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**TRANSMITTAL**

DATE: April 10, 2012 REFERENCE NO.: 201232

PROJECT NAME: 1801 Santa Rita Road, Pleasanton

TO: Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**RECEIVED**  
**3:35 pm, Apr 11, 2012**  
Alameda County  
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Please find enclosed:  Draft  Final  
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Sent via:  Mail  Same Day Courier  
 Overnight Courier  Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Updated Site Conceptual Model and Closure Request

As Requested  For Review and Comment  
 For Your Use

**COMMENTS:**

If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)  
Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasanton, CA 94566-6267  
Cheryl Dizon, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

Completed by: Peter Schaefer Signed:

Filing: **Correspondence File**



Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Denis L. Brown**  
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Re: Shell-branded Service Station  
1801 Santa Rita Road  
Pleasanton, California  
SAP Code 135783  
Incident No. 97615964  
ACEH Case No. RO0002882

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

A handwritten signature in black ink, appearing to read "Denis Brown", is located below the "Sincerely," text.

Denis L. Brown  
Senior Program Manager



## **UPDATED SITE CONCEPTUAL MODEL AND CLOSURE REQUEST**

**SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD  
PLEASANTON, CALIFORNIA**

**SAP CODE           135783  
INCIDENT NO.    97615964  
AGENCY NO.       RO0002882**

**APRIL 10, 2012**  
**REF. NO. 201232 (3)**  
This report is printed on recycled paper.

**Prepared by:  
Conestoga-Rovers  
& Associates**

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## EXECUTIVE SUMMARY

- This SCM is intended to address the deficiencies presented in the Closure Review posted on SWRCB's Geotracker website.
- Shell voluntarily initiated the investigation in 2002 due to the proximity of the site to water production wells.
- Historical groundwater monitoring and grab groundwater data adequately define TPHg, BTEX, MTBE, and TBA impacts horizontally and vertically in groundwater to below applicable RWQCB ESLs and demonstrate that the plume is not migrating. Deep and shallow wells appear to be screened in the upper and lower portion of the same water-bearing zone.
- Vadose zone soil analytical results are all below ESLs, with the exception of five soil samples collected from well borings drilled in the area of the USTs and dispensers. Since no vadose zone soil concentrations exceeded ESLs in other borings, soil impacts have been adequately delineated.
- The site is likely to remain in use as a service station.
- This site meets the RWQCB criteria for a low-risk fuel site. Therefore, on behalf of Shell, we respectfully request closure of this case. CRA requests that Alameda County Environmental Health suspend the groundwater monitoring program during the closure review.

## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). This evaluation and other information included in this report are intended to address the deficiencies identified in the California Water Resources Control Board's Geotracker website's Closure Review for the subject site.

The site is a Shell-branded service station located on the northwestern corner of Santa Rita Road and Valley Avenue in a mixed commercial and residential area of Pleasanton, California (Figure 1). The site layout includes a convenience store, three fuel underground storage tanks (USTs), and four dispenser islands (Figure 2).

A summary of previous work performed at the site is contained in Appendix A.

## 2.0 SITE CONCEPTUAL MODEL

<i>ITEM</i>	<i>EVALUATION CRITERIA</i>	<i>COMMENTS/DISCUSSION</i>
<b>2.1</b>	<b>Hydrocarbon Source</b>	
2.1.1	Identify/Describe Release Source and Volume (if known)	Unknown. Low levels of soil contamination were identified during investigation activities in 2002. No release from the USTs or piping was identified.
2.1.2	Discuss Steps Taken to Stop Release	The dispensers and product piping were upgraded in November 2002. During the upgrade activities, approximately 150 cubic yards of soil were excavated for off-site disposal. A hoist was replaced in April 2005, and a waste oil UST was removed in February 2007.
<b>2.2</b>	<b>Site Characterization</b>	
2.2.1	Current Site Use/Status	The site is a Shell-branded service station.
2.2.2	Soil Definition Status	All detections of total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), and tertiary-amyl methyl ether (TAME) in the 52 vadose zone (less than



ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		<p>35 feet below grade [fbg]) soil samples analyzed from the site are below the San Francisco Bay Regional Water Quality Control Board<sup>1</sup> (RWQCB) environmental screening level (ESL) for soils at sites with commercial land use, where groundwater is a potential source of drinking water with the following exceptions.</p> <ul style="list-style-type: none"> <li>• 420 milligrams per kilograms (mg/kg) TPHg in MW-1 at 28.5 fbg,</li> <li>• 0.77 mg/kg benzene and 3.7 mg/kg toluene in MW-4 at 29.5 fbg,</li> <li>• 2.0 mg/kg benzene in MW-4 at 34.5 fbg,</li> <li>• 0.058 mg/kg benzene in MW-1A at 30 fbg, and</li> <li>• 6.2 mg/kg toluene and 3.5 mg/kg total xylenes in MW-4A at 30 fbg.</li> </ul> <p>It should be noted that the RWQCB advises that ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.)." In this case, BTEX, fuel oxygenates, and lead scavengers are the appropriate related chemicals. Since the detections of benzene, toluene, and total xylenes which exceed ESLs are all in the area of the USTs and dispensers and no vadose zone soil concentrations exceeded ESLs in other borings, soil impacts have been adequately delineated.</p> <p>Tables 1 and 2 present historical soil data.</p>
2.2.3	Separate-Phase Hydrocarbon (SPH) Definition Status	SPH has not been observed at the site.
2.2.4	Groundwater Definition Status (TPHg/ BTEX)	<p>Groundwater has been monitored at the site since the fourth quarter of 2002.</p> <p>During the third quarter 2011 groundwater monitoring event, TPHd, TPHg, BTEX, and</p>

