have been conducted at the site. Although the calculated volume of 55 gallons was applied to each application well during the initial event, during the two subsequent events Delta was unable to apply the calculated MgSO<sub>4</sub> volume due to the tight formation at the site and the application method (gravity feed). A groundwater elevation contour map from the first quarter 2010 monitoring event is included on Figure 2. Groundwater flow direction is variable at the site, trending in general from the north northwest to the west; a rose diagram showing historic flow directions is included on Figure 3. MgSO<sub>4</sub> application pilot study data are included in Table 2 and historic well data are provided in Table 3. Field data sheets are included as Appendix B and the certified analytical reports with chain-of-custody documentation for monitoring in May through July 2010 are presented as Appendix C.

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

As noted in the *First Quarter 2010 Semi-Annual Monitoring Report and Quarterly Feasibility Report* dated May 13, 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 and July 15, 2010. Monitoring samples were collected from the application wells on May 11, 2010, June 9, 2010, and June 22, 2010; baseline samples were collected from all wells (including observation wells) prior to each application event. 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<sup>TM</sup> (electron acceptor solution) were obtained from EOS Remediation, LLC and transported to the site. One drum of EAS<sup>TM</sup> 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; because sulfate is highly soluble, it is unlikely that a sulfate precipitate formed following the first application, resulting in reduced pore space availability. There may be a slightly higher possibility of magnesium forming a precipitate, but that is generally thought to be unlikely. Groundwater elevations should not have been interfering with distribution as it was fairly consistent during this period. It is possible that pumping the material into the wells at a low flow rate (less than 4 standard cubic feet [scfm]) may yield better introduction of MgSO<sub>4</sub> to a broader area.

### **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 initial MgSO<sub>4</sub> application, which appeared to be a typical trend. Ferric iron concentrations were inconclusive, generally decreasing at well EW-1, but showing an increase at well S-3 following a reduction in sulfate concentrations after the second application event.

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.

Although early results at the application points showed promising results with this technology, it is apparent that there may be difficulty distributing the MgSO<sub>4</sub> effectively. It was also noted that in the absence of sulfate as an electron receptor TPH-g rebounded at the most highly-impacted well (EW-1), though TPH-g concentrations at application well S-3 decreased steadily throughout the pilot study to date. It is not known what radius of influence would be expected due to the long distance between existing wells, but no influence has been 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 S-3 and EW-1 on Graphs 3 and 4, respectively, and TPH-g concentrations correlated to groundwater elevation is included on Graph 5.

## **Recommendations**

Delta proposes one additional application event to be conducted once current sulfate concentrations in the application wells have dropped below approximately 1,000 milligrams per liter (mg/L). Assuming the final application takes place in September, the pilot test study would conclude with our monitoring samples collected during the two months following the final application. In order to determine if this is a viable technology for this site, we propose doing the additional application using a pump with a maximum flow rate of 4 scfm to determine if a higher volume of MgSO<sub>4</sub> can be distributed at greater distances without the potential of generating off-gas. An alternative would be to install an infiltration gallery upgradient of the source area; however, due to the placement of the underground storage tanks (USTs), dispenser islands and source area, as well as the variability of groundwater flow direction from north northwest to west, this method is probably not feasible. Delta will submit additional information and recommendations in the next quarterly feasibility report, which will be submitted along with the Third Quarter 2010 monitoring report by November 15th.

## **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.

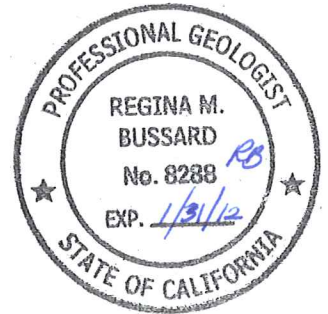
If you have any questions regarding this report, please contact Suzanne McClurkin-Nelson (Delta Site Manager) at (408) 826-1875 or Denis Brown (Shell Project Manager) at (707) 865-0251.

Sincerely,

**Delta Consultants**

Suzanne McClurkin-Nelson  
Senior Project Manager

Regina Bussard, P.G.  
Project Geologist

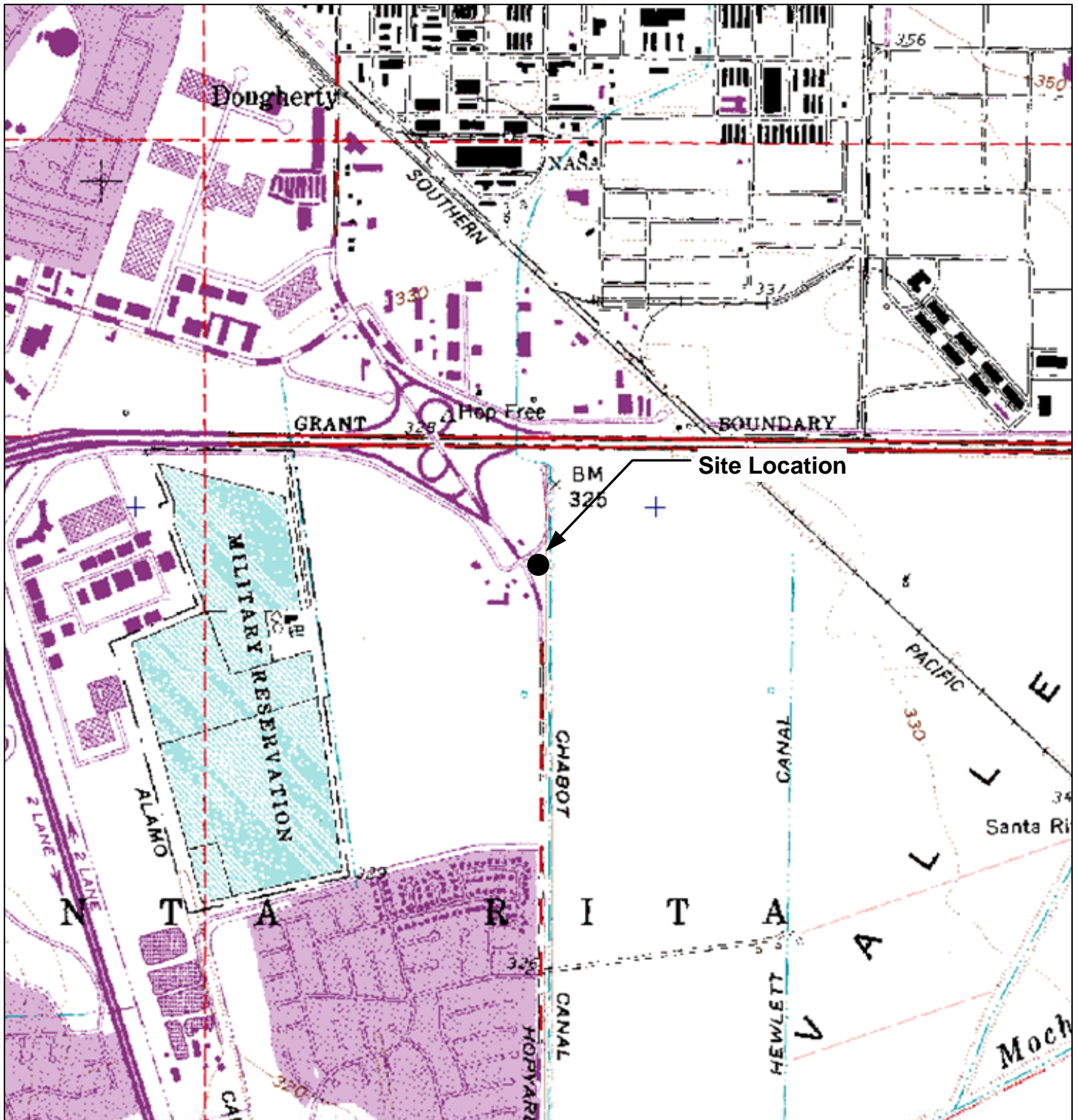


cc: Denis Brown, Shell Oil Products US  
Carl Cox, C and J Cox Corporation, Pleasanton  
Colleen Winey, Zone 7 Water Agency, Livermore  
Danielle Stefani, Livermore-Pleasanton Fire Department, Pleasanton

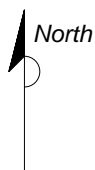
**ATTACHMENTS:**

- Figure 1 – Site Location Map
- Figure 2 – Groundwater Elevation Contour Map – 2/9/2010
- Figure 3 – Groundwater Flow Direction Rose Diagram
- Graph 1 – TPH-g vs. Sulfate Concentrations – 10/30/2009
- Graph 2 – MgSO<sub>4</sub> Feasibility Study
- Graph 3 – TPH-g Trends Pre- and During MgSO<sub>4</sub> Applications (Well S-3)
- Graph 4 – TPH-g Trends Pre- and During MgSO<sub>4</sub> Applications (Well EW-1)
- Graph 5 – TPH-g Trends vs. Groundwater Elevation
- Table 1 – MgSO<sub>4</sub> Application Feasibility Groundwater Testing Data
- Table 2 – MgSO<sub>4</sub> Application Feasibility Pilot Study
- Table 3 – Historic Well Data
- Appendix A – Regulatory Approval Letter and MgSO<sub>4</sub> Work Plan
- Appendix B – Field Data Sheets
- Appendix C – Certified Analytical Reports with Chain-of-Custody Documentation

## FIGURES



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



QUADRANGLE LOCATION

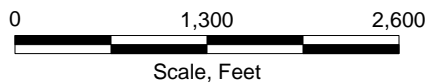


FIGURE 1  
 SITE LOCATION MAP

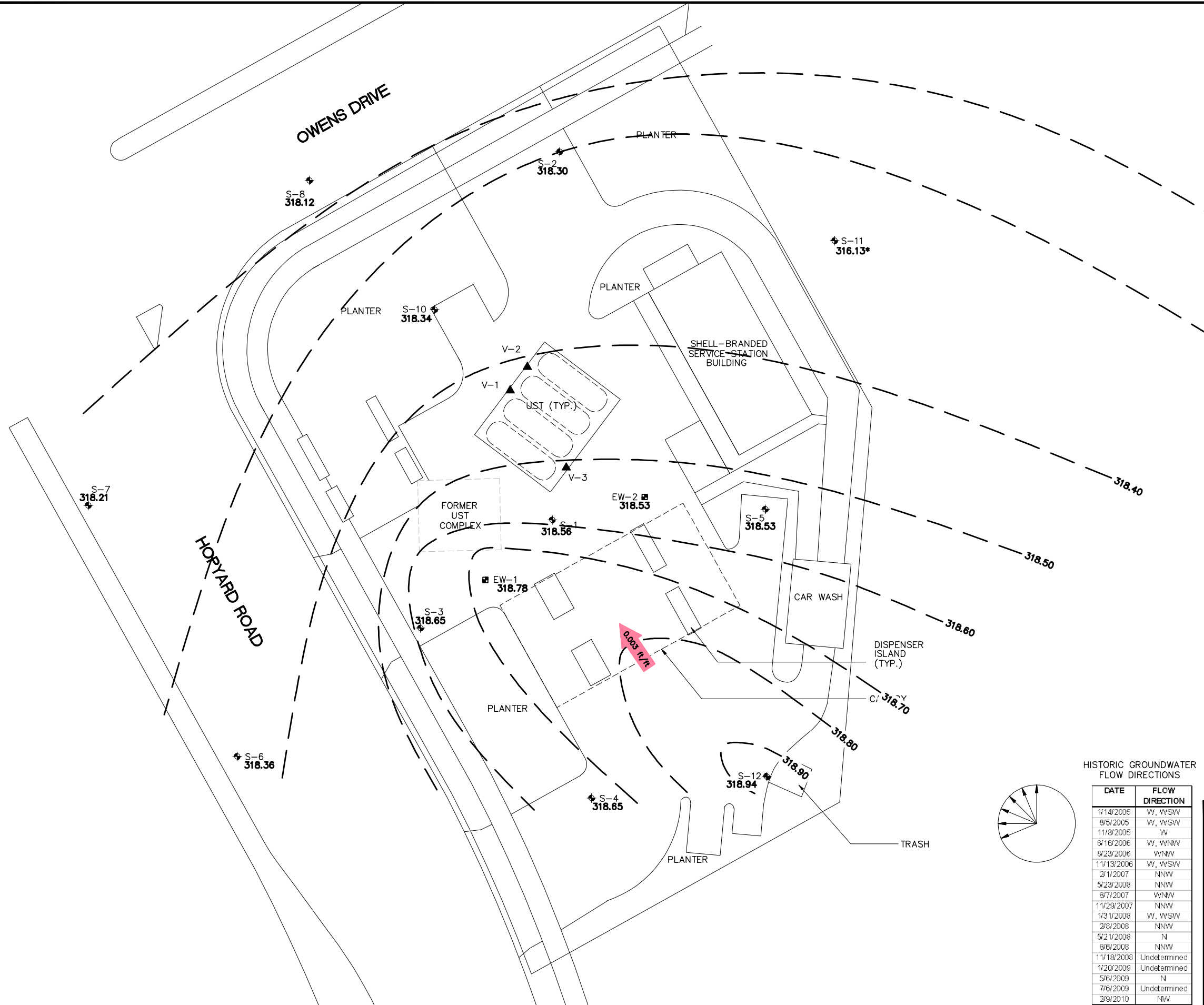
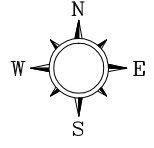
SHELL-BRANDED SERVICE STATION  
 5251 Hopyard Road  
 Pleasanton, California

PROJECT NO. SCA5251H1A	DRAWN BY V. F. 3/31/05
FILE NO.	PREPARED BY VF
REVISION NO.	REVIEWED BY



PROJECT NUMBER SCA5251H1D  
 APPROVED BY  
 CHECKED BY  
 DRAWN BY J.F.F. 3/15/2010

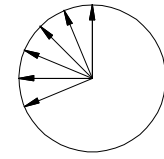
SCALE IN FEET  
 0 20 40



- LEGEND**
- MW-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - EW-1 GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
  - V-3 SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
  - 318.68 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL)
  - 318.40 - - - GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL) CONTOUR INTERVAL=0.10 FEET
  - \* ANOMALOUS DATA NOT USED IN CONTOURING
  - 0.003 ft/ft APPROXIMATE GROUNDWATER DIRECTION
  - NG NOT GAUGED

HISTORIC GROUNDWATER FLOW DIRECTIONS

DATE	FLOW DIRECTION
1/14/2005	W, WSW
8/5/2005	W, WSW
11/8/2005	W
8/16/2006	W, WNW
8/23/2006	WNW
11/13/2006	W, WSW
2/1/2007	NNW
5/23/2008	NNW
8/7/2007	WNW
11/29/2007	NNW
1/31/2008	W, WSW
2/8/2008	NNW
5/21/2008	N
8/6/2008	NNW
11/18/2008	Undetermined
1/20/2009	Undetermined
5/6/2009	N
7/6/2009	Undetermined
2/9/2010	NW



**DELTA CONSULTANTS**

SHELL OIL PRODUCTS US  
 SHELL BRANDED SERVICE STATION  
 PLEASANTON, CALIFORNIA

**FIGURE 2**

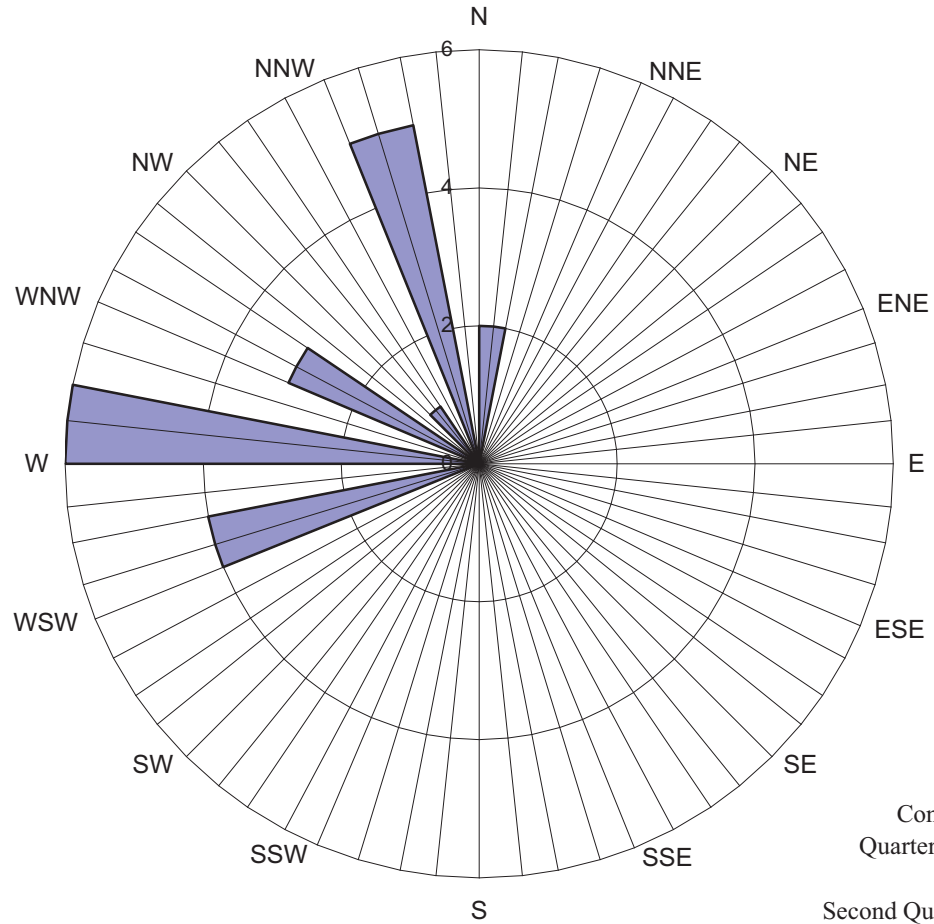
**GROUNDWATER ELEVATION CONTOUR MAP**  
 2/9/2010