<sup>1</sup> *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]*

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		<p>fuel oxygenate concentrations were below ESLs for groundwater where groundwater is a potential source of drinking water with the exception of 340 micrograms per liter (<math>\mu\text{g/L}</math>) TPHd, 350 <math>\mu\text{g/L}</math> TPHg, 1.4 <math>\mu\text{g/L}</math> benzene, 27 <math>\mu\text{g/L}</math> MTBE, and 200 <math>\mu\text{g/L}</math> TBA detected in MW-4A and 11 <math>\mu\text{g/L}</math> MTBE detected in MW-1A. As noted above, the RWQCB advises that TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.).” In this case BTEX and fuel oxygenates are the appropriate related chemicals. BTEX concentrations in the shallow zone are defined to below ESLs by shallow well MW-5 and a grab groundwater sample collected from boring B-1. MW-1A, MW-4A, and MW-5 are shallow wells which have contained insufficient water to sample several times during recent sampling events (including the fourth quarter of 2011) indicating that the vertical groundwater migration is the primary concern at this site. We note that the deep and shallow wells appear to be screened in the upper and lower portion of the same water-bearing zone. The groundwater gradient in shallow wells during the second and third quarter of 2011 was southerly; however, since groundwater elevations in the deeper wells (MW-1 through MW-4) were at least 8 feet below the screened intervals of the shallow wells (MW-1A, MW-4A and MW-5) in the fourth quarter of 2011, vertical migration and impacts to deeper wells are of greater concern than lateral migration in shallow groundwater. Since all concentrations of constituents of concern (COCs) in deeper site wells are below ESLs, groundwater impacts are adequately defined.</p> <p>Historical monitoring well groundwater data are included in Table 3, and grab groundwater sampling data are presented in Table 4. Groundwater monitoring well</p>

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		construction data are presented in Table 5.
2.2.5	TPHg/BTEX Plume Stability and Concentration Trends	Quarterly groundwater monitoring data indicate that COC concentrations are declining. Trend graphs for COCs presented on Figures 4 through 6 predict that all COCs will reach ESLs by 2038.
2.2.6	Groundwater Definition Status (Oxygenates)	<p>The highest MTBE (MW-1A, 290 micrograms per liter [<math>\mu\text{g}/\text{L}</math>]; 1/5/09) and TBA (MW-4A, 1,300 <math>\mu\text{g}/\text{L}</math>; 1/5/09) concentrations were detected in shallow screened wells in the area of the dispensers. This source area is adequately characterized by shallow zone wells MW-1A, MW-4A, and MW-5 and boring B-4. Groundwater data from well MW-5 and boring B-1 define the down gradient extent of MTBE and TBA impacts. As stated above, the potential for vertical groundwater migration is the primary concern at this site. Fuel oxygenate concentrations in all deeper zone wells (MW-1 through MW-4) are all below ESLs, so the extent of fuel oxygenates in groundwater is adequately defined.</p> <p>Historical monitoring well groundwater data are included in Table 3 and grab groundwater sampling data are presented in Table 4.</p>
2.2.7	Oxygenate Plume Stability and Concentration Trends	Groundwater monitoring data indicate that the MTBE and TBA plumes are not migrating and concentrations are steadily declining. As stated above, Figures 4 through 6 predict that all COCs will reach ESLs by 2038. TAME, DIPE, and ETBE have not been detected in groundwater samples.
2.2.8	Groundwater Flow Direction, Depth Trends and Gradient	Static groundwater depth has ranged from 34.55 to 85.83 fbg. Groundwater flow direction is variable but generally southwesterly (during the third quarter 2011 groundwater flow direction was anomalous with flow to the northeast) with a variable but generally shallow groundwater gradient. Vertical groundwater gradients are variable and historically have varied from -0.005 to

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		0.003 (Table 6). Groundwater depths are presented in the historical groundwater monitoring table (Table 3). The third quarter 2011 groundwater contour map is included as Figure 3.
2.2.9	Stratigraphy and Hydrogeology	Based on 10 site borings, the site is underlain predominately by clays and silts with occasional, minor (up to 5 feet thick) sand lenses, to a depth of approximately 50 fbg. Coarse grained sands are initially encountered between approximately 50 and 55 fbg and continue to approximately 95 fbg where they are underlain by fine grained soils to the total depth explored of 97.5 fbg. Cross sections are presented in Figures 7 and 8, and boring logs are presented in Appendix B.
2.2.10	Preferential Pathways Analysis	No preferential pathway analysis has been conducted or is warranted based on depth to water and utility depths.
2.2.11	Other Pertinent Issues	None at this time.
<b>2.3</b>	<b>Remediation Status</b>	
2.3.1	Remedial Actions Taken	The dispensers and product piping were upgraded in November 2002. During the upgrade activities, approximately 150 cubic yards of soil were excavated for off-site disposal. A hoist was replaced in April 2005, and a waste oil UST was removed in February 2007.
2.3.2	Area Remediated	The area of the dispensers and UST complex.
2.3.3	Remediation Effectiveness	The plume is stable and declining following remedial activities.
<b>2.4</b>	<b>Well and Sensitive Receptor Survey</b>	
2.4.1	Designated Beneficial Water Use	The California State Water Resources Control Board's Geotracker website file for the environmental case at this site states that the groundwater at this site is considered a "drinking water supply;" however, neighboring properties are served by the local municipal water purveyor for potable water. Groundwater in this area cannot be

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		precluded from being a potential future source of drinking water.
2.4.2	Well Survey Results	In 2006, Delta Consultants (Delta) field verified two drinking water supply wells within one-half mile of the site. Well 3S/1E 16L 7M (City of Pleasanton Well 6) is located approximately 1,600 feet south of the site. Well 3S/1E 16L 5 (City of Pleasanton Well 5) is located approximately 1,848 feet southeast of the site. According to information supplied by Zone 7 Water Agency, the depth to the top of the first well screen in Well 6 is 165 fbg, and the depth to the top of the first well screen in Well 5 is 149 fbg. Both wells are located cross-gradient from the site. Additionally, Delta field verified two private wells located approximately 2,312 feet west of the site (Well No. 3S/1E 17B4) and 2,323 feet northwest of the site (Well No. 3S/1E 9N4).
2.4.3	Likelihood of Impact to Wells	Due to the distance and direction to the identified water-producing wells and declining trends observed for COCs, it is unlikely they would be impacted.
2.4.4	Likelihood of Impact to Surface Water	Arroyo Valle is located approximately 3,500 feet south, and infiltration pond "Lake I" is located approximately 3,600 feet northeast. Due to the distance and cross-gradient and up-gradient directions to these surface water features and depth to groundwater, it is unlikely that surface water would be impacted.
<b>2.5</b>	<b>Risk Assessment</b>	
2.5.1	Site Conceptual Exposure Model (current and future uses)	The site is an active Shell-branded service station and is likely to remain in use as a service station. The site is surrounded by mixed residential and commercial properties. There is no indication that the land use in the site vicinity will change from commercial and residential land use in the near future.
2.5.2	Exposure Pathways	Potential exposure pathways include ingestion of impacted groundwater, exposure of on-site workers to impacted shallow soils,

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		<p>and intrusion of vapor to indoor air.</p> <p>Groundwater ingestion does not appear to be a completed pathway because there are no down-gradient water-producing wells or surface water in close proximity to the site.</p> <p>As discussed above, impacted soil is limited on site. Any worker doing trenching or excavating at a former gasoline station would be properly trained and prepared for encountering potentially impacted soil, and would wear personal protective equipment, as necessary. Therefore, the residual impacted soils do not appear to pose a significant threat to construction workers who may occasionally come in contact with the potentially impacted soils on site, and any work at this site would require contractors to have appropriate health and safety training to perform the work. At this time, no further investigation associated with the residual soil impact is recommended.</p> <p>Furthermore, all COC groundwater concentrations are below the commercial land use ESLs for evaluating the potential for vapor intrusion<sup>2</sup>.</p>
2.5.3	Risk Assessment Status	No formal risk assessment is planned the site.
2.5.4	Identified Human Exceedances	NA
2.5.5	Identified Ecological Exceedances	NA
<b>2.6</b>	<b>Additional Recommended Data or Tasks</b>	
2.6.1	Well Destructions	

<sup>2</sup> Screening for Environmental Concerns at Site With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, Interim Final – November 2007 [Revised May 2008]; Table E-1: Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (commercial land use).

### 3.0 CONCLUSIONS AND RECOMMENDATIONS

As stated above, the site is likely to remain in use as a service station. Given the concentrations of COCs in site soil and groundwater compared to the ESLs as presented above, CRA concludes that the residual petroleum and fuel oxygenate impacts at this site pose very little or no risk to human health or the environment.

This site meets the RWQCB criteria for a low-risk fuel site. Soil and groundwater impacts have been adequately delineated. No further soil or groundwater investigation is warranted. On behalf of Shell, we respectfully request closure of this case. CRA requests that the Alameda County Environmental Health suspend the groundwater monitoring program during the closure review.