5251 HOPYARD ROAD  
 PLEASANTON, CALIFORNIA



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

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, California

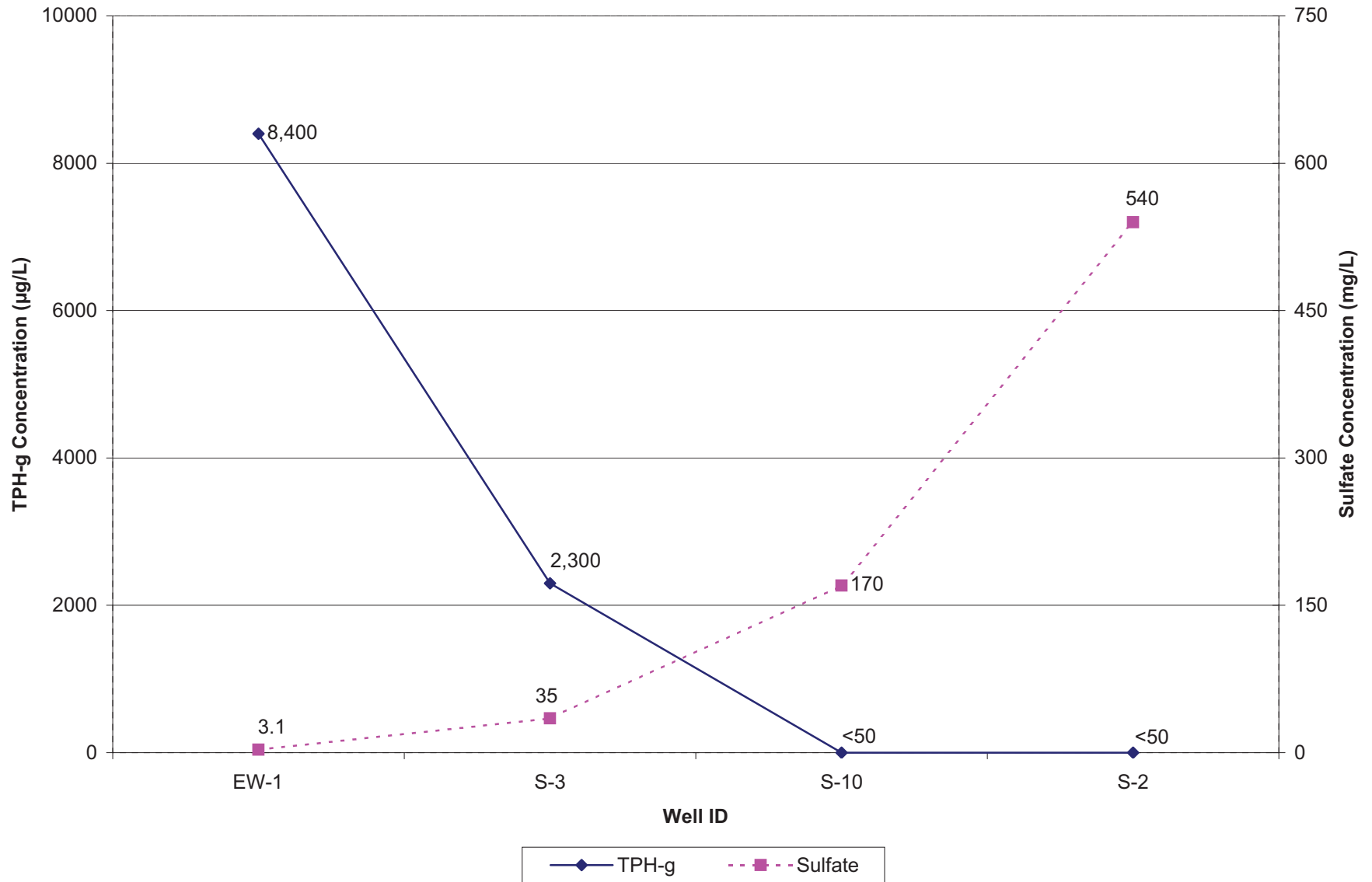


Legend  
Concentric Circles represent  
Quarterly and Semi-Annual Monitoring  
Events  
Second Quarter 2002 through First Quarter

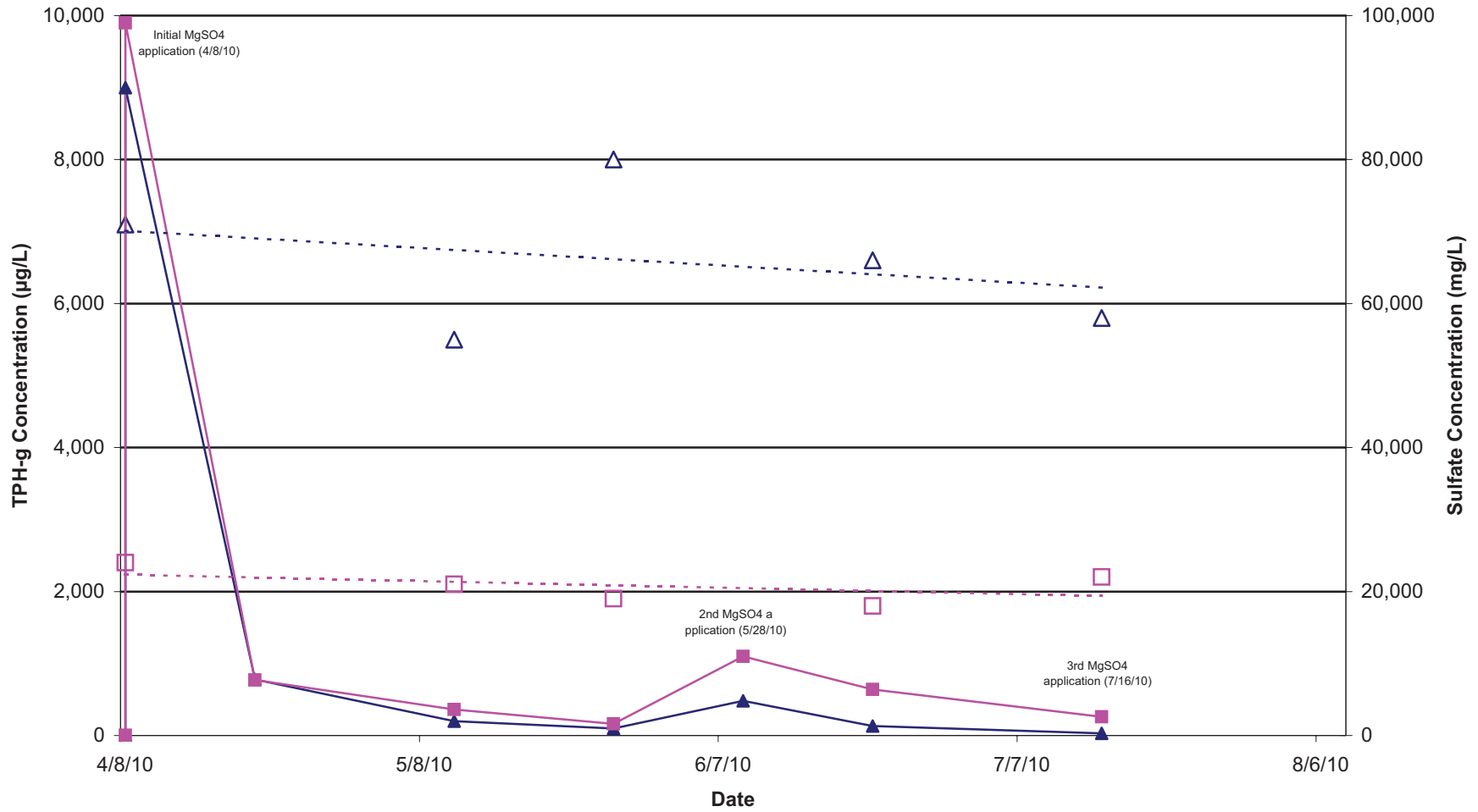
■ Groundwater Flow Direction

## GRAPHS

**GRAPH 1**  
**TPH-G VS. SULFATE CONCENTRATIONS - 10/30/2009**  
Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California

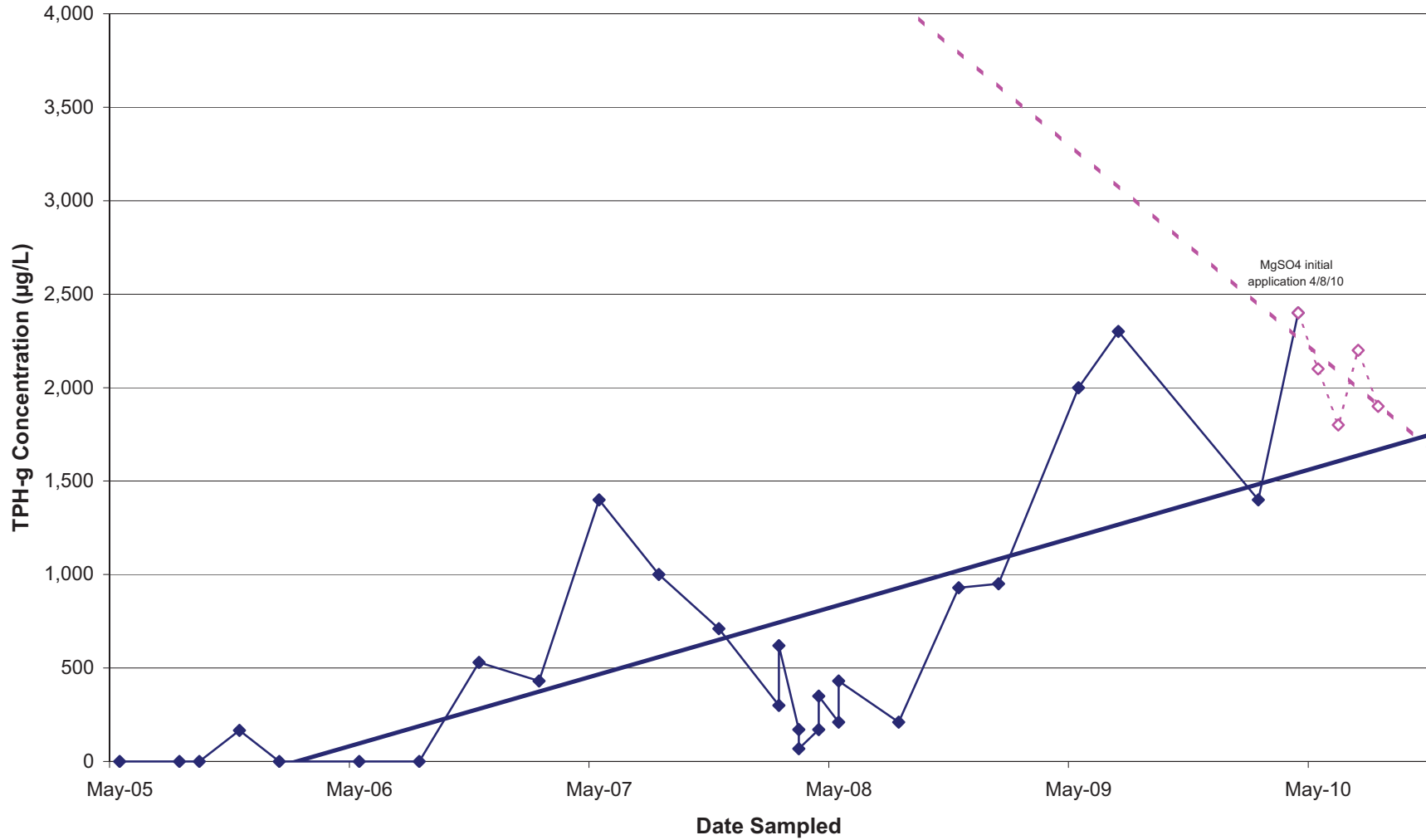


**GRAPH 2**  
**MgSO<sub>4</sub> FEASIBILITY STUDY**  
 Shell-Branded Service Station  
 5251 Hopyard Road  
 Pleasanton, California



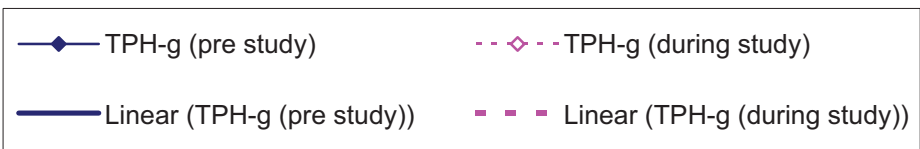
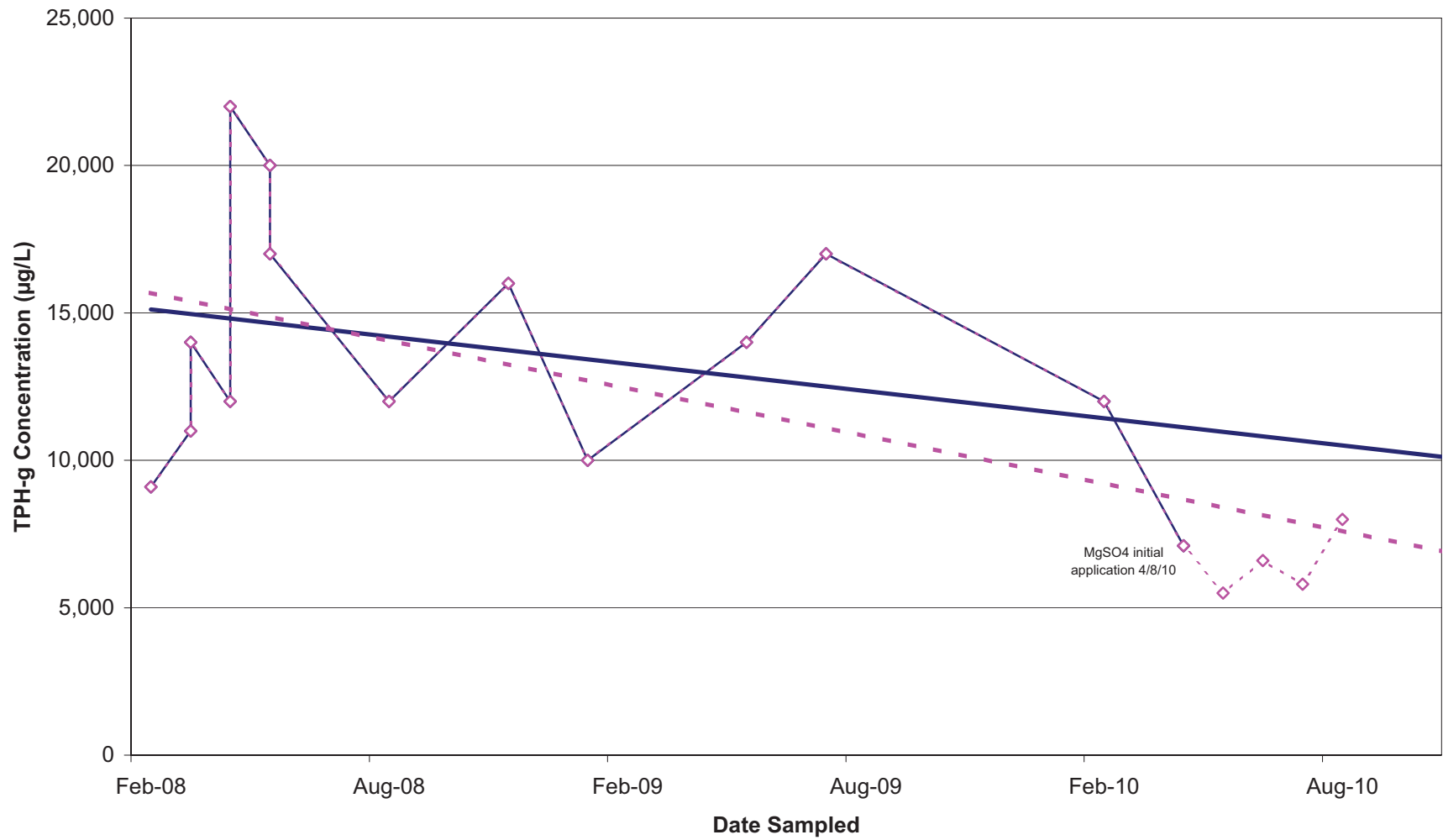
**GRAPH 3**  
**TPH-g TRENDS PRE- AND DURING MgSO<sub>4</sub> APPLICATIONS (S-3)**

Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California



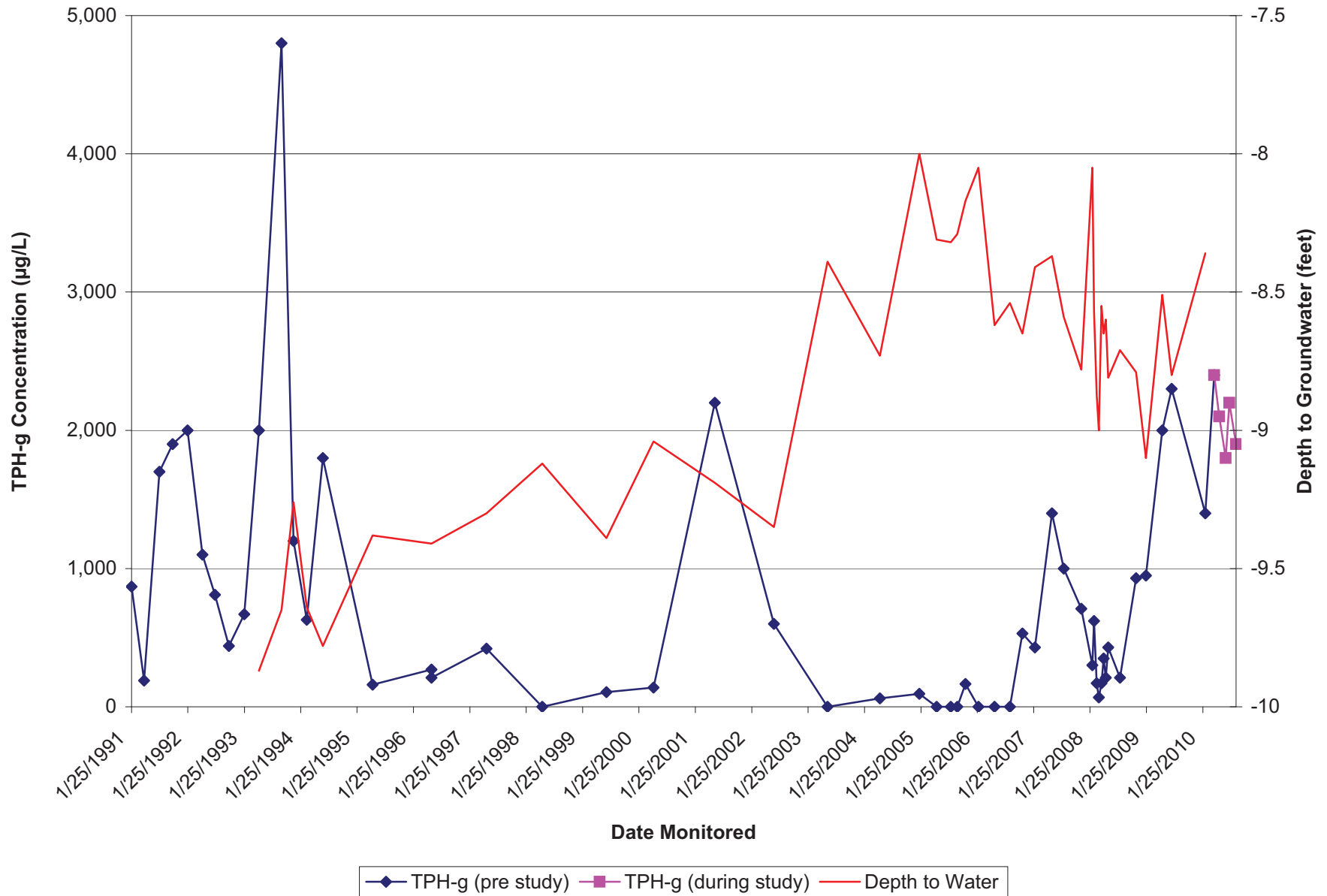
**GRAPH 4**  
**TPH-g TRENDS PRE- AND DURING MgSO<sub>4</sub> APPLICATIONS (EW-1)**

Shell-Branded Service Station  
5251 Hopyard Road  
Pleasanton, California



### GRAPH 5 TPH-g TRENDS VS. GROUNDWATER ELEVATION

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

ug/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**  
**MgSO<sub>4</sub> FEASIBILITY PILOT STUDY**

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, CA

Well ID	Date	Volume MgSO <sub>4</sub> Applied (gallons)	DTW (feet)	pH (pH units)	Sulfate (mg/L)	Ferrous Iron (Fe+2)† (mg/L)	Ferric Iron (Fe+3) (mg/L)	TPH-g (ug/L)	BTEX Compounds				MTBE (ug/L)
									B (ug/L)	T (ug/L)	E (ug/L)	X (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	--	7.5	ND(<1.0)	0.8	N(<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	N(<0.10)	12,000	20	38	200	54	ND(<5.0)

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	--	7.2	570	0.0	N(<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	N(<0.10)	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	19

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	--	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)

**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	--	--	--	90,000	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	4/21/10 12:00 PM	--	--	--	7,800	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	5/11/10 9:45 AM	--	--	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	--	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	--	--	--	4,800	NS	NS	NS	NS	NS	NS	NS	NS
EW-1	6/22/10 10:30 AM	--	--	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)

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	3.6	11
S-3	4/8/10 7:30 PM	--	--	--	99,000	NS	NS	NS	NS	NS	NS	NS	NS
S-3	4/21/10 11:45 AM	--	--	--	7,700	NS	NS	NS	NS	NS	NS	NS	NS
S-3	5/11/10 9:55 AM	--	--	7.11	3,600	4.8	1.43	2,100	230	2.9	15	2.7	9.3
S-3	5/27/10 11:15 AM <sup>c</sup>	40	--	6.9	1,600	3.0	1.42	1,900	210	ND(<2.0)	4.1	ND(<2.0)	8.2
S-3	6/9/10 10:00 AM	--	--	--	11,000	NS	NS	NS	NS	NS	NS	NS	NS
S-3	6/22/10 10:15 AM	--	--	6.93	6,400	4.5	4.43	1,800	270	2.4	26	4	5.8
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)	ND(<2.0)	7.4

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

Shell-branded Service Station  
5251 Hopyard Road  
Pleasanton, CA

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

**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

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.

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.74	11.18	315.56	2.4

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-1	1/14/2005	4,200	NA	22	34	380	33	NA	100	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	326.74	11.32	315.42	NA
S-1	08/05/2005	4,600	NA	32	52	420	69	NA	110	<40	<40	<40	410	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	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	326.74	9.06	317.68	NA
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.74	8.42	318.32	NA
<b>S-1</b>	<b>2/9/2010</b>	<b>8,800</b>	<b>NA</b>	<b>18</b>	<b>33</b>	<b>340</b>	<b>37</b>	<b>NA</b>	<b>13</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>66</b>	<b>NA</b>	<b>326.74</b>	<b>8.18</b>	<b>318.56</b>	<b>NA</b>
S-2	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	4/16/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA

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**HISTORIC WELL DATA**  
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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-2	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	10/18/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	8.83	317.76	NA
S-2	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	7/17/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	NA	NA	NA
S-2	1/23/1993	<50	140 b	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.59	8.10	318.49	NA
S-2	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	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	326.59	8.91	317.68	NA
S-2	12/8/1993	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.47	8.14	318.33	NA
S-2	08/05/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	320	<2.0	<2.0	<2.0	510	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	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	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	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	326.47	8.34	318.13	NA

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Shell-branded Service Station  
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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.50	8.41	318.09	NA
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	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	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	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	326.50	8.53	317.97	NA
<b>S-2</b>	<b>2/9/2010</b>	<b>62</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>42</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>326.50</b>	<b>8.20</b>	<b>318.30</b>	<b>NA</b>
S-3	1/25/1991	870	330	230	<2.5	130	<2.5	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	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	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	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	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	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	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	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	327.38	8.81	318.57	NA

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-3	4/28/1993	2,000	<50	300	3.4	210	38	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	327.04	8.31	318.73	NA
S-3	08/05/2005 l	<50	NA	0.51	<0.50	<0.50	<1.0	NA	6.0	<2.0	<2.0	<2.0	42	NA	327.04	8.32	318.72	NA
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	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	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	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	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	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	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	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	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	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	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	327.01	8.05	318.96	NA



**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-3	2/20/2008	620 n	NA	150	4.1	11	11	NA	19	<2.0	<2.0	<2.0	<10	<100	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	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	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	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	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	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	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	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	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	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	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	327.01	8.80	318.21	NA
<b>S-3</b>	<b>2/9/2010</b>	<b>1,400</b>	<b>NA</b>	<b>180</b>	<b>4.7</b>	<b>11</b>	<b>13</b>	<b>NA</b>	<b>12</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>32</b>	<b>NA</b>	<b>327.01</b>	<b>8.36</b>	<b>318.65</b>	<b>NA</b>

S-4	1/25/1991	<50	<50	<0.5	1.5	<0.5	2.8	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	4/16/1991	<50	0.7	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	10/18/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	8.82	318.56	NA
S-4	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	7/17/1992	<500	74	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	10/16/1992	<500	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	NA	NA	NA
S-4	1/23/1993	<500	94 b	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.38	8.32	319.06	NA
S-4	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	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	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	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	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	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	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	327.38	9.29	318.09	NA

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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-4	5/12/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	140	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	327.24	8.79	318.45	NA
<b>S-4</b>	<b>2/9/2010</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>327.24</b>	<b>8.59</b>	<b>318.65</b>	<b>NA</b>
S-5	1/25/1991	<50	<50	<0.5	<0.5	<0.5	0.7	NA	NA	NA	NA	NA	NA	NA	327.76	NA	NA	NA

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5251 Hopyard Road  
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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-5	4/16/1991	<50	<50	<0.5	<0.5	<0.5	0.8	NA	NA	NA	NA	NA	NA	NA	327.76	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	327.76	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	327.76	10.00	317.76	NA
S-5	1/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	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	327.76	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	327.76	NA	NA	NA
S-5	10/16/1992	230	57	13	<0.5	4.9	4.3	NA	NA	NA	NA	NA	NA	NA	327.76	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	327.76	8.88	318.88	NA
S-5	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	10.20	317.56	NA
S-5	9/22/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	9.92	317.84	NA
S-5	12/8/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	10.19	317.57	NA
S-5	3/4/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	9.95	317.81	NA
S-5	6/16/1994	<50	NA	0.9	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	10.02	317.74	NA
S-5	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	9.58	318.18	NA
S-5	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	327.76	9.84	317.92	NA
S-5	5/12/1997	360	NA	3.3	<0.50	17	9.8	130	NA	NA	NA	NA	NA	NA	327.76	9.16	318.60	4.2
S-5	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	92	NA	NA	NA	NA	NA	NA	327.76	9.25	318.51	3.8
S-5 (D)	5/8/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	100	NA	NA	NA	NA	NA	NA	327.76	9.25	318.51	3.8
S-5	6/27/1999	223	NA	13.7	12.9	8.20	45.8	106	NA	NA	NA	NA	NA	NA	327.76	9.39	318.37	3.0
S-5	4/28/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	255	NA	NA	NA	NA	NA	NA	327.76	9.43	318.33	1.2
S-5	5/30/2001	<100	NA	<1.0	<1.0	<1.0	<1.0	NA	480	NA	NA	NA	NA	NA	327.76	9.47	318.29	1.1
S-5	6/17/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	210	NA	NA	NA	NA	NA	327.76	9.74	318.02	0.2
S-5	5/30/2003	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	450	NA	NA	NA	NA	NA	327.43	8.87	318.56	1.7
S-5	5/3/2004	<250	NA	<2.5	<2.5	<2.5	<5.0	NA	470	NA	NA	NA	NA	NA	327.43	9.10	318.33	0.7
S-5	1/14/2005	<100	NA	<1.0	<1.0	<1.0	<2.0	NA	230	NA	NA	NA	NA	NA	327.43	8.43	319.00	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	327.43	8.71	318.72	NA
S-5	08/05/2005	1,900	NA	57	7.5	22	17	NA	240	<4	<4	<4	480	NA	327.43	8.90	318.53	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	327.43	8.84	318.59	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	327.43	8.86	318.57	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	327.43	8.66	318.77	NA

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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	327.43	9.00	318.43	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	327.43	8.97	318.46	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	327.43	8.77	318.66	NA
S-5	2/1/2007	280	NA	14	2.1	<0.50	1.4	NA	13	<2.0	<2.0	<2.0	42	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	11	NA	327.43	9.18	318.25	NA
<b>S-5</b>	<b>2/9/2010</b>	<b>130</b>	<b>NA</b>	<b>2.3</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>2.4</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>327.43</b>	<b>8.90</b>	<b>318.53</b>	<b>NA</b>
S-6	1/25/1991	<50	<50	<0.5	1.7	<0.5	2.8	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	4/16/1991	<50	<50	<0.5	<0.5	<0.5	0.6	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	7/24/1991	<50	<50	<0.5	<0.5	<0.5	0.5	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	10/18/1991	<50	<50	<0.5	<0.5	<0.5	0.5	NA	NA	NA	NA	NA	NA	NA	326.56	8.84	317.22	NA
S-6	1/23/1992	<50	<50	<0.5	<0.5	<0.5	0.5	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	7/17/1992	400	130	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA
S-6	10/16/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	NA	NA	NA

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-6	1/23/1993	<50	230 b	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	7.82	318.74	NA
S-6	4/28/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	9.00	317.56	NA
S-6	9/22/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	8.61	317.96	NA
S-6	12/8/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	10.02	316.54	NA
S-6	3/4/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	8.88	317.68	NA
S-6	6/16/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	9.04	317.52	NA
S-6	5/5/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.56	8.54	318.02	NA
S-6	5/21/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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	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	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	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	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	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	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	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	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	30.5	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	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	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	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	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	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	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	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	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	<100	326.35	8.17	318.18	NA

**TABLE 3**  
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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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	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	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	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	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	326.35	8.32	318.03	NA
<b>S-6</b>	<b>2/9/2010</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>326.35</b>	<b>7.99</b>	<b>318.36</b>	<b>NA</b>
S-7	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA
S-7	4/16/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA
S-7	7/24/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA
S-7	10/18/1991	<50	140 f	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	326.49	NA	NA	NA
S-7	4/27/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.36	7.88	318.48	1.8

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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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-7	5/3/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	100	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	326.36	8.39	317.97	NA
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	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	326.36	8.63	317.73	NA
<b>S-7</b>	<b>2/9/2010</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>8.4</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>326.36</b>	<b>8.15</b>	<b>318.21</b>	<b>NA</b>

S-8	1/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	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	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	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	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	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	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	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	325.32	NA	NA	NA

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-8	1/23/1993	<50	<50	<0.5	<0.5	<0.5	<0.5	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	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	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	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	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	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	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	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	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	325.32	7.64	317.68	2.0
S-8	6/27/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	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	<2.50	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	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	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	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	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	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	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	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	<10.0	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	<10.0	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	<10.0	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	<10.0	NA	325.03	6.98	318.05	NA
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	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	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	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	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	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	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	325.03	7.10	317.93	NA



**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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	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	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	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	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	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	325.03	7.83	317.20	NA
<b>S-8</b>	<b>2/9/2010</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>325.03</b>	<b>6.91</b>	<b>318.12</b>	<b>NA</b>
S-9	11/22/2006	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	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	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	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	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	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	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	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	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	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	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	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	325.89	8.06	317.83	NA
<b>S-9</b>	<b>2/9/2010</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>325.89</b>	<b>7.80</b>	<b>318.09</b>	<b>NA</b>
S-10	6/30/2009	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	326.24	8.11	318.13	NA
<b>S-10</b>	<b>2/9/2010</b>	<b>65</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>1.7</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>1,400</b>	<b>NA</b>	<b>326.24</b>	<b>7.90</b>	<b>318.34</b>	<b>NA</b>
S-11	6/30/2009	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	326.12	7.98	318.14	NA
<b>S-11</b>	<b>2/9/2010</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>326.12</b>	<b>9.99</b>	<b>316.13</b>	<b>NA</b>

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-12	6/30/2009	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	326.91	8.89	318.02	NA
<b>S-12</b>	<b>2/9/2010</b>	<b>57</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>26</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>11</b>	<b>NA</b>	<b>326.91</b>	<b>7.97</b>	<b>318.94</b>	<b>NA</b>

EW-1	2/20/2008	9,100 n	NA	110	180	840	146.9	NA	<5.0	<10	<10	<10	<50	<500	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	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	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	8.40	NA	NA
EW-1	4/21/2008	22,000	NA	430	510	1,100	747	NA	<5.0	<10	<10	<10	71	<500	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	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	8.60	NA	NA
EW-1	8/6/2008	12,000	NA	140	79	720	110	NA	<10	<20	<20	<20	<100	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	8.03	NA	NA
EW-1	1/20/2009	10,000	NA	110	58	440	61	NA	<20	<40	<40	<40	<200	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	7.92	NA	NA
EW-1	7/6/2009	17,000	NA	18	82	750	140	NA	<10	<20	<20	<20	<100	NA	326.98	8.21	318.77	NA
<b>EW-1</b>	<b>2/9/2010</b>	<b>12,000</b>	<b>NA</b>	<b>13</b>	<b>41</b>	<b>490</b>	<b>120</b>	<b>NA</b>	<b>&lt;5.0</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;50</b>	<b>NA</b>	<b>326.98</b>	<b>8.20</b>	<b>318.78</b>	<b>NA</b>

EW-2	12/14/2007	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	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	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	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	9.51	NA	NA
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	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	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	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	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	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	8.92	NA	NA

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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	9.28	NA	NA
EW-2	5/6/2009	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

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

**TABLE 3**  
**HISTORIC WELL DATA**  
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)	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 APPROVAL LETTER  
AND MGS0<sub>4</sub> WORK PLAN**



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

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

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.



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**

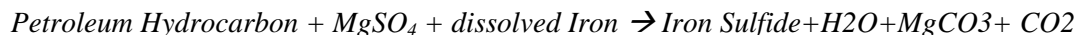
The 2008 City of Pleasanton Water Quality Report indicates that local groundwater has an average sulfate concentration ranging from 32 to 111 mg/L with an average concentration of 54 mg/L. Groundwater samples collected at the site from wells S-2, S-3, S-10, and EW-1 on October 30, 2009 reported sulfate 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  $MgSO_4$  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  $MgSO_4$  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  $MgSO_4$ . 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  $MgSO_4$  (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 Epsom 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  $MgSO_4$  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  $MgSO_4$  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.

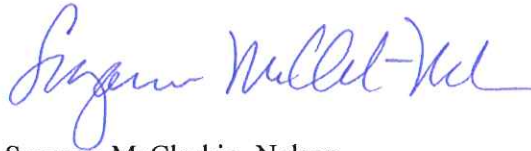
If you have any questions regarding this work plan, or need additional information about the Site, please do not hesitate to contact Suzanne McClurkin- Nelson at (408) 826-1875.