All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES



Peter Schaefer, CEG, CHG

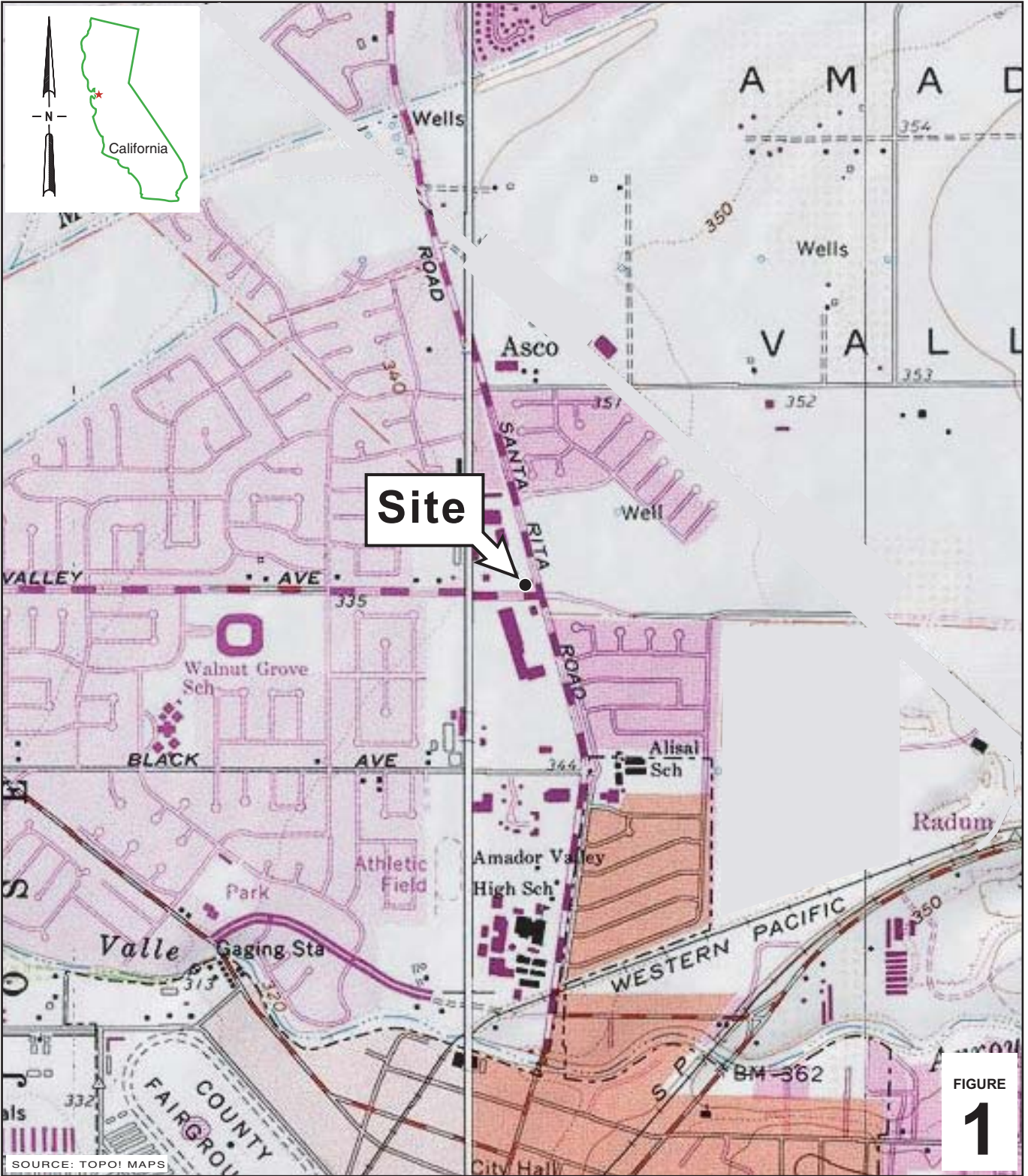


Aubrey K. Cool, PG





## FIGURES



I:\Shell\6-charts\2012-1201232-1-Pleasanton\_1801\_Santa\_Rita\201232-FIGURE S\201232 VICINITY (F1).AI

FIGURE 1

0 1/8 1/4 1/2 1  
SCALE : 1" = 1/4 MILE

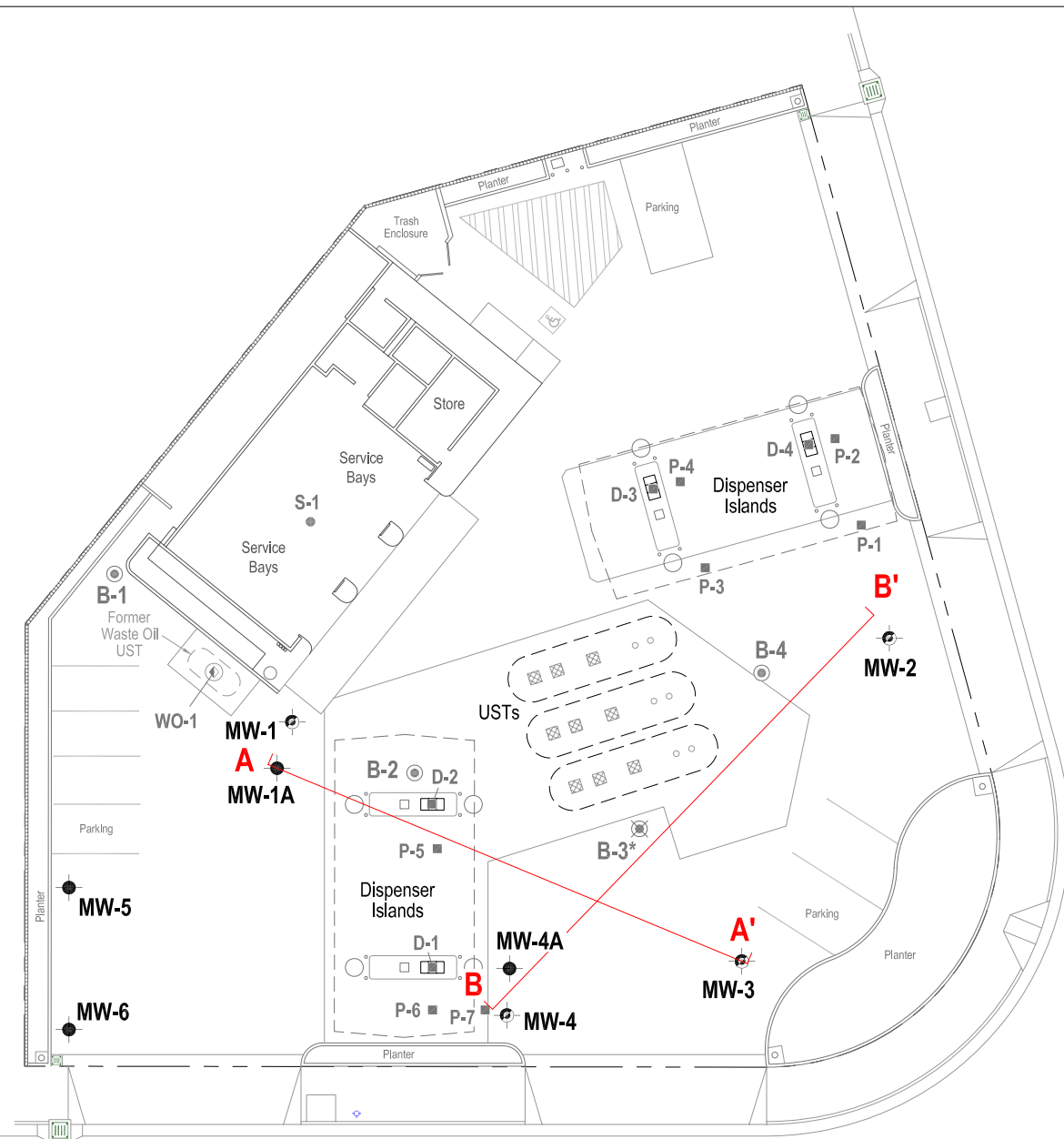
### Shell-branded Service Station

1801 Santa Rita Road  
Pleasanton, California



CONESTOGA-ROVERS  
& ASSOCIATES

### Vicinity Map



EXPLANATION	
MW-1	Deeper monitoring well location
MW-1A	Shallower monitoring well location
WO-1	Soil sample location (CRA, 2007)
B-1	Soil boring location (Delta, 2006)
B-3*	Attempted soil boring location (Delta, 2006)
S-1	Soil sample location (Delta, 2005)
D-1	Soil sample location (Delta, 2002)
A	Cross section line
A'	

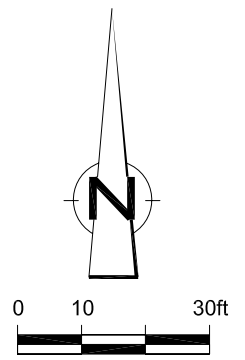
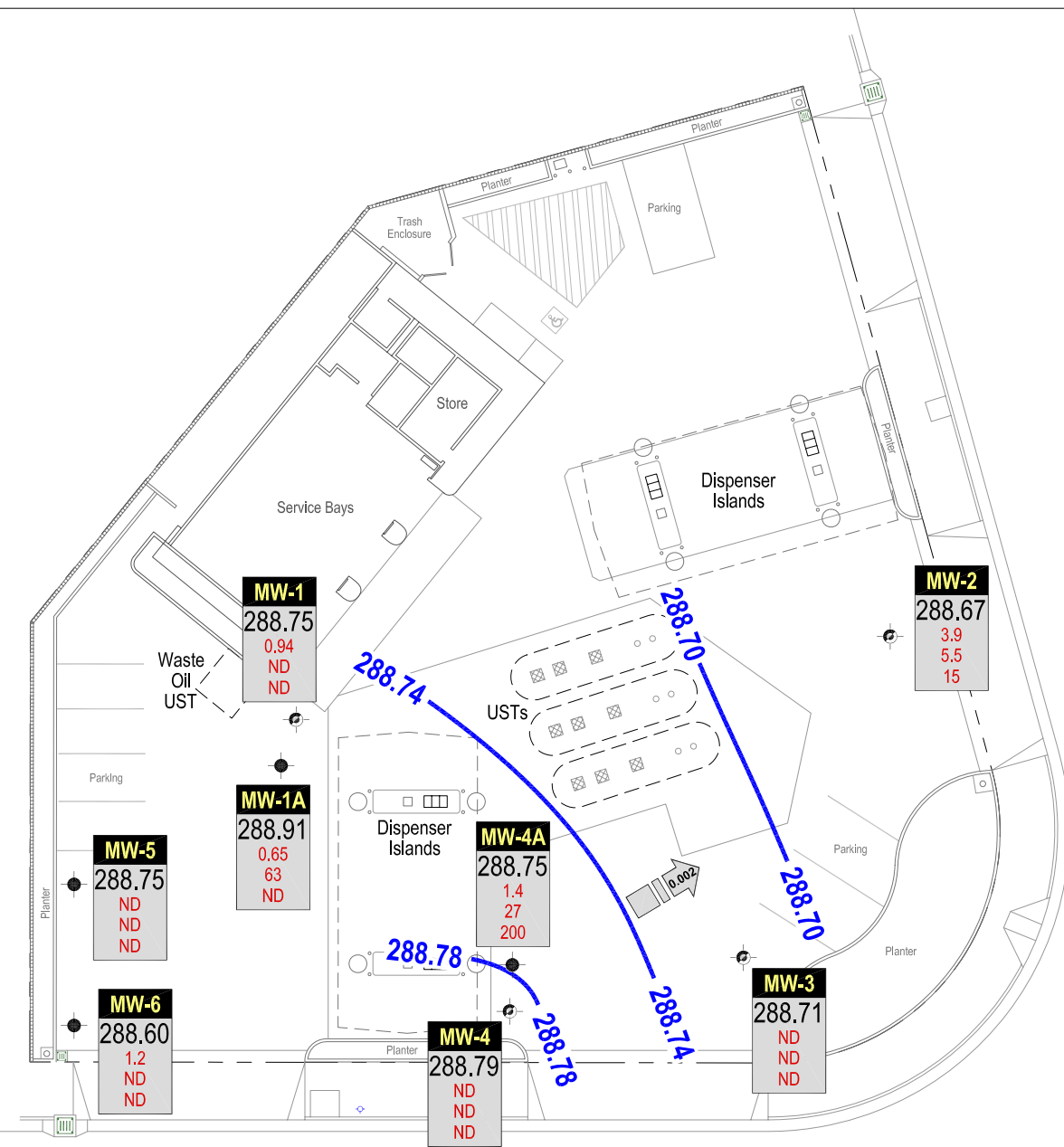


Figure 2  
 Site Plan  
 Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California





**EXPLANATION**

- MW-1 Deeper monitoring well location (used in contouring)
- MW-1A Shallower monitoring well location (not used in contouring)
- Groundwater flow direction and gradient
- Groundwater elevation contour, in feet above mean sea level (msl); dashed where inferred
- Well designation
- Groundwater elevation, in feet above msl
- Benzene, MTBE, and TBA concentrations are in micrograms per liter

**Notes:**  
 ND = Not detected  
 - Deeper zone wells used in contouring

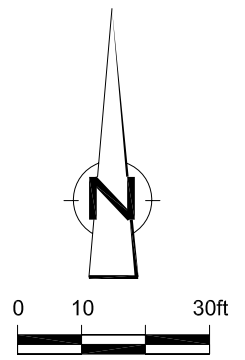


Figure 3  
 Groundwater Contour and  
 Chemical Concentration Map  
 July 7-8, 2011  
 Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California