Sincerely,

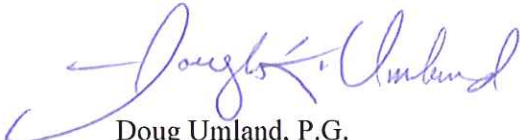
**DELTA CONSULTANTS**



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

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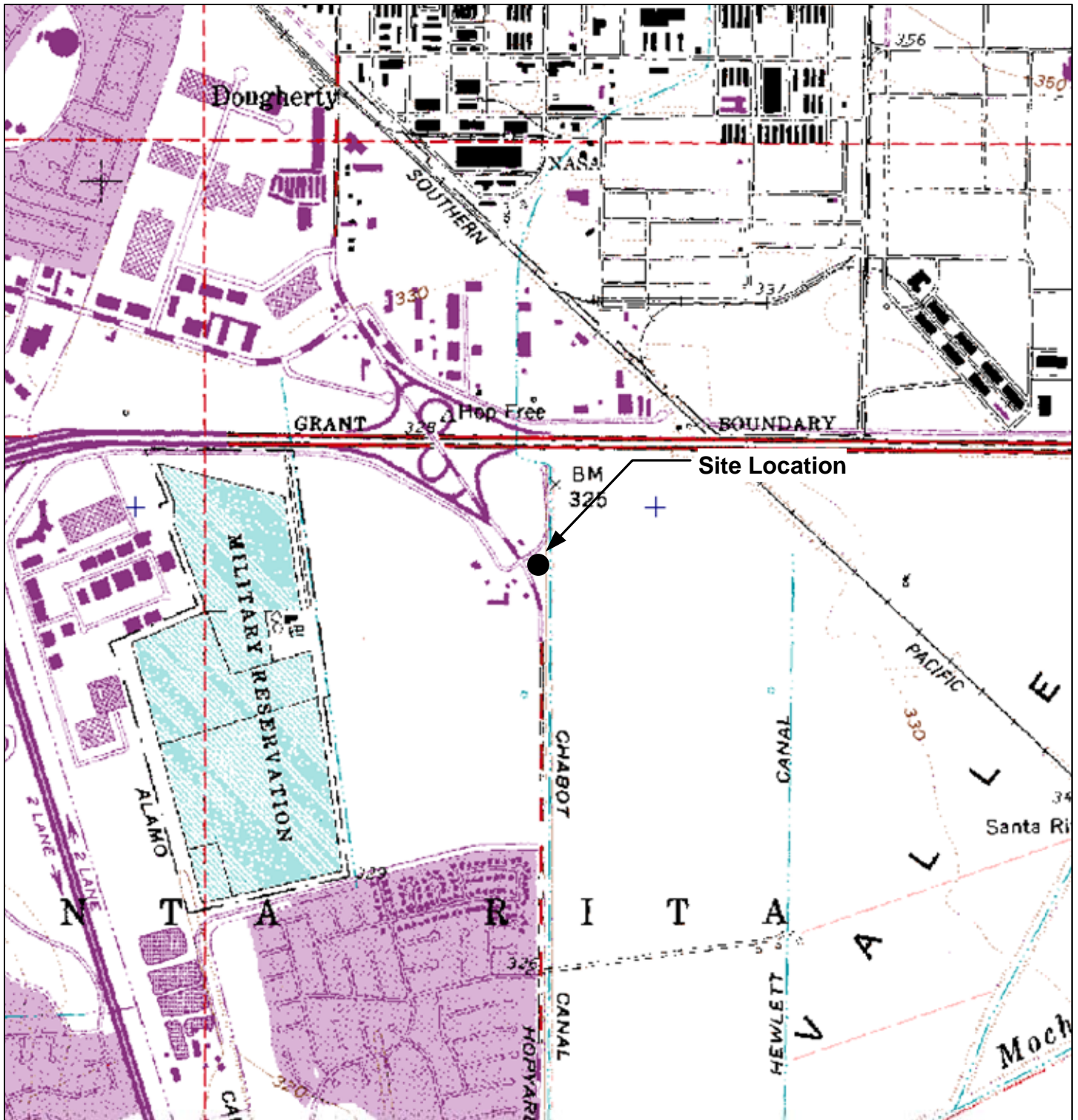
#### REFERENCES CITED

City of Pleasanton, 2008, Annual Water Quality Report.

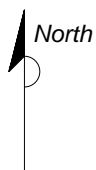
Cunningham, J. A., et al., 2001, Enhanced In Situ Bioremediation of BTEX Contaminated Groundwater by Combined Injection of Nitrate and Sulfate, *Environ. Sci. Technol.*, 2001, 35, 1663-1670.

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



QUADRANGLE LOCATION

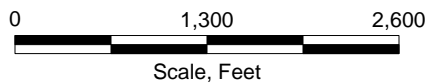


FIGURE 1  
 SITE LOCATION MAP

SHELL-BRANDED SERVICE STATION  
 5251 Hopyard Road  
 Pleasanton, California

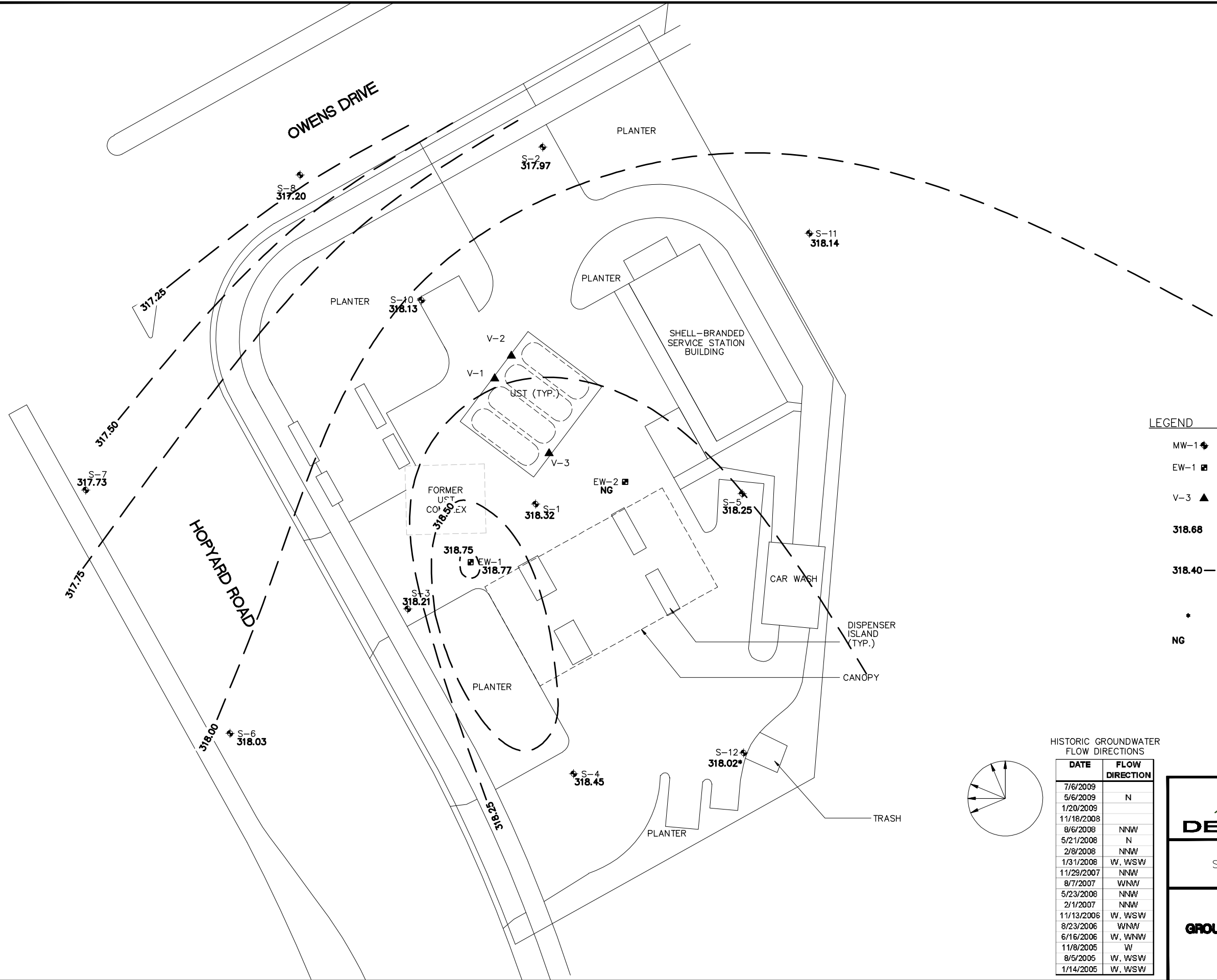
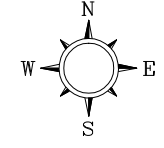
PROJECT NO. SCA5251H1A	DRAWN BY V. F. 3/31/05
FILE NO.	PREPARED BY VF
REVISION NO.	REVIEWED BY





PROJECT NUMBER SCA5251H1A  
 APPROVED BY  
 CHECKED BY  
 DRAWN BY J.F.F. 8/3/2009

SCALE IN FEET  
 0 20 40

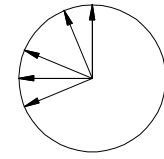


**LEGEND**

- MW-1 ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- EW-1 ■ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- V-3 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- 318.68 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL)
- 318.40 - - - GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL) CONTOUR INTERVAL=0.25 FEET
- \* ANOMALOUS DATA NOT USED IN CONTOURING
- NG NOT GAUGED

HISTORIC GROUNDWATER FLOW DIRECTIONS

DATE	FLOW DIRECTION
7/6/2009	
5/6/2009	N
1/20/2009	
11/18/2008	
8/6/2008	NNW
5/21/2008	N
2/8/2008	NNW
1/31/2008	W, WSW
11/29/2007	NNW
8/7/2007	WNW
5/23/2008	NNW
2/1/2007	NNW
11/13/2006	W, WSW
8/23/2006	WNW
6/16/2006	W, WNW
11/8/2005	W
8/5/2005	W, WSW
1/14/2005	W, WSW



**DELTA CONSULTANTS**

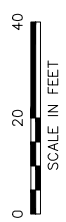
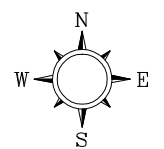
SHELL OIL PRODUCTS US  
 SHELL BRANDED SERVICE STATION  
 PLEASANTON, CALIFORNIA

**FIGURE 2**

**GROUNDWATER ELEVATION CONTOUR MAP**  
 7/6/2009

5251 HOPYARD ROAD  
 PLEASANTON, CALIFORNIA

PROJECT NUMBER SCA5251H1A  
 APPROVED BY  
 CHECKED BY  
 DRAWN BY J.F.F. 8/3/2009



S-10				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	340	ND<1.0	ND<2.0	5,100

S-2				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	110	ND<0.50	59	ND<10

S-9				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	ND<50	ND<0.50	ND<1.0	ND<10

S-8				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	ND<50	ND<0.50	ND<1.0	ND<10

S-11				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	ND<50	ND<0.50	ND<1.0	ND<10

S-1				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	5,800	25	22	180

S-7				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	58	ND<0.50	4.3	ND<10

S-5				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	62	ND<0.50	2.5	11

EW-1				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	17,000	18	ND<10	ND<100

S-3				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	2,300	500	21	ND<50

S-12				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	83	ND<0.50	37	ND<10

S-6				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	ND<50	ND<0.50	ND<1.0	ND<10

S-4				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
7/6/09	ND<50	ND<0.50	ND<1.0	ND<10

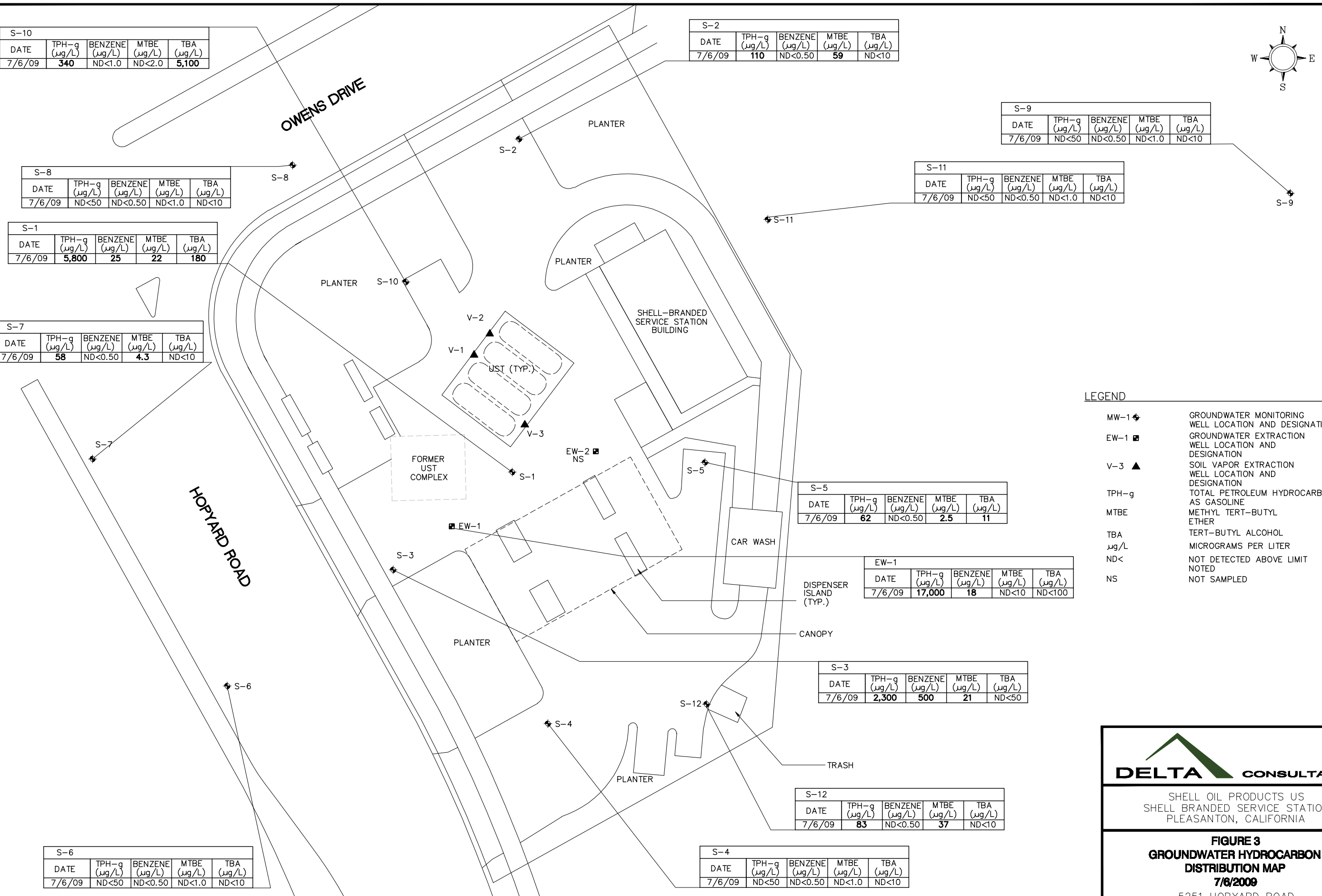
- LEGEND**
- MW-1 ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - EW-1 ■ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
  - V-3 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
  - TPH-g TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
  - MTBE METHYL TERT-BUTYL ETHER
  - TBA TERT-BUTYL ALCOHOL
  - µg/L MICROGRAMS PER LITER
  - ND< NOT DETECTED ABOVE LIMIT
  - ND<10 NOT DETECTED ABOVE LIMIT
  - NS NOT SAMPLED



SHELL OIL PRODUCTS US  
 SHELL BRANDED SERVICE STATION  
 PLEASANTON, CALIFORNIA

**FIGURE 3**  
**GROUNDWATER HYDROCARBON**  
**DISTRIBUTION MAP**  
**7/6/2009**

5251 HOPYARD ROAD  
 PLEASANTON, CALIFORNIA



**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

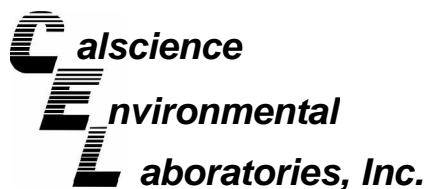
ug/L = Micrograms per liter, equivalent to parts per billion

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

< = Denotes no reported concentration above shown detection limit

**APPENDIX C**

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



May 19, 2010

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

Subject: **CalScience Work Order No.: 10-05-0863**  
**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 5/12/2010 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. 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 reads "Philip Samelle for".

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

## Analytical Report



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

Date Received: 05/12/10  
Work Order No: 10-05-0863  
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	10-05-0863-1-A	05/11/10 09:45	Aqueous	GC/MS T	05/15/10	05/15/10 20:06	100515L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	13	0.50	1		Xylenes (total)	43	1.0	1	
Ethylbenzene	100	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	9.5	1.0	1		TPPH	5500	250	5	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	96	80-132			1,2-Dichloroethane-d4	95	80-141		
Toluene-d8-TPPH	110	88-112			Toluene-d8	112	80-120		
1,4-Bromofluorobenzene	96	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-05-0863-2-A	05/11/10 09:55	Aqueous	GC/MS T	05/15/10	05/15/10 20:35	100515L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	230	1.0	2		Xylenes (total)	2.7	2.0	2	
Ethylbenzene	15	2.0	2		Methyl-t-Butyl Ether (MTBE)	9.3	2.0	2	
Toluene	2.9	2.0	2		TPPH	2100	100	2	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	104	80-132			1,2-Dichloroethane-d4	109	80-141		
Toluene-d8-TPPH	98	88-112			Toluene-d8	101	80-120		
1,4-Bromofluorobenzene	93	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-3,952	N/A	Aqueous	GC/MS T	05/15/10	05/15/10 12:38	100515L01

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	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	120	80-132			1,2-Dichloroethane-d4	117	80-141		
Toluene-d8	98	80-120			Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	90	76-120							

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



**Analytical Report**



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

Date Received: 05/12/10  
 Work Order No: 10-05-0863  
 Preparation: EPA 5030B  
 Method: LUFT GC/MS / EPA 8260B  
 Units: ug/L

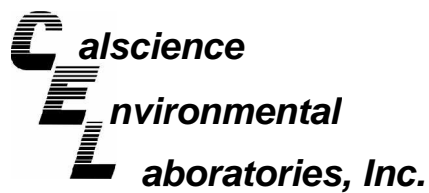
Project: 5251 Hopyard Rd., Pleasanton, CA

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	099-12-767-3,958	N/A	Aqueous	GC/MS R	05/17/10	05/17/10 13:32	100517L01

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 Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Dibromofluoromethane	105	80-132			1,2-Dichloroethane-d4	105	80-141		
Toluene-d8	99	80-120			Toluene-d8-TPPH	100	88-112		
1,4-Bromofluorobenzene	97	76-120							

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



## Analytical Report



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

Date Received: 05/12/10  
Work Order No: 10-05-0863  
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	10-05-0863-1-F	05/11/10 09:45	Aqueous	ICP 5300	05/12/10	05/13/10 15:20	100512LA3

Parameter	Result	RL	DF	Qual	Units
Iron	10.0	0.100	1		mg/L

S-3	10-05-0863-2-F	05/11/10 09:55	Aqueous	ICP 5300	05/12/10	05/13/10 13:08	100512LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	6.23	0.100	1		mg/L

Method Blank	097-01-003-10,556	N/A	Aqueous	ICP 5300	05/12/10	05/13/10 10:53	100512LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	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: 05/12/10  
Work Order No: 10-05-0863

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date Collected	Matrix
EW-1	10-05-0863-1	05/11/10	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	2000	50	50		mg/L	N/A	05/14/10	EPA 300.0

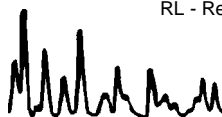
S-3	10-05-0863-2	05/11/10	Aqueous
-----	--------------	----------	---------

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	3600	50	50		mg/L	N/A	05/14/10	EPA 300.0

Method Blank				N/A	Aqueous
--------------	--	--	--	-----	---------

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	ND	1.0	1		mg/L	N/A	05/14/10	EPA 300.0

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



## Analytical Report


**LABORATORY ID: 10-05-0863**

Method: EPA 6010B (Calculation)

Matrix: Water/Aqueous

CLIENT: Delta Environmental Consultants, Inc.