# Predicted Time to Reach Water Quality Objectives (WQO) in Well MW-1A

Shell-branded Service Station, 1801 Santa Rita Road, Pleasanton, California

$$y = b e^{ax} \quad \implies \quad x = \ln(y/b) / a$$

where:  $y$  = concentration in  $\mu\text{g/L}$        $a$  = decay constant  
 $b$  = concentration at time (x)       $x$  = time (x) in days

Given	Constituent	Methyl Tert-Butyl Ether (MTBE)
WQO:	$y$	5
Constant:	$b$	$3.07\text{E}+38$
Constant:	$a$	$-2.10\text{E}-03$
Starting date for current trend:		1/5/2009

Calculate		
Attenuation Half Life (years):	$(-\ln(2)/a)/365.25$	0.90
Estimated Date to Reach WQO:	$(x = \ln(y/b) / a)$	Aug 2013

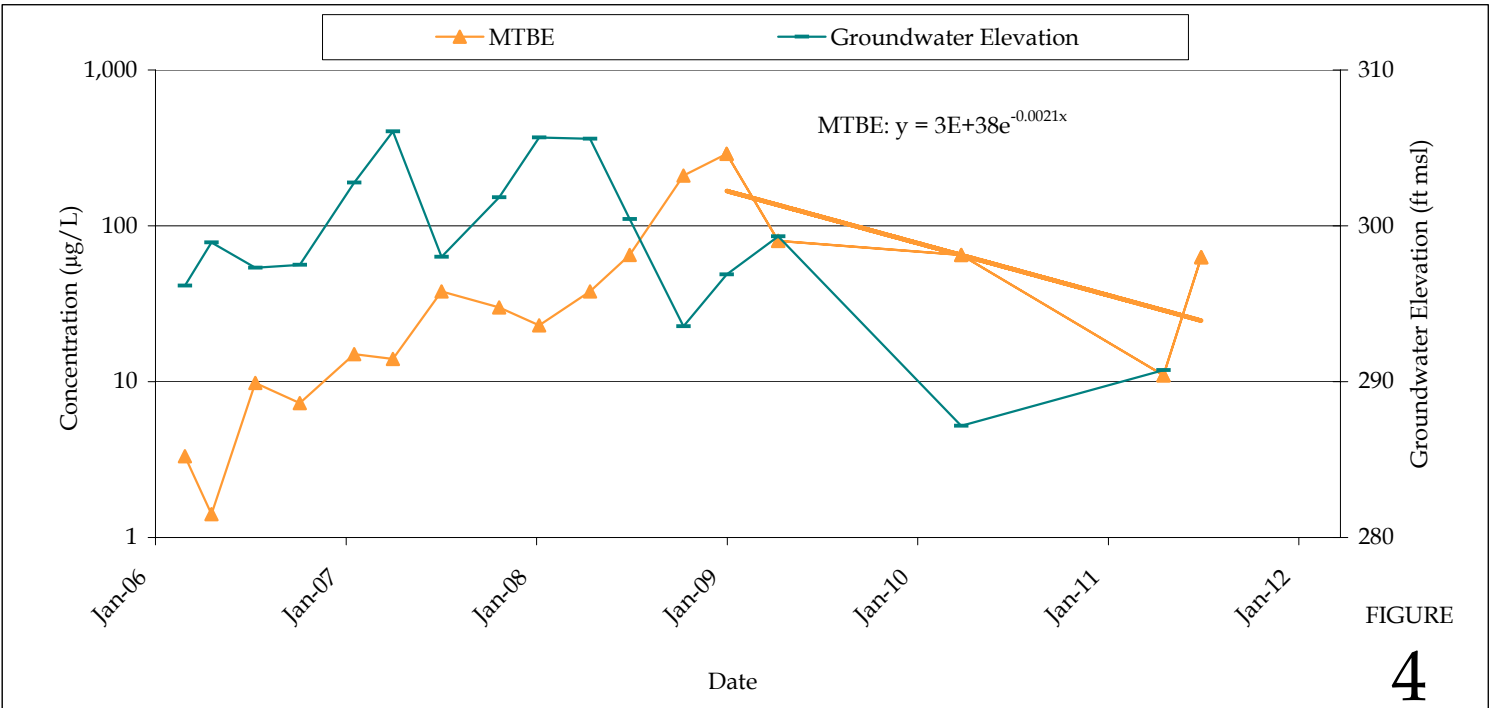


FIGURE  
**4**

Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California



**MW-1A:**  
 MTBE Concentrations and  
 Groundwater Elevation

# Predicted Time to Reach Water Quality Objectives (WQO) in Well MW-4A

Shell-branded Service Station, 1801 Santa Rita Road, Pleasanton, California

$$y = b e^{ax} \quad \implies \quad x = \ln(y/b) / a$$

where: y = concentration in  $\mu\text{g/L}$       a = decay constant  
 b = concentration at time (x)      x = time (x) in days

		Constituent	Benzene	Methyl Tert-Butyl Ether (MTBE)	Tert-Butyl Alcohol (TBA)
Given	WQO :	y	1	5	12
	Constant:	b	1.67E+56	4.73E+51	3.89E+50
	Constant:	a	-3.19E-03	-2.85E-03	-2.75E-03
	Starting date for current trend:		7/12/2006	1/5/2009	1/5/2009

Calculate			Benzene	MTBE	TBA
Attenuation Half Life (years):	$(-\ln(2)/a)/365.25$		0.60	0.66	0.69
Estimated Date to Reach WQO:	$(x = \ln(y/b) / a)$		Mar 2011	Aug 2012	Jul 2013