PROJECT: 5251 Hopyard Rd., Pleasanton, CA

### Results

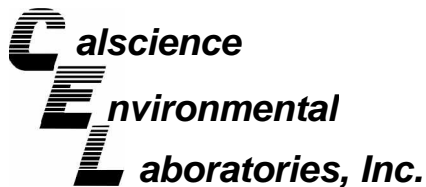
Sample ID	Ferric Iron (Fe+3) mg/L	Dilution Factor	Reporting Limit	Date Extracted	Date Analyzed
EW-1	7.6	1	0.10	05/12/10	05/13/10
S-3	1.43	1	0.10	05/12/10	05/13/10

Reporting Limit: 0.10

### Laboratory Notes

Ferrrous 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: 05/12/10  
Work Order No: 10-05-0863  
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
10-05-0744-4	Aqueous	ICP 5300	05/12/10	05/13/10	100512SA3

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	4X	132	65-149	5	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: 05/12/10  
Work Order No: 10-05-0863  
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
10-05-0745-8	Aqueous	GC/MS T	05/15/10	05/15/10	100515S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	101	72-120	3	0-20	
Carbon Tetrachloride	105	105	63-135	0	0-20	
Chlorobenzene	105	103	80-120	2	0-20	
1,2-Dibromoethane	105	102	80-120	3	0-20	
1,2-Dichlorobenzene	98	99	80-120	1	0-20	
1,1-Dichloroethene	90	91	60-132	1	0-24	
Ethylbenzene	110	107	78-120	3	0-20	
Toluene	106	100	74-122	5	0-20	
Trichloroethene	100	97	69-120	2	0-20	
Vinyl Chloride	105	96	58-130	9	0-20	
Methyl-t-Butyl Ether (MTBE)	100	105	72-126	4	0-21	
Tert-Butyl Alcohol (TBA)	98	99	72-126	0	0-20	
Diisopropyl Ether (DIPE)	95	96	71-137	1	0-23	
Ethyl-t-Butyl Ether (ETBE)	92	95	74-128	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	107	106	76-124	2	0-20	
Ethanol	108	91	35-167	17	0-48	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

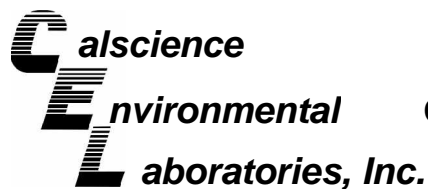
Date Received: 05/12/10  
Work Order No: 10-05-0863  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-05-0745-14	Aqueous	GC/MS R	05/17/10	05/17/10	100517S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	96	72-120	12	0-20	
Carbon Tetrachloride	103	95	63-135	8	0-20	
Chlorobenzene	106	95	80-120	12	0-20	
1,2-Dibromoethane	111	99	80-120	12	0-20	
1,2-Dichlorobenzene	105	92	80-120	12	0-20	
1,1-Dichloroethene	113	100	60-132	11	0-24	
Ethylbenzene	107	95	78-120	12	0-20	
Toluene	106	95	74-122	11	0-20	
Trichloroethene	111	99	69-120	11	0-20	
Vinyl Chloride	119	107	58-130	11	0-20	
Methyl-t-Butyl Ether (MTBE)	110	96	72-126	14	0-21	
Tert-Butyl Alcohol (TBA)	104	93	72-126	11	0-20	
Diisopropyl Ether (DIPE)	105	93	71-137	12	0-23	
Ethyl-t-Butyl Ether (ETBE)	110	99	74-128	11	0-20	
Tert-Amyl-Methyl Ether (TAME)	111	97	76-124	13	0-20	
Ethanol	103	86	35-167	18	0-48	

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:  
Work Order No:

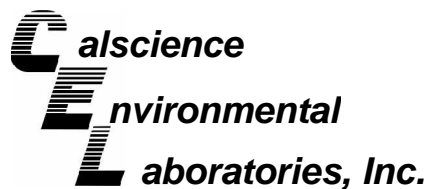
N/A  
10-05-0863

Project: 5251 Hopyard Rd., Pleasanton, CA

Matrix: Aqueous or Solid

<u>Parameter</u>	<u>Method</u>	<u>Quality Control Sample ID</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>MS% REC</u>	<u>MSD % REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	EPA 300.0	10-05-0761-1	05/15/10	N/A	105	104	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

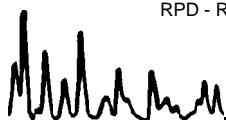
Date Received: N/A  
 Work Order No: 10-05-0863  
 Preparation: EPA 3010A Total  
 Method: EPA 6010B

Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-003-10,556	Aqueous	ICP 5300	05/12/10	05/13/10	100512LA3

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	105	102	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: 10-05-0863  
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		
099-12-767-3,952	Aqueous	GC/MS T	05/15/10	05/15/10	100515L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	103	80-122	73-129	0	0-20	
Carbon Tetrachloride	103	104	68-140	56-152	1	0-20	
Chlorobenzene	105	104	80-120	73-127	1	0-20	
1,2-Dibromoethane	103	102	80-121	73-128	1	0-20	
1,2-Dichlorobenzene	99	99	80-120	73-127	0	0-20	
1,1-Dichloroethene	92	94	72-132	62-142	2	0-25	
Ethylbenzene	110	109	80-126	72-134	1	0-20	
Toluene	103	103	80-121	73-128	0	0-20	
Trichloroethene	99	100	80-123	73-130	1	0-20	
Vinyl Chloride	102	101	67-133	56-144	1	0-20	
Methyl-t-Butyl Ether (MTBE)	103	104	75-123	67-131	1	0-20	
Tert-Butyl Alcohol (TBA)	100	99	75-123	67-131	0	0-20	
Diisopropyl Ether (DIPE)	98	97	71-131	61-141	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	96	97	76-124	68-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	106	106	80-123	73-130	0	0-20	
Ethanol	89	83	61-139	48-152	7	0-27	
TPPH	91	90	65-135	53-147	1	0-30	

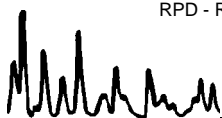
Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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: 10-05-0863  
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		
099-12-767-3,958	Aqueous	GC/MS R	05/17/10	05/17/10	100517L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	94	107	80-122	73-129	12	0-20	
Carbon Tetrachloride	99	109	68-140	56-152	10	0-20	
Chlorobenzene	93	107	80-120	73-127	14	0-20	
1,2-Dibromoethane	93	107	80-121	73-128	14	0-20	
1,2-Dichlorobenzene	90	104	80-120	73-127	14	0-20	
1,1-Dichloroethene	93	109	72-132	62-142	16	0-25	
Ethylbenzene	95	108	80-126	72-134	13	0-20	
Toluene	93	106	80-121	73-128	13	0-20	
Trichloroethene	97	111	80-123	73-130	14	0-20	
Vinyl Chloride	102	117	67-133	56-144	14	0-20	
Methyl-t-Butyl Ether (MTBE)	95	107	75-123	67-131	12	0-20	
Tert-Butyl Alcohol (TBA)	89	103	75-123	67-131	15	0-20	
Diisopropyl Ether (DIPE)	93	104	71-131	61-141	11	0-20	
Ethyl-t-Butyl Ether (ETBE)	96	110	76-124	68-132	14	0-20	
Tert-Amyl-Methyl Ether (TAME)	94	108	80-123	73-130	14	0-20	
Ethanol	86	100	61-139	48-152	14	0-27	
TPPH	93	103	65-135	53-147	10	0-30	

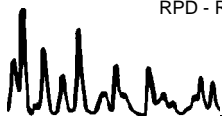
Total number of LCS compounds : 17

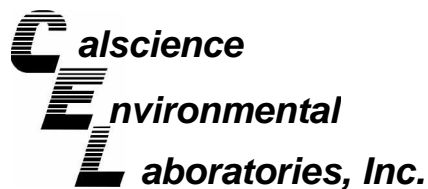
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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:  
Work Order No:

N/A  
10-05-0863

Project: 5251 Hopyard Rd., Pleasanton, CA

Matrix: Aqueous or Solid

<u>Parameter</u>	<u>Method</u>	<u>Quality Control</u> Sample ID	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>LCS %</u> <u>REC</u>	<u>LCSD %</u> <u>REC</u>	<u>%REC</u> <u>CL</u>	<u>RPD</u>	<u>RPD</u> <u>CL</u>	<u>Qual</u>
Sulfate	EPA 300.0	099-12-906-993	N/A	05/14/10	101	102	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Work Order Number: 10-05-0863

<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
---	---	---	---	---	---	---	---

SAP # \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES

DATE: 5/1/10

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** 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):  
**Cora Olson**

PHONE NO.: **408-826-1877** E-MAIL: **colson@dellaenv.com** CONSULTANT PROJECT NO.: **SCA5251H1D**

Sampler Name: **Matt Lambert**

LAB USE ONLY: **OS-0863**

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:

REQUESTED ANALYSIS

Gasoline Hydrocarbons				Sulfate Indicators			Waste Characterization			TEMPERATURE ON RECEIPT °C
TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous Iron	Ferric Iron				

SPECIAL INSTRUCTIONS OR NOTES :

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

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	Gasoline Hydrocarbons			Sulfate Indicators			Waste Characterization	TEMPERATURE ON RECEIPT °C	Container PID Readings or Laboratory Notes	
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous Iron				Ferric Iron
		1	EW-1		5/1/10	9:45	Water	4	1			1	RL6	X	X	X				
2	S-3	5/11/10	9:55	Water	4	1		1	RL6	X	X	X		7.11	X	4.8	X			

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>5/1/10</u>	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: <u>5/12/10</u>	Time: <u>1030</u>
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

0863

PLEASE PRESS FIRMLY

**1 FROM**

DATE: 5/11/10  
 COMPANY: Delta  
 ADDRESS: 312 Perry  
 ADDRESS:  
 CITY: San Jose  
 STATE/ROOM: STE/ ROOM  
 ZIP: 95128  
 CODE:  
 SENDER'S NAME: Walt Lamb  
 PHONE NUMBER:

**2 TO**

COMPANY: CAL SCIENCE  
 NAME:  
 PHONE NUMBER: 714.255.5454  
 ADDRESS: 740 LINCOLN WAY  
 ADDRESS:  
 CITY: GARDEN GROVE  
 STATE/ROOM: STE/ ROOM  
 ZIP: 92841  
 CODE:

**3** YOUR INTERNET BILLING REFERENCE WILL APPEAR ON YOUR INVOICE

SPECIAL INSTRUCTIONS

**GSO**  
 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)

PACKAGE LABEL

**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: 105866722 DRIVER #: ROUTE #

PEEL OFF HERE



**9** GSO TRACKING NUMBER 105866722

**ORC**


**GSO**  
 GOLDEN STATE OVERNIGHT  
 1-800-322-5555  
 www.gso.com

GARDEN GROVE

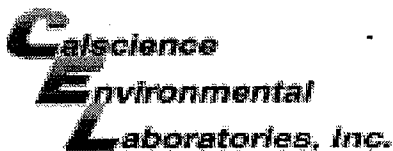
**92841** 43 lb 1/MMM

**D**

**D92843A**



81551107 1005112151 CSL-06



WORK ORDER #: 10-05-0863

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: Delta

DATE: 05/12/10

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

Temperature 4.1 °C + 0.5°C (CF) = 4.6 °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: JF

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Initial: JF

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Initial: JS

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"/>
<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"/> WSC 5-12-10	<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 checked="" type="checkbox"/> WSC 5-12-10
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  VOA<sup>4</sup>h  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  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

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

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> z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Field-filtered Scanned by: WSC

## Philip Sanelle

---

**From:** Suzanne McClurkin-Nelson [SMcClurkin-Nelson@deltaenv.com]  
**Sent:** Wednesday, May 12, 2010 2:40 PM  
**To:** Philip Sanelle  
**Cc:** Suzanne McClurkin-Nelson; Matt Lambert  
**Subject:** RE: 5251 Hopyard Rd., Pleasanton, CA (10-05-0863)  
**Attachments:** Corrected COC(5251).pdf; ole1.bmp

**Importance:** High

Hi Philip - Yes, the pH and Ferrous iron were measured in the field so you will need to run total iron so you can calculate ferric iron. Also, I have revised the TAT to 5-days instead of standard. Thanks!

**Suzanne McClurkin-Nelson | Senior Project Manager | North American Operations**  
**Delta Consultants, an Oranjewoud N.V. Company**  
Direct +1 408 826 1875 | Mobile +1 408 796 8889 | Alternate +1 408 582 4422  
[smcclurkin-nelson@deltaenv.com](mailto:smcclurkin-nelson@deltaenv.com) | [www.deltaenv.com](http://www.deltaenv.com)

**SUSTAINABLE STRATEGIES FOR GLOBAL LEADERS**

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Confidentiality Notice: If you are not the intended recipient of this email, please delete it. Thank you.

---

**From:** Philip Sanelle [mailto:PSanelle@calscience.com]  
**Sent:** Wednesday, May 12, 2010 12:51 PM  
**To:** Suzanne McClurkin-Nelson  
**Cc:** Matt Lambert  
**Subject:** 5251 Hopyard Rd., Pleasanton, CA (10-05-0863)

Suzanne,

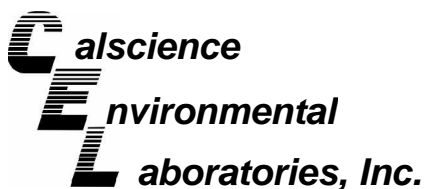
Just to confirm. The numbers written in for pH and ferrous iron on the COC were done in the field, correct? So, We just need to run total iron for the ferric iron calculation.

Attached is the COC in question.

Thank you, <<10050863.pdf>>

Philip Sanelle  
Project Manager Assistant  
Calscience Environmental Laboratories, Inc.  
7440 Lincoln Way  
Garden Grove, CA 92841-1427  
Phone: 714-895-5494 x210  
Fax: 714-894-7501  
[PSanelle@calscience.com](mailto:PSanelle@calscience.com)

*The difference is service*



June 09, 2010

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

Subject: **Calscience Work Order No.: 10-05-2190**  
**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 5/28/2010 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. 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 cursive script that reads "Philip Samelle for".

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



## Analytical Report



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

Date Received: 05/28/10  
Work Order No: 10-05-2190  
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
EW-1	10-05-2190-1-A	05/27/10 11:00	Aqueous	GC/MS R	06/02/10	06/03/10 21:26	100603L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	17	2.5	5		Xylenes (total)	66	5.0	5	
Ethylbenzene	200	5.0	5		Methyl-t-Butyl Ether (MTBE)	ND	5.0	5	
Toluene	9.8	5.0	5		TPPH	8000	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	100	80-132			1,2-Dichloroethane-d4	103	80-141		
Toluene-d8-TPPH	99	88-112			Toluene-d8	99	80-120		
1,4-Bromofluorobenzene	100	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-05-2190-2-A	05/27/10 11:15	Aqueous	GC/MS R	06/02/10	06/03/10 21:56	100603L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	210	1.0	2		Xylenes (total)	ND	2.0	2	
Ethylbenzene	4.1	2.0	2		Methyl-t-Butyl Ether (MTBE)	8.2	2.0	2	
Toluene	ND	2.0	2		TPPH	1900	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	104	80-132			1,2-Dichloroethane-d4	106	80-141		
Toluene-d8-TPPH	99	88-112			Toluene-d8	99	80-120		
1,4-Bromofluorobenzene	99	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	10-05-2190-3-A	05/27/10 10:30	Aqueous	GC/MS R	06/03/10	06/04/10 04:41	100603L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	20	1.0	2		Xylenes (total)	57	2.0	2	
Ethylbenzene	200	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2	
Toluene	36	2.0	2		TPPH	14000	500	10	
<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	97	80-132			1,2-Dichloroethane-d4	97	80-141		
Toluene-d8	101	80-120			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	99	76-120							

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



## Analytical Report



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

Date Received: 05/28/10  
Work Order No: 10-05-2190  
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-2	10-05-2190-4-A	05/27/10 10:15	Aqueous	GC/MS R	06/03/10	06/04/10 05:10	100603L02

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)	36	1.0	1	
Toluene	ND	1.0	1		TPPH	80	50	1	
<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	102	80-132			1,2-Dichloroethane-d4	104	80-141		
Toluene-d8	98	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	98	76-120							

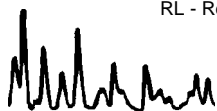
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10	10-05-2190-5-A	05/27/10 09:45	Aqueous	GC/MS R	06/03/10	06/03/10 14:38	100603L01

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)	1.6	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<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	107	80-132			1,2-Dichloroethane-d4	107	80-141		
Toluene-d8	100	80-120			Toluene-d8-TPPH	100	88-112		
1,4-Bromofluorobenzene	97	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,043	N/A	Aqueous	GC/MS R	06/03/10	06/03/10 14:09	100603L01

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 Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Dibromofluoromethane	105	80-132			1,2-Dichloroethane-d4	107	80-141		
Toluene-d8	97	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	96	76-120							

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



**Analytical Report**



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

Date Received: 05/28/10  
 Work Order No: 10-05-2190  
 Preparation: EPA 5030B  
 Method: LUFT GC/MS / EPA 8260B  
 Units: ug/L

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 3 of 3

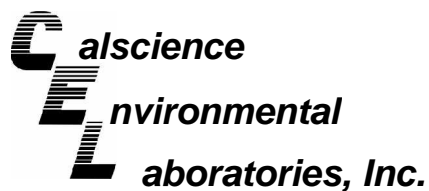
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,048	N/A	Aqueous	GC/MS R	06/03/10	06/04/10 02:17	100603L02

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	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	104	80-132			1,2-Dichloroethane-d4	108	80-141		
Toluene-d8	97	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	97	76-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,051	N/A	Aqueous	GC/MS R	06/04/10	06/04/10 13:51	100604L01

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	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	104	80-132			1,2-Dichloroethane-d4	112	80-141		
Toluene-d8	99	80-120			Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	97	76-120							

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



## Analytical Report



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

Date Received: 05/28/10  
Work Order No: 10-05-2190  
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	10-05-2190-1-F	05/27/10 11:00	Aqueous	ICP 5300	05/28/10	06/01/10 20:17	100528LA4A

Parameter	Result	RL	DF	Qual	Units
Iron	7.52	0.100	1		mg/L

S-3	10-05-2190-2-F	05/27/10 11:15	Aqueous	ICP 5300	05/28/10	06/01/10 20:18	100528LA4A
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Parameter	Result	RL	DF	Qual	Units
Iron	4.42	0.100	1		mg/L

S-1	10-05-2190-3-F	05/27/10 10:30	Aqueous	ICP 5300	05/28/10	06/01/10 20:18	100528LA4A
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Parameter	Result	RL	DF	Qual	Units
Iron	0.538	0.100	1		mg/L

S-2	10-05-2190-4-F	05/27/10 10:15	Aqueous	ICP 5300	05/28/10	06/01/10 20:20	100528LA4A
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Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	1		mg/L

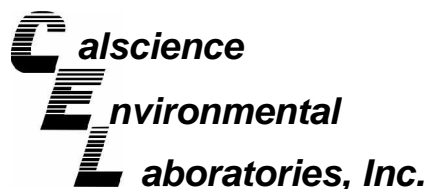
S-10	10-05-2190-5-F	05/27/10 09:45	Aqueous	ICP 5300	05/28/10	06/01/10 20:21	100528LA4A
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Parameter	Result	RL	DF	Qual	Units
Iron	0.367	0.100	1		mg/L

Method Blank	097-01-003-10,631	N/A	Aqueous	ICP 5300	05/28/10	06/01/10 15:32	100528LA4A
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Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	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: 05/28/10  
Work Order No: 10-05-2190

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix
EW-1	10-05-2190-1	05/27/10	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	960	20	20		mg/L	N/A	06/01/10	EPA 300.0

S-3	10-05-2190-2	05/27/10	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	1600	40	40		mg/L	N/A	06/01/10	EPA 300.0

S-1	10-05-2190-3	05/27/10	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	ND	1.0	1		mg/L	N/A	06/01/10	EPA 300.0

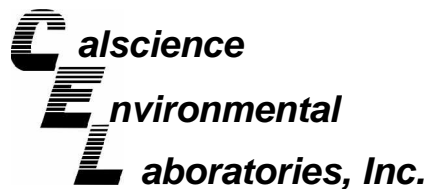
S-2	10-05-2190-4	05/27/10	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	570	10	10		mg/L	N/A	06/01/10	EPA 300.0

S-10	10-05-2190-5	05/27/10	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfate	160	5.0	5		mg/L	N/A	06/01/10	EPA 300.0

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



**Analytical Report**



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

Date Received: 05/28/10  
 Work Order No: 10-05-2190

Project: 5251 Hopyard Rd., Pleasanton, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix
Method Blank		N/A	Aqueous

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method</u>
Sulfate	ND	1.0	1		mg/L	N/A	06/01/10	EPA 300.0

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

## Analytical Report


**LABORATORY ID: 10-05-2190**
**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	5.72	1	0.10	05/28/10	06/01/10
S-3	1.42	1	0.10	05/28/10	06/01/10
S-1	ND	1	0.10	05/28/10	06/01/10
S-2	ND	1	0.10	05/28/10	06/01/10
S-10	0.367	1	0.10	05/28/10	06/01/10

**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: 05/28/10  
Work Order No: 10-05-2190  
Preparation: EPA 3010A Total  
Method: EPA 6010B

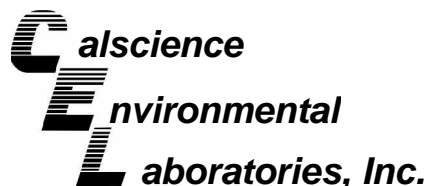
Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-05-1643-7	Aqueous	ICP 5300	05/28/10	06/02/10	100528SA4

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	106	108	65-149	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: 05/28/10  
Work Order No: 10-05-2190  
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
S-10	Aqueous	GC/MS R	06/03/10	06/03/10	100603S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	106	72-120	1	0-20	
Carbon Tetrachloride	96	99	63-135	3	0-20	
Chlorobenzene	102	102	80-120	1	0-20	
1,2-Dibromoethane	108	104	80-120	3	0-20	
1,2-Dichlorobenzene	99	101	80-120	2	0-20	
1,2-Dichloroethane	104	104	80-120	0	0-20	
1,1-Dichloroethene	106	97	60-132	9	0-24	
Ethylbenzene	109	108	78-120	1	0-20	
Toluene	106	107	74-122	0	0-20	
Trichloroethene	104	104	69-120	0	0-20	
Vinyl Chloride	110	108	58-130	2	0-20	
Methyl-t-Butyl Ether (MTBE)	99	105	72-126	6	0-21	
Tert-Butyl Alcohol (TBA)	100	100	72-126	0	0-20	
Diisopropyl Ether (DIPE)	106	107	71-137	2	0-23	
Ethyl-t-Butyl Ether (ETBE)	105	105	74-128	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	105	106	76-124	1	0-20	
Ethanol	99	98	35-167	1	0-48	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

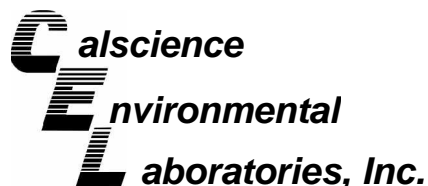
Date Received: 05/28/10  
Work Order No: 10-05-2190  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-05-2171-5	Aqueous	GC/MS R	06/03/10	06/04/10	100603S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	93	72-120	13	0-20	
Carbon Tetrachloride	102	91	63-135	11	0-20	
Chlorobenzene	101	89	80-120	12	0-20	
1,2-Dibromoethane	109	94	80-120	15	0-20	
1,2-Dichlorobenzene	101	88	80-120	13	0-20	
1,2-Dichloroethane	106	94	80-120	12	0-20	
1,1-Dichloroethene	100	96	60-132	4	0-24	
Ethylbenzene	107	96	78-120	12	0-20	
Toluene	107	94	74-122	13	0-20	
Trichloroethene	105	92	69-120	13	0-20	
Vinyl Chloride	115	103	58-130	11	0-20	
Methyl-t-Butyl Ether (MTBE)	111	93	72-126	17	0-21	
Tert-Butyl Alcohol (TBA)	99	95	72-126	4	0-20	
Diisopropyl Ether (DIPE)	111	95	71-137	15	0-23	
Ethyl-t-Butyl Ether (ETBE)	111	96	74-128	14	0-20	
Tert-Amyl-Methyl Ether (TAME)	109	93	76-124	15	0-20	
Ethanol	99	89	35-167	12	0-48	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

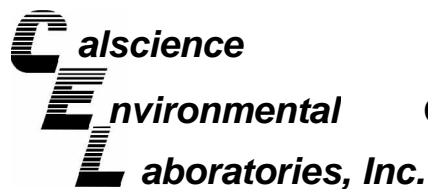
Date Received: 05/28/10  
Work Order No: 10-05-2190  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-06-0044-2	Aqueous	GC/MS R	06/04/10	06/04/10	100604S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	93	72-120	3	0-20	
Carbon Tetrachloride	102	100	63-135	3	0-20	
Chlorobenzene	92	91	80-120	1	0-20	
1,2-Dibromoethane	94	91	80-120	3	0-20	
1,2-Dichlorobenzene	91	91	80-120	0	0-20	
1,2-Dichloroethane	100	95	80-120	5	0-20	
1,1-Dichloroethene	104	93	60-132	11	0-24	
Ethylbenzene	99	97	78-120	2	0-20	
Toluene	99	97	74-122	2	0-20	
Trichloroethene	97	94	69-120	3	0-20	
Vinyl Chloride	111	105	58-130	5	0-20	
Methyl-t-Butyl Ether (MTBE)	94	97	72-126	3	0-21	
Tert-Butyl Alcohol (TBA)	91	91	72-126	0	0-20	
Diisopropyl Ether (DIPE)	96	97	71-137	0	0-23	
Ethyl-t-Butyl Ether (ETBE)	98	95	74-128	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	96	93	76-124	3	0-20	
Ethanol	87	96	35-167	10	0-48	

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:  
Work Order No:

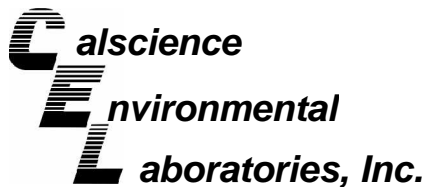
N/A  
10-05-2190

Project: 5251 Hopyard Rd., Pleasanton, CA

Matrix: Aqueous or Solid

<u>Parameter</u>	<u>Method</u>	<u>Quality Control Sample ID</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>MS% REC</u>	<u>MSD % REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	EPA 300.0	S-1	06/01/10	N/A	103	103	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: 10-05-2190  
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
097-01-003-10,631	Aqueous	ICP 5300	05/28/10	06/01/10	100528LA4A

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	101	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: 10-05-2190  
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		
099-12-767-4,043	Aqueous	GC/MS R	06/03/10	06/03/10	100603L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	105	115	80-122	73-129	9	0-20	
Carbon Tetrachloride	92	107	68-140	56-152	15	0-20	
Chlorobenzene	101	110	80-120	73-127	9	0-20	
1,2-Dibromoethane	103	115	80-121	73-128	11	0-20	
1,2-Dichlorobenzene	100	109	80-120	73-127	8	0-20	
1,1-Dichloroethene	97	111	72-132	62-142	14	0-25	
Ethylbenzene	107	117	80-126	72-134	9	0-20	
Toluene	106	115	80-121	73-128	9	0-20	
Trichloroethene	104	114	80-123	73-130	9	0-20	
Vinyl Chloride	105	116	67-133	56-144	10	0-20	
Methyl-t-Butyl Ether (MTBE)	96	110	75-123	67-131	13	0-20	
Tert-Butyl Alcohol (TBA)	99	109	75-123	67-131	9	0-20	
Diisopropyl Ether (DIPE)	102	116	71-131	61-141	13	0-20	
Ethyl-t-Butyl Ether (ETBE)	103	117	76-124	68-132	13	0-20	
Tert-Amyl-Methyl Ether (TAME)	105	115	80-123	73-130	9	0-20	
Ethanol	101	113	61-139	48-152	12	0-27	
TPPH	91	107	65-135	53-147	16	0-30	

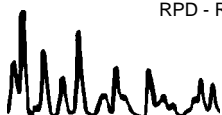
Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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: 10-05-2190  
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		
099-12-767-4,048	Aqueous	GC/MS R	06/03/10	06/04/10	100603L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	102	93	80-122	73-129	10	0-20	
Carbon Tetrachloride	97	88	68-140	56-152	10	0-20	
Chlorobenzene	97	88	80-120	73-127	10	0-20	
1,2-Dibromoethane	104	93	80-121	73-128	11	0-20	
1,2-Dichlorobenzene	98	87	80-120	73-127	11	0-20	
1,1-Dichloroethene	96	95	72-132	62-142	2	0-25	
Ethylbenzene	105	95	80-126	72-134	9	0-20	
Toluene	103	93	80-121	73-128	9	0-20	
Trichloroethene	103	93	80-123	73-130	11	0-20	
Vinyl Chloride	107	129	67-133	56-144	19	0-20	
Methyl-t-Butyl Ether (MTBE)	108	91	75-123	67-131	17	0-20	
Tert-Butyl Alcohol (TBA)	99	90	75-123	67-131	10	0-20	
Diisopropyl Ether (DIPE)	106	92	71-131	61-141	14	0-20	
Ethyl-t-Butyl Ether (ETBE)	108	96	76-124	68-132	11	0-20	
Tert-Amyl-Methyl Ether (TAME)	105	94	80-123	73-130	11	0-20	
Ethanol	103	86	61-139	48-152	18	0-27	
TPPH	94	103	65-135	53-147	9	0-30	

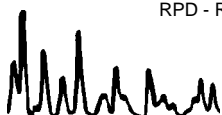
Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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: 10-05-2190  
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		
099-12-767-4,051	Aqueous	GC/MS R	06/04/10	06/04/10	100604L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	102	94	80-122	73-129	8	0-20	
Carbon Tetrachloride	99	96	68-140	56-152	3	0-20	
Chlorobenzene	98	89	80-120	73-127	10	0-20	
1,2-Dibromoethane	99	91	80-121	73-128	9	0-20	
1,2-Dichlorobenzene	98	89	80-120	73-127	10	0-20	
1,1-Dichloroethene	105	91	72-132	62-142	14	0-25	
Ethylbenzene	104	95	80-126	72-134	9	0-20	
Toluene	103	96	80-121	73-128	8	0-20	
Trichloroethene	102	95	80-123	73-130	7	0-20	
Vinyl Chloride	112	106	67-133	56-144	5	0-20	
Methyl-t-Butyl Ether (MTBE)	97	92	75-123	67-131	5	0-20	
Tert-Butyl Alcohol (TBA)	99	84	75-123	67-131	17	0-20	
Diisopropyl Ether (DIPE)	101	97	71-131	61-141	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	102	95	76-124	68-132	7	0-20	
Tert-Amyl-Methyl Ether (TAME)	101	92	80-123	73-130	9	0-20	
Ethanol	101	84	61-139	48-152	18	0-27	
TPPH	108	100	65-135	53-147	7	0-30	

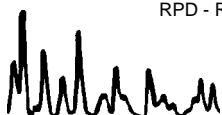
Total number of LCS compounds : 17

Total number of ME compounds : 0

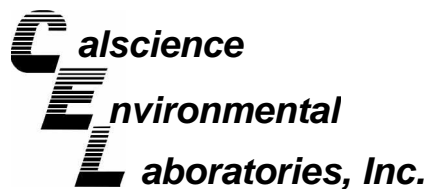
Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

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:  
Work Order No:

N/A  
10-05-2190

Project: 5251 Hopyard Rd., Pleasanton, CA

Matrix: Aqueous or Solid

<u>Parameter</u>	<u>Method</u>	<u>Quality Control</u> Sample ID	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>LCS %</u> <u>REC</u>	<u>LCSD %</u> <u>REC</u>	<u>%REC</u> <u>CL</u>	<u>RPD</u>	<u>RPD</u> <u>CL</u>	<u>Qual</u>
Sulfate	EPA 300.0	099-12-906-1,029	N/A	06/01/10	100	100	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit

## Glossary of Terms and Qualifiers



Work Order Number: 10-05-2190

<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

INCIDENT # (ENV SERVICES): 9 8 9 9 5 8 4 3

PO #: \_\_\_\_\_

SAP #: \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES:

DATE: 5/27/10

PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants

ADDRESS: 312 Piery Road, San Jose, CA 95138

LOG CODE: \_\_\_\_\_

SITE ADDRESS: Street and City: 5251 Hopyard Road; Pleasanton

State: CA

GLOBAL ID NO.: T0600101267

PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin- Nelson

TELEPHONE: 408-826-1875

FAX: 408-225-8506

E-MAIL: SMcClurkin-Nelson@deltaenv.com

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

PHONE NO.: 408-826-1877

E-MAIL: colson@deltaenv.com

CONSULTANT PROJECT NO.: SCA5251H1D

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:

LAB USE ONLY

10-05-2190

REQUESTED ANALYSIS

SPECIAL INSTRUCTIONS OR NOTES :

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

Gasoline Hydrocarbons				Sulfate Indicators			Waste Characterization	TEMPERATURE ON RECEIPT C°										
LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous Iron	Ferric Iron	Container PID Readings or Laboratory Notes
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER									
1	EW-1	5/27/10	11:00	Water	3	1		1		5	X	X	X	7.1	X	1.8	X	
2	S-3	5/27/10	11:15	Water	3	1		1		5	X	X	X	6.9	X	3.0	X	
3	S-1	5/27/10	10:30	Water	3	1		1		5	X	X	X	7.5	X	0.8	X	
4	S-2	5/27/10	10:15	Water	3	1		1		5	X	X	X	7.2	X	0	X	
5	S-10	5/27/10	9:45	Water	3	1		1		5	X	X	X	6.3	X	0	X	

Relinquished by: (Signature) <i>Cora Olson</i>	Received by: (Signature)	Date: 5/27/10	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature) GSO	Received by: (Signature) <i>Greg N. Co</i>	Date: 5/28/10	Time: 09:30