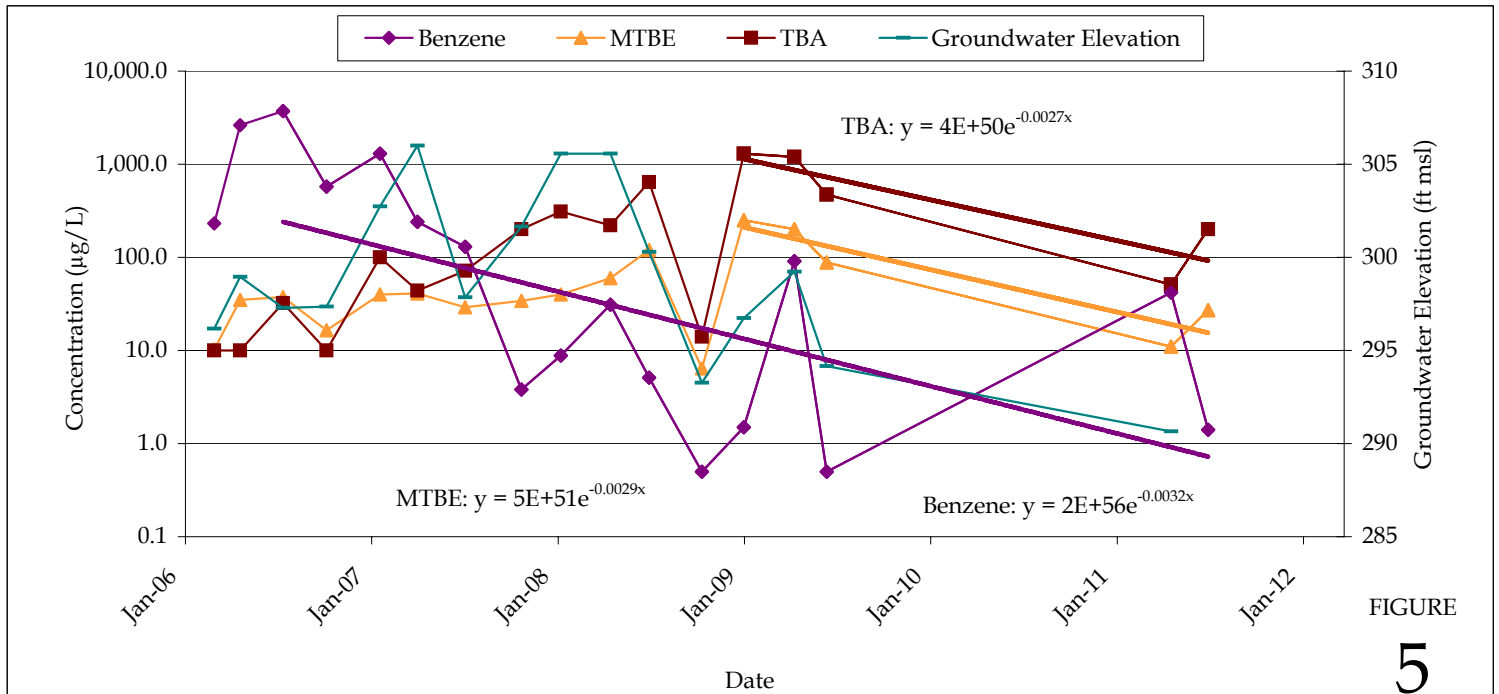


FIGURE 5

Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California



**MW-4A:**  
 Benzene, MTBE, and TBA Concentrations  
 and Groundwater Elevation

# Predicted Time to Reach Water Quality Objectives (WQO) in Well MW-4A

Shell-branded Service Station, 1801 Santa Rita Road, Pleasanton, California

$$y = b e^{ax} \quad \implies \quad x = \ln(y/b) / a$$

where:  $y$  = concentration in  $\mu\text{g/L}$        $a$  = decay constant  
 $b$  = concentration at time ( $x$ )       $x$  = time ( $x$ ) in days

Given	Constituent	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
WQO :	$y$	100	100
Constant:	$b$	1.10E+11	5.02E+28
Constant:	$a$	-5.14E-04	-1.50E-03
Starting date for current trend:		4/3/2007	7/12/2006

Calculate		Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
Attenuation Half Life (years):	$(-\ln(2)/a)/365.25$	3.69	1.27
Estimated Date to Reach WQO:	$(x = \ln(y/b) / a)$	Dec 2010	May 2012