2190

DATE	5/27/10	SHIPPER'S GSO ACCOUNT NO.	9255
COMPANY	Delta Consultants		
ADDRESS	312 Piercy Rd		
ADDRESS		STE/ROOM	
CITY	San Jose	ZIP CODE	95138
SENDER'S NAME	Cori Olson	PHONE NUMBER	408 826 1877
COMPANY	CAL SCIENCE		
NAME		PHONE NUMBER	714-895-5491
ADDRESS	7440 LINCOLN WAY		
ADDRESS		STE/ROOM	
CITY	GARDEN GROVE	ZIP CODE	92841
3	YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE		
SPECIAL INSTRUCTIONS			

**GSO**  
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 CREDIT CARD  M/C  VISA  AM EX CREDIT CARD NUMBER \_\_\_\_\_ EXP \_\_\_\_\_

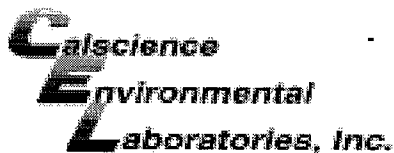
- 8 PICK UP INFORMATION TIME DRIVER # ROUTE #

106193823



- 9 GSO TRACKING NUMBER 106193823

307501



WORK ORDER #: 10-05-2190

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: DELTA CONSULTANTS

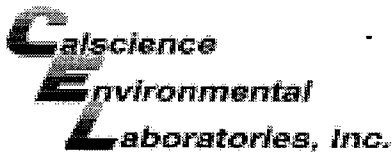
DATE: 05/28/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0°C - 6.0°C, not frozen)
Temperature 2.2°C + 0.5°C (CF) = 2.7°C
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: PS

CUSTODY SEALS INTACT:
Cooler No (Not Intact) Not Present N/A
Sample No (Not Intact) Not Present
Initial: PS
Initial: JK

SAMPLE CONDITION:
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 VOAna2 125AGB 125AGBh 125AGBp 1AGB 1AGBna2 1AGBs
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 500PB 500PBna
250PB 250PBn 125PB 125PBzanna 100PJ 100PJna2
Air: Tedlar Summa Other: Trip Blank Lot#: Labeled/Checked by: NC
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope
Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 zanna: ZnAc2+NaOH f: Field-filtered
Reviewed by: Scanned by: NC



WORK ORDER #: 10-05-2190

# SAMPLE ANOMALY FORM

## SAMPLES - CONTAINERS & LABELS:

## Comments:

- 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
  - Sample ID
  - Date and/or Time Collected
  - Project Information
  - # of Container(s)
  - Analysis
- 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
  - Low in volume
  - Leaking (Not transferred - duplicate bag submitted)
  - Leaking (transferred into Calscience Tedlar® Bag\*)
  - Leaking (transferred into Client's Tedlar® Bag\*)
- Other: \_\_\_\_\_

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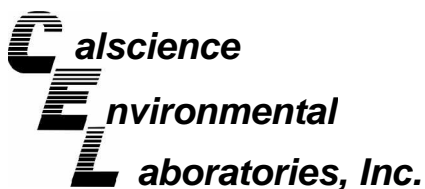
## HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis
1	B,C,D	4							
2	D	4							
4	B,C,D	4							

Comments: \_\_\_\_\_

\*Transferred at Client's request.

Initial / Date: NC 05/28/10



June 22, 2010

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

Subject: **CalScience Work Order No.: 10-06-0856**  
**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 6/10/2010 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. 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 reads 'Philip Samelle for'.

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

## Analytical Report



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

Date Received: 06/10/10  
Work Order No: 10-06-0856  
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	10-06-0856-1-A	06/09/10 10:05	Aqueous	IC 10	N/A	06/11/10 17:54	100611L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Sulfate	4800	100	100		mg/L

S-3	10-06-0856-2-A	06/09/10 10:00	Aqueous	IC 10	N/A	06/11/10 18:12	100611L01
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Sulfate	11000	200	200		mg/L

Method Blank	099-12-906-1,068	N/A	Aqueous	IC 10	N/A	06/11/10 10:20	100611L01
--------------	------------------	-----	---------	-------	-----	-------------------	-----------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
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: 06/10/10  
Work Order No: 10-06-0856  
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
10-06-0974-1	Aqueous	IC 10	N/A	06/11/10	100611S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	97	97	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: 10-06-0856  
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
099-12-906-1,068	Aqueous	IC 10	N/A	06/11/10	100611L01

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	102	101	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Work Order Number: 10-06-0856

<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

INCIDENT # (ENV SERVICES): 9 8 9 9 5 8 4 3

PO #: \_\_\_\_\_ SAP #: \_\_\_\_\_

DATE: 6/9/10

PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants

LOG CODE: \_\_\_\_\_

SITE ADDRESS: Street and City: 5251 Hopyard Road; Pleasanton CA GLOBAL ID NO.: T0600101267

ADDRESS: 312 Piercy Road, San Jose, CA 95138

EDF DELIVERABLE TO (Name, Company, Office Location): Cora Olson PHONE NO.: 408-826-1877 E-MAIL: colson@deltaenv.com CONSULTANT PROJECT NO.: SCA5251H1D

PROJECT CONTACT (Hardcopy or PDF Report to): 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  UST AGENCY:

REQUESTED ANALYSIS

Gasoline Hydrocarbons	Sulfate Indicators	Waste Characterization	TEMPERATURE ON RECEIPT C°
-----------------------	--------------------	------------------------	---------------------------

SPECIAL INSTRUCTIONS OR NOTES :

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	TPH-Gasoline (8260B)				pH	Sulfate			Ferrous Iron	Femic Iron	TEMPERATURE ON RECEIPT C°	Container PID Readings or Laboratory Notes
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	Sulfate		Ferrous Iron	Femic Iron					
1	EW-1	6/9/10	10:05	Water				1		1						X						
2	S-3	6/9/10	10:00	Water				1		1						X						

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/10/10	Time: 1030
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

05/2006 Revision

0856

**1 FROM**

DATE 6/7/10  
 COMPANY Data Consultants  
 ADDRESS 316 Perry Rd  
 ADDRESS  
 CITY San Jose  
 SENDERS NAME [Redacted] PHONE NUMBER 408 514 4342

---

**2 TO**

COMPANY CAL SCIENCE  
 NAME PHONE NUMBER 714 895 5494  
 ADDRESS 7440 LINCOLN WAY  
 ADDRESS  
 CITY GARDEN GROVE ZIP CODE 92841

---

**3** YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE

SPECIAL INSTRUCTIONS



**SHIPPING AIR BILL**

**4 PACKAGE INFORMATION**

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

PACKAGE

**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

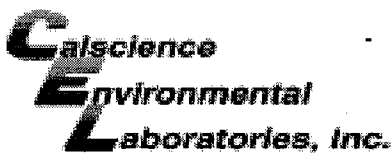
**7**

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

105866715

PEEL OFF HERE 105866715

**9 GSO TRACKING NUMBER** 105866715



WORK ORDER #: 10-06-0856

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: DELTA CONSULTANTS

DATE: 06/10/10

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

Temperature 2.3°C + 0.5°C (CF) = 2.8°C [X] 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: WS

CUSTODY SEALS INTACT:

- [ ] Cooler [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present [ ] N/A
[ ] Sample [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present

Initial: WS

Initial: WS

SAMPLE CONDITION:

Table with 4 columns: Description, Yes, No, N/A. Rows include 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.

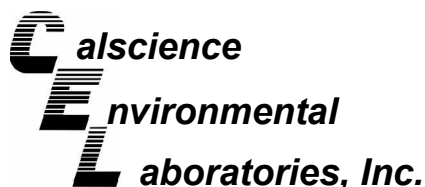
CONTAINER TYPE:

- Solid: [ ] 4ozCGJ [ ] 8ozCGJ [ ] 16ozCGJ [ ] Sleeve (\_\_\_\_) [ ] EnCores® [ ] TerraCores® [ ] \_\_\_\_\_
Water: [ ] VOA [ ] VOA h [ ] VOAn2 [ ] 125AGB [ ] 125AGBh [ ] 125AGBp [ ] 1AGB [ ] 1AGBna2 [ ] 1AGBs
[ ] 500AGB [ ] 500AGJ [ ] 500AGJs [ ] 250AGB [ ] 250CGB [ ] 250CGBs [ ] 1PB [ ] 500PB [ ] 500PBna
[X] 250PB [ ] 250PBn [ ] 125PB [ ] 125PBzanna [ ] 100PJ [ ] 100PJna2 [ ] \_\_\_\_\_ [ ] \_\_\_\_\_ [ ] \_\_\_\_\_

Air: [ ] Tedlar® [ ] Summa® Other: [ ] \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: WS

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

Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 zanna: ZnAc2+NaOH f: Field-filtered Scanned by: WS



July 02, 2010

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

Subject: **Calscience Work Order No.: 10-06-1825**  
**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 6/23/2010 and analyzed in accordance with the attached chain-of-custody.

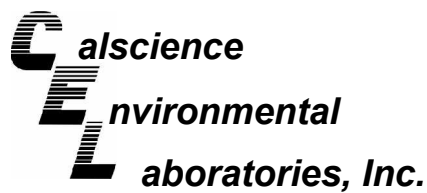
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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



## Analytical Report



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

Date Received: 06/23/10  
Work Order No: 10-06-1825  
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	10-06-1825-1-D	06/22/10 10:30	Aqueous	IC 9	N/A	06/23/10 17:03	100623L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Sulfate	1300	20	20		mg/L

S-3	10-06-1825-2-D	06/22/10 10:15	Aqueous	IC 9	N/A	06/23/10 17:19	100623L01
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Sulfate	6400	100	100		mg/L

Method Blank	099-12-906-1,101	N/A	Aqueous	IC 9	N/A	06/23/10 13:01	100623L01
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
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: 06/23/10  
Work Order No: 10-06-1825  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

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	10-06-1825-1-B	06/22/10 10:30	Aqueous	GC/MS T	06/28/10	06/29/10 02:54	100628L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5.2	1.0	2		Xylenes (total)	20	2.0	2	
Ethylbenzene	53	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2	
Toluene	4.5	2.0	2		TPPH	6600	100	2	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	103	80-126			1,2-Dichloroethane-d4	86	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	92	80-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-06-1825-2-B	06/22/10 10:15	Aqueous	GC/MS T	06/28/10	06/29/10 03:24	100628L02

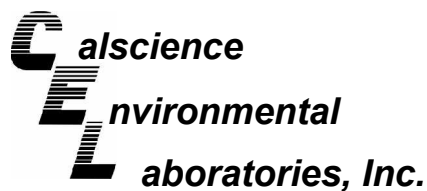
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	270	1.0	2		Xylenes (total)	4.0	2.0	2	
Ethylbenzene	26	2.0	2		Methyl-t-Butyl Ether (MTBE)	5.8	2.0	2	
Toluene	2.4	2.0	2		TPPH	1800	100	2	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	103	80-126			1,2-Dichloroethane-d4	87	80-131		
Toluene-d8	99	80-120			Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	93	80-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,169	N/A	Aqueous	GC/MS T	06/28/10	06/29/10 00:56	100628L02

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	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	103	80-126			1,2-Dichloroethane-d4	87	80-131		
Toluene-d8	97	80-120			Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	92	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: 06/23/10  
Work Order No: 10-06-1825  
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	10-06-1825-1-D	06/22/10 10:30	Aqueous	ICP 5300	06/24/10	06/25/10 13:47	100624LA6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Iron	5.09	0.100	1		mg/L

S-3	10-06-1825-2-E	06/22/10 10:15	Aqueous	ICP 5300	06/24/10	06/25/10 13:49	100624LA6
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Iron	8.93	0.100	1		mg/L

Method Blank	097-01-003-10,723	N/A	Aqueous	ICP 5300	06/24/10	06/24/10 19:47	100624LA6
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Iron	ND	0.100	1		mg/L

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

## Analytical Report


**LABORATORY ID: 10-06-1825**

Method: EPA 6010B (Calculation)

Matrix: Water/Aqueous

CLIENT: Delta Environmental Consultants, Inc.

PROJECT: 5251 Hopyard Rd., Pleasanton, CA

### Results

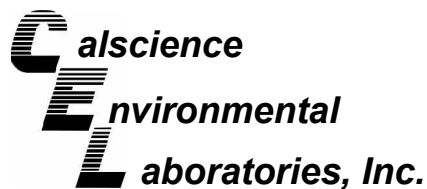
Sample ID	Ferric Iron (Fe+3) mg/L	Dilution Factor	Reporting Limit	Date Extracted	Date Analyzed
EW-1	2.29	1	0.10	06/24/10	06/25/10
S-3	4.43	1	0.10	06/24/10	06/25/10

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

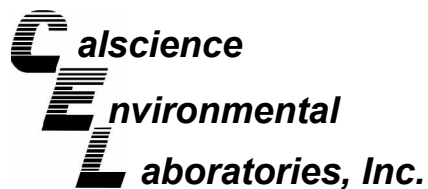
Date Received: 06/23/10  
Work Order No: 10-06-1825  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-06-1849-1	Aqueous	ICP 5300	06/24/10	06/24/10	100624SA6

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	116	112	65-149	3	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

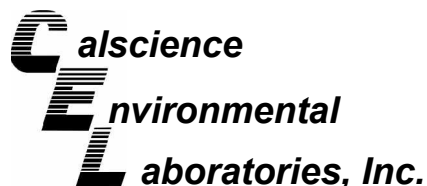
Date Received: 06/23/10  
Work Order No: 10-06-1825  
Preparation: N/A  
Method: EPA 300.0

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-06-1813-1	Aqueous	IC 9	N/A	06/23/10	100623S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	97	97	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

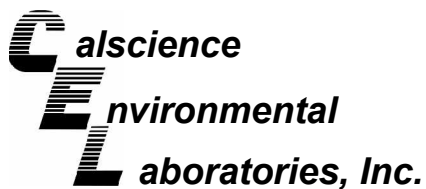
Date Received: 06/23/10  
Work Order No: 10-06-1825  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-06-2105-1	Aqueous	GC/MS T	06/28/10	06/29/10	100628S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	94	80-120	0	0-20	
Carbon Tetrachloride	88	92	55-151	4	0-20	
Chlorobenzene	99	100	80-120	1	0-20	
1,2-Dibromoethane	99	101	77-125	2	0-20	
1,2-Dichlorobenzene	93	94	78-120	1	0-20	
1,2-Dichloroethane	90	91	80-120	2	0-20	
1,1-Dichloroethene	87	88	69-129	0	0-20	
Ethylbenzene	88	89	73-127	1	0-20	
Toluene	90	90	80-120	0	0-20	
Trichloroethene	89	89	67-133	1	0-20	
Vinyl Chloride	84	84	67-133	0	0-20	
Methyl-t-Butyl Ether (MTBE)	84	85	65-131	2	0-22	
Tert-Butyl Alcohol (TBA)	105	110	62-134	4	0-20	
Diisopropyl Ether (DIPE)	98	100	64-136	2	0-29	
Ethyl-t-Butyl Ether (ETBE)	88	89	70-124	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	86	86	71-125	0	0-20	
Ethanol	122	117	44-152	4	0-43	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



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

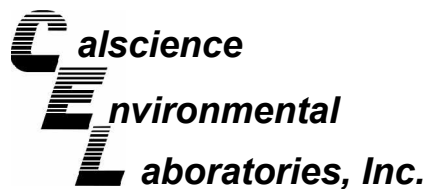
Date Received: N/A  
Work Order No: 10-06-1825  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-003-10,723	Aqueous	ICP 5300	06/24/10	06/24/10	100624LA6

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	98	98	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: 10-06-1825  
Preparation: N/A  
Method: EPA 300.0

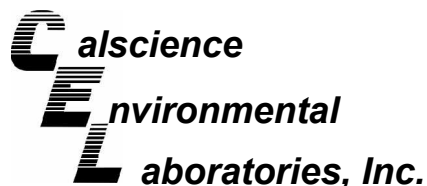
Project: 5251 Hopyard Rd., Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-1,101	Aqueous	IC 9	N/A	06/23/10	100623L01

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	98	99	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: 10-06-1825  
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		
099-12-767-4,169	Aqueous	GC/MS T	06/28/10	06/29/10	100628L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	95	92	80-120	73-127	3	0-20	
Carbon Tetrachloride	88	88	67-139	55-151	0	0-22	
Chlorobenzene	100	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	98	98	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	93	93	79-120	72-127	0	0-20	
1,2-Dichloroethane	90	88	80-120	73-127	2	0-20	
1,1-Dichloroethene	88	86	71-125	62-134	1	0-25	
Ethylbenzene	90	88	80-123	73-130	3	0-20	
Toluene	92	89	80-120	73-127	3	0-20	
Trichloroethene	90	88	80-120	73-127	2	0-20	
Vinyl Chloride	89	85	68-140	56-152	4	0-23	
Methyl-t-Butyl Ether (MTBE)	83	83	75-123	67-131	1	0-25	
Tert-Butyl Alcohol (TBA)	105	103	72-126	63-135	2	0-20	
Diisopropyl Ether (DIPE)	99	99	75-129	66-138	1	0-22	
Ethyl-t-Butyl Ether (ETBE)	88	88	76-124	68-132	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	86	85	79-121	72-128	2	0-20	
Ethanol	125	125	53-143	38-158	0	0-25	
TPPH	96	93	65-135	53-147	3	0-30	

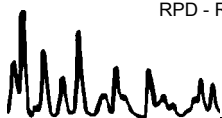
Total number of LCS compounds : 18

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 10-06-1825
 

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<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

**INCIDENT # (ENV SERVICES):** 9 8 9 9 5 8 4 3

**PO #:** \_\_\_\_\_ **SAP #:** \_\_\_\_\_

**DATE:** 6/22/10 **PAGE:** 1 of 1

**SAMPLING COMPANY:** Delta Consultants **LOG CODE:** \_\_\_\_\_

**ADDRESS:** 312 Piercy Road, San Jose, CA 95138

**PROJECT CONTACT (Handcopy 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):** Cora Olson **PHONE NO.:** 408-826-1877 **E-MAIL:** colson@deltaenv.com **CONSULTANT PROJECT NO.:** SCA5251H1D

**Sampler Name:** Matt Lambert **LAB USE ONLY:** 06-1825

**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:

**REQUESTED ANALYSIS**

Gasoline Hydrocarbons			Sulfate Indicators			Waste Characterization			TEMPERATURE ON RECEIPT °C
-----------------------	--	--	--------------------	--	--	------------------------	--	--	---------------------------

**SPECIAL INSTRUCTIONS OR NOTES :**

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

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	Gasoline Hydrocarbons			Sulfate Indicators			pH	Waste Characterization			Container PID Readings or Laboratory Notes
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	Sulfate	Ferrous Iron	Ferric Iron					
1	EW-1	6/22/10	10:30	Water	4	1		1		5	X	X	X			7.38	X	2.8	X		
2	S-3	6/22/10	10:15	Water	4	1		1		5	X	X	X			8.73	X	4.5	X		

Relinquished by: (Signature)	Received by: (Signature) _____	Date: 6/22/10	Time: _____
Relinquished by: (Signature) _____	Received by: (Signature)	Date: 6/23/10	Time: 1030
Relinquished by: (Signature) _____	Received by: (Signature) _____	Date: _____	Time: _____

05/2/06 Revision

1825



PLEASE PRESS FIRMLY

<b>1</b>	DATE	6/22/10		
	COMPANY	DUP		
	ADDRESS	312 Perry Rd		
	ADDRESS	STE/ ROOM		
<b>F</b>	CITY	ZIP CODE	95138	
	SENDER'S NAME	PHONE NUMBER	408 528-4542	
	COMPANY NAME	PHONE NUMBER	714 395-5494	
<b>R</b>	ADDRESS	STE/ ROOM		
	ADDRESS	ZIP CODE	92641	
	CITY	GARDEN GROVE		
<b>O</b>	YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE			
	SPECIAL INSTRUCTIONS			

**GSO**  
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)

PACKAGE LABEL

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

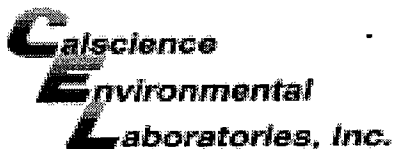
**8** PICK UP INFORMATION \_\_\_\_\_  
TIME \_\_\_\_\_ DRIVER # \_\_\_\_\_ ROUTE # \_\_\_\_\_

105866714

PEEL OFF HERE

105866714

**9** GSO TRACKING NUMBER



WORK ORDER #: 10-06-1825

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Delta

DATE: 06/23/10

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

Temperature 2.4°C + 0.5°C (CF) = 2.9°C [X] 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: [Signature]

CUSTODY SEALS INTACT:

- [X] Cooler [ ] \_\_\_\_\_ [ ] No (Not Intact) [ ] Not Present [ ] N/A
[ ] Sample [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present

Initial: [Signature]
Initial: [Signature]

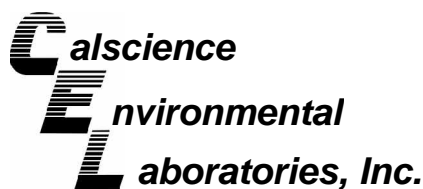
SAMPLE CONDITION:

Table with 4 columns: Question, Yes, No, N/A. Rows include Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, Sampler's name indicated on COC, etc.

CONTAINER TYPE:

- Solid: [ ] 4ozCGJ [ ] 8ozCGJ [ ] 16ozCGJ [ ] Sleeve (\_\_\_\_) [ ] EnCores® [ ] TerraCores® [ ] \_\_\_\_\_
Water: [ ] VOA [X] VOA<sup>3</sup>h [ ] VOAna<sub>2</sub> [ ] 125AGB [ ] 125AGBh [ ] 125AGBp [ ] 1AGB [ ] 1AGBna<sub>2</sub> [ ] 1AGBs
[ ] 500AGB [ ] 500AGJ [ ] 500AGJs [ ] 250AGB [ ] 250CGB [ ] 250CGBs [ ] 1PB [ ] 500PB [ ] 500PBna
[X] 250PB [X] 250PBn [ ] 125PB [ ] 125PBz<sub>2</sub>na [ ] 100PJ [ ] 100PJna<sub>2</sub> [ ] \_\_\_\_\_ [ ] \_\_\_\_\_ [ ] \_\_\_\_\_
Air: [ ] Tedlar® [ ] Summa® Other: [ ] \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: [Signature]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: [Signature]
Preservative: h: HCL n: HNO3 na2:Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 z<sub>2</sub>na: ZnAc2+NaOH f: Field-filtered Scanned by: [Signature]



July 28, 2010

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

Subject: **CalScience Work Order No.: 10-07-1297**  
**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 7/17/2010 and analyzed in accordance with the attached chain-of-custody.

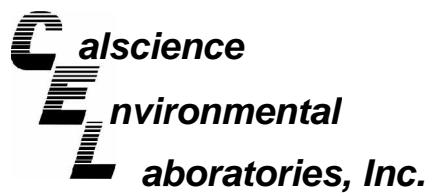
CalScience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, 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



## Analytical Report



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

Date Received: 07/17/10  
Work Order No: 10-07-1297  
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	10-07-1297-1-D	07/15/10 14:40	Aqueous	IC 10	N/A	07/19/10 12:50	100719L01

Parameter	Result	RL	DF	Qual	Units
Sulfate	300	5.0	5		mg/L

S-3	10-07-1297-2-D	07/15/10 14:50	Aqueous	IC 10	N/A	07/19/10 13:07	100719L01
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Parameter	Result	RL	DF	Qual	Units
Sulfate	2600	40	40		mg/L

S-1	10-07-1297-3-D	07/15/10 15:10	Aqueous	IC 10	N/A	07/19/10 13:25	100719L01
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Parameter	Result	RL	DF	Qual	Units
Sulfate	ND	1.0	1		mg/L

S-2	10-07-1297-4-D	07/15/10 14:10	Aqueous	IC 10	N/A	07/19/10 13:42	100719L01
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Parameter	Result	RL	DF	Qual	Units
Sulfate	570	10	10		mg/L

S-10	10-07-1297-5-D	07/15/10 13:50	Aqueous	IC 10	N/A	07/19/10 14:00	100719L01
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Parameter	Result	RL	DF	Qual	Units
Sulfate	150	2.0	2		mg/L

Method Blank	099-12-906-1,137	N/A	Aqueous	IC 10	N/A	07/19/10 10:49	100719L01
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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: 07/17/10  
Work Order No: 10-07-1297  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Road, 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	10-07-1297-1-A	07/15/10 14:40	Aqueous	GC/MS R	07/20/10	07/21/10 04:46	100720L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	4.7	1.0	2		Xylenes (total)	27	2.0	2	
Ethylbenzene	52	2.0	2		Methyl-t-Butyl Ether (MTBE)	ND	2.0	2	
Toluene	4.5	2.0	2		TPPH	5800	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	108	80-126			1,2-Dichloroethane-d4	112	80-131		
Toluene-d8	103	80-120			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	101	80-120							

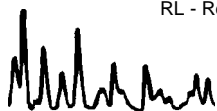
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	10-07-1297-2-A	07/15/10 14:50	Aqueous	GC/MS R	07/20/10	07/21/10 05:14	100720L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	230	1.0	2		Xylenes (total)	ND	2.0	2	
Ethylbenzene	ND	2.0	2		Methyl-t-Butyl Ether (MTBE)	7.4	2.0	2	
Toluene	ND	2.0	2		TPPH	2200	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	109	80-126			1,2-Dichloroethane-d4	115	80-131		
Toluene-d8	104	80-120			Toluene-d8-TPPH	104	88-112		
1,4-Bromofluorobenzene	104	80-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	10-07-1297-3-A	07/15/10 15:10	Aqueous	GC/MS R	07/20/10	07/21/10 05:42	100720L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	20	2.5	5		Xylenes (total)	54	5.0	5	
Ethylbenzene	200	5.0	5		Methyl-t-Butyl Ether (MTBE)	ND	5.0	5	
Toluene	38	5.0	5		TPPH	12000	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	106	80-126			1,2-Dichloroethane-d4	108	80-131		
Toluene-d8	103	80-120			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	105	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: 07/17/10  
Work Order No: 10-07-1297  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B  
Units: ug/L

Project: 5251 Hopyard Road, 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
S-2	10-07-1297-4-A	07/15/10 14:10	Aqueous	GC/MS R	07/20/10	07/21/10 06:11	100720L02

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)	19	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<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	104	80-126			1,2-Dichloroethane-d4	115	80-131		
Toluene-d8	101	80-120			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	100	80-120							

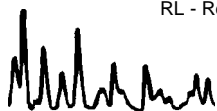
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10	10-07-1297-5-A	07/15/10 13:50	Aqueous	GC/MS R	07/20/10	07/21/10 06:40	100720L02

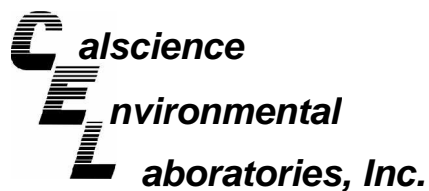
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Dibromofluoromethane	109	80-126			1,2-Dichloroethane-d4	117	80-131		
Toluene-d8	101	80-120			Toluene-d8-TPPH	100	88-112		
1,4-Bromofluorobenzene	100	80-120							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-4,326	N/A	Aqueous	GC/MS R	07/20/10	07/21/10 02:53	100720L02

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 Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Dibromofluoromethane	106	80-126			1,2-Dichloroethane-d4	112	80-131		
Toluene-d8	101	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: 07/17/10  
Work Order No: 10-07-1297  
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	10-07-1297-1-E	07/15/10 14:40	Aqueous	ICP 5300	07/19/10	07/20/10 13:05	100719LA3

Parameter	Result	RL	DF	Qual	Units
Iron	2.89	0.100	1		mg/L

S-3	10-07-1297-2-E	07/15/10 14:50	Aqueous	ICP 5300	07/19/10	07/20/10 13:07	100719LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	4.63	0.100	1		mg/L

S-1	10-07-1297-3-E	07/15/10 15:10	Aqueous	ICP 5300	07/19/10	07/20/10 13:09	100719LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	0.558	0.100	1		mg/L

S-2	10-07-1297-4-E	07/15/10 14:10	Aqueous	ICP 5300	07/19/10	07/20/10 13:11	100719LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	ND	0.100	1		mg/L

S-10	10-07-1297-5-E	07/15/10 13:50	Aqueous	ICP 5300	07/19/10	07/20/10 13:13	100719LA3
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Parameter	Result	RL	DF	Qual	Units
Iron	0.119	0.100	1		mg/L

Method Blank	097-01-003-10,811	N/A	Aqueous	ICP 5300	07/19/10	07/20/10 11:49	100719LA3
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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: 10-07-1297**

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	0.49	1	0.10	07/19/10	07/20/10
S-3	1.4	1	0.10	07/19/10	07/20/10
S-1	ND	1	0.10	07/19/10	07/20/10
S-2	ND	1	0.10	07/19/10	07/20/10
S-10	0.12	1	0.10	07/19/10	07/20/10

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

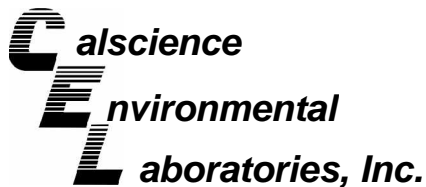
Date Received: 07/17/10  
Work Order No: 10-07-1297  
Preparation: EPA 3010A Total  
Method: EPA 6010B

Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-07-1280-1	Aqueous	ICP 5300	07/19/10	07/20/10	100719SA3

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	122	121	65-149	1	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

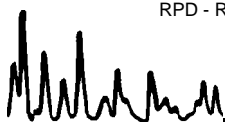
Date Received 07/17/10  
 Work Order No: 10-07-1297  
 Preparation: EPA 3010A Total  
 Method: EPA 6010B

Project: 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
10-07-1280-1	Aqueous	ICP 5300	07/19/10	07/20/10	100719SA3

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron	123	120	75-125	3	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: 07/17/10  
Work Order No: 10-07-1297  
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
EW-1	Aqueous	IC 10	N/A	07/19/10	100719S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Sulfate	101	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

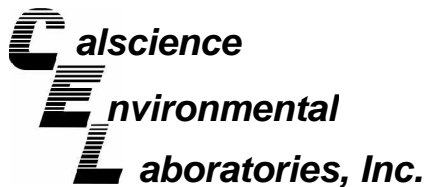
Date Received: 07/17/10  
Work Order No: 10-07-1297  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project 5251 Hopyard Road, Pleasanton, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-07-1287-3	Aqueous	GC/MS R	07/20/10	07/21/10	100720S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	100	80-120	6	0-20	
Ethylbenzene	96	103	73-127	7	0-20	
Toluene	95	100	80-120	5	0-20	
Methyl-t-Butyl Ether (MTBE)	97	104	65-131	6	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: 10-07-1297  
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
097-01-003-10,811	Aqueous	ICP 5300	07/19/10	07/20/10	100719LA3

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Iron	103	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: 10-07-1297  
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
099-12-906-1,137	Aqueous	IC 10	N/A	07/19/10	100719L01

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Sulfate	103	103	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: 10-07-1297  
Preparation: EPA 5030B  
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
099-12-767-4,326	Aqueous	GC/MS R	07/20/10	07/21/10	100720L02

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	100	94	80-120	7	0-20	
Ethylbenzene	103	96	80-123	7	0-20	
Toluene	103	96	80-120	7	0-20	
Methyl-t-Butyl Ether (MTBE)	110	100	75-123	9	0-25	
TPPH	83	93	65-135	11	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Work Order Number: 10-07-1297

<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

INCIDENT # (ENV SERVICES): 9 8 9 9 5 8 4 3

PO # \_\_\_\_\_ SAP # \_\_\_\_\_

DATE: 7/15/10

PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants

LOG CODE: \_\_\_\_\_

SITE ADDRESS: Street and City: 5251 Hopyard Road; Pleasanton State: CA GLOBAL ID NO.: T0600101267

EDF DELIVERABLE TO (Name, Company, Office Location): Cora Olson PHONE NO.: 408-826-1877 E-MAIL: colson@dellaenv.com CONSULTANT PROJECT NO.: SCA5251H1D

Sampler Name: IAN WILLIAMS

LAB USE ONLY: 10-07-1097

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

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:

REQUESTED ANALYSIS

SPECIAL INSTRUCTIONS OR NOTES :

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

Gasoline Hydrocarbons

Sulfate Indicators

Waste Characterization

TEMPERATURE ON RECEIPT °C

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	Gasoline Hydrocarbons			Sulfate Indicators			Waste Characterization	TEMPERATURE ON RECEIPT °C	Container PID Readings or Laboratory Notes	
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH-Gasoline (8260B)	BTEX (8260B)	MTBE (8260B)	pH	Sulfate	Ferrous Iron				Ferric Iron
1	EW-1	7/15/10	1440	Water	3	1	1	5	X	X	X				X	X			Fe <sup>2+</sup> = 2.4 mg/L	
2	S-3		1450	Water	3	1	1	5	X	X	X				X	X			Fe <sup>2+</sup> = 3.2 mg/L	
3	S-1		1510	Water	3	1	1	5	X	X	X				X	X			Fe <sup>2+</sup> = 0.6 mg/L	
4	S-2		1410	Water	3	1	1	5	X	X	X				X	X			Fe <sup>2+</sup> = 0.0 mg/L	
5	S-10		1350	Water	3	1	1	5	X	X	X				X	X			Fe <sup>2+</sup> = 0.0 mg/L	

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
<i>[Signature]</i>	<i>[Signature]</i>	7/15/10	1620
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
<i>[Signature]</i>	<i>[Signature]</i>		
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
GSO	<i>[Signature]</i>	7/17/10	0900

\* SHIPPED VIA GSO

05/2/06 Revision

4.

	<b>&lt; WebShip &gt; &gt; &gt; &gt;</b> 800-322-5555 www.gso.com
---	---

1297

<b>Ship From:</b> MICHAEL NINOTAKA BLAINE TECH SERVICES, INC 1680 ROGERS AVE SAN JOSE, CA 95112  <b>Ship To:</b> DON BURLEY CALSCIENCE 7440 LINCOLN WAY GARDEN GROVE, CA 92841  <b>COD:</b> \$0.00  <b>Reference:</b> BTSSJ  <b>Delivery Instructions:</b> FRAGILE, NON HAZARDOUS  <b>Signature Type:</b> SIGNATURE REQUIRED	<b>Tracking #:</b> 514557196 	<b>SDS</b>
	<b>ORC</b> <b>GARDEN GROVE</b>  <b>D92843A</b>  83180377	<b>D</b>

Print Date : 07/16/10 08:41 AM

Package 1 of 1

<input type="button" value="Send Label To Printer"/>	<input checked="" type="checkbox"/> Print All	<input type="button" value="Edit Shipment"/>	<input type="button" value="Finish"/>
--	---	--	---------------------------------------

**LABEL INSTRUCTIONS:**

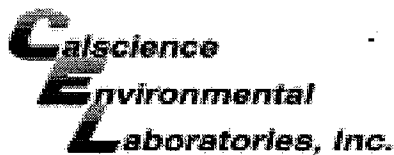
- Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**
- STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
  - STEP 2 - Fold this page in half.
  - STEP 3 - Securely attach this label 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:**

<input type="button" value="Send Label Via Email"/>	<input type="button" value="Create Return Label"/>
---	--

**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 or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.



WORK ORDER #: 10-07-  2  9  7

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: BTS

DATE: 07/17/10

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

Temperature 1.4 °C + 0.5°C (CF) = 1.9 °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: PS

**CUSTODY SEALS INTACT:**

Cooler     \_\_\_\_\_     No (Not Intact)     Not Present     N/A    Initial: PS

Sample     \_\_\_\_\_     No (Not Intact)     Not Present    Initial: KP

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"/> WSC 7/17/10	<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 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     VOA<sup>3</sup>h     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     125PBz<sub>2</sub>na     100PJ     100PJna<sub>2</sub>     \_\_\_\_\_     \_\_\_\_\_     \_\_\_\_\_

**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>    z<sub>2</sub>na: ZnAc<sub>2</sub>+NaOH    f: Field-filtered    **Scanned by:** WSC