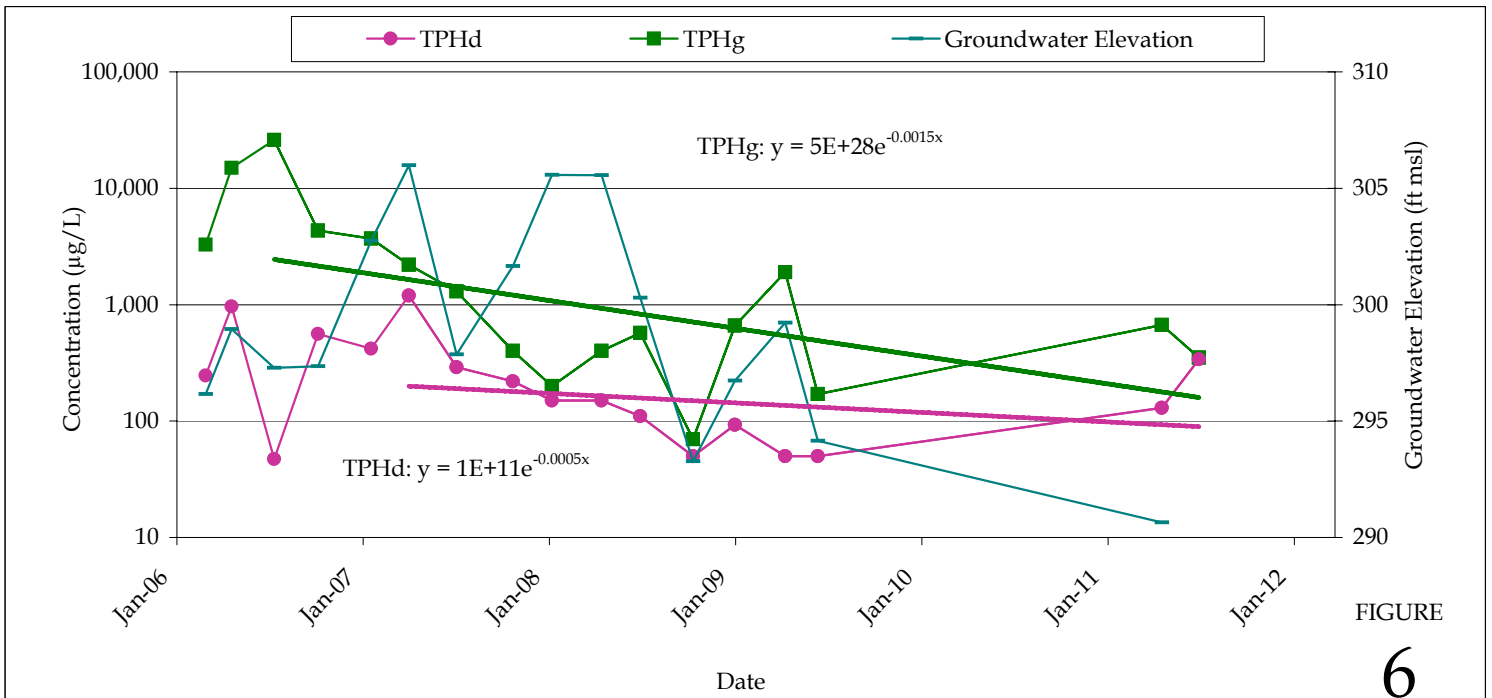
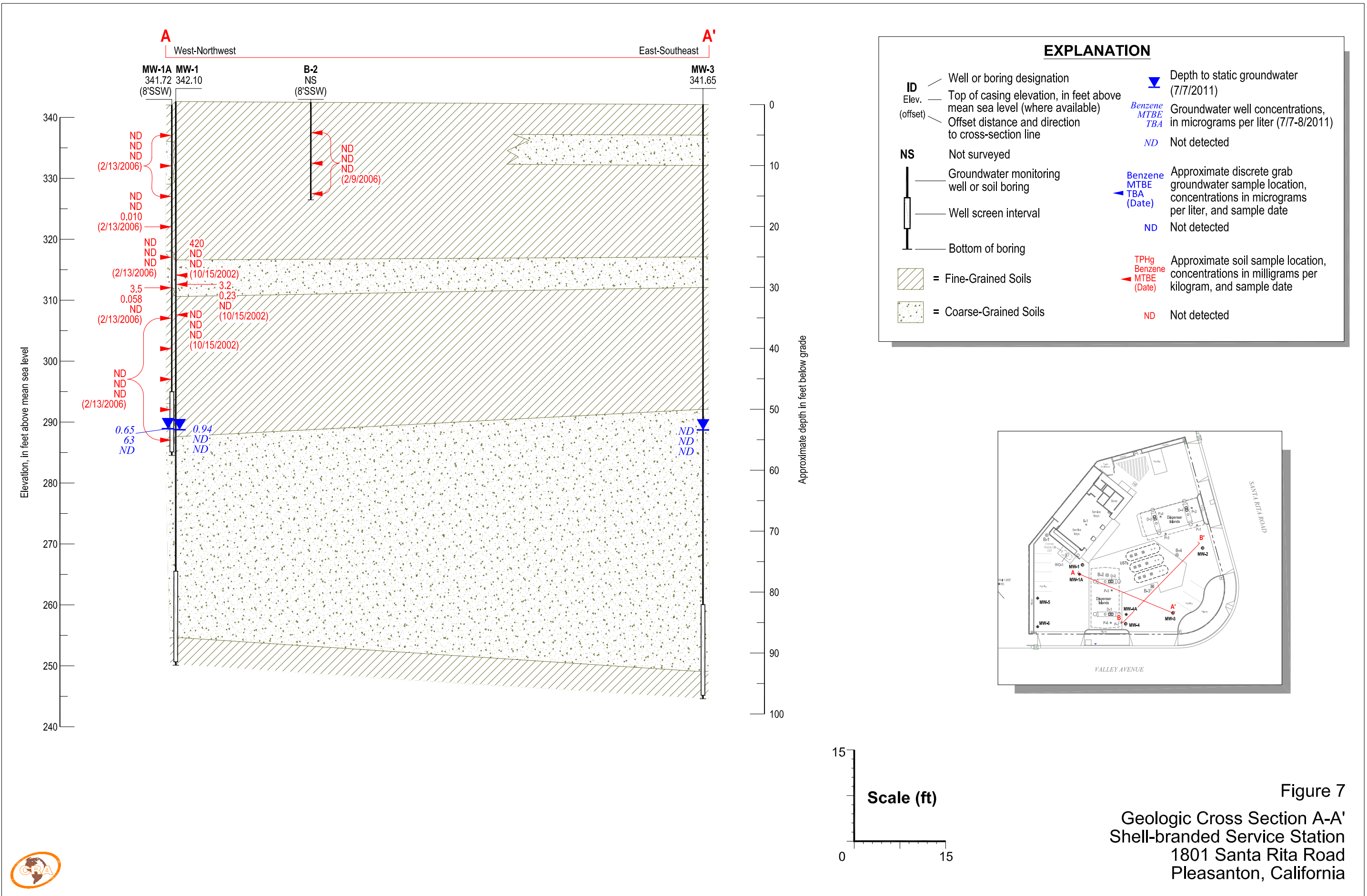


FIGURE 6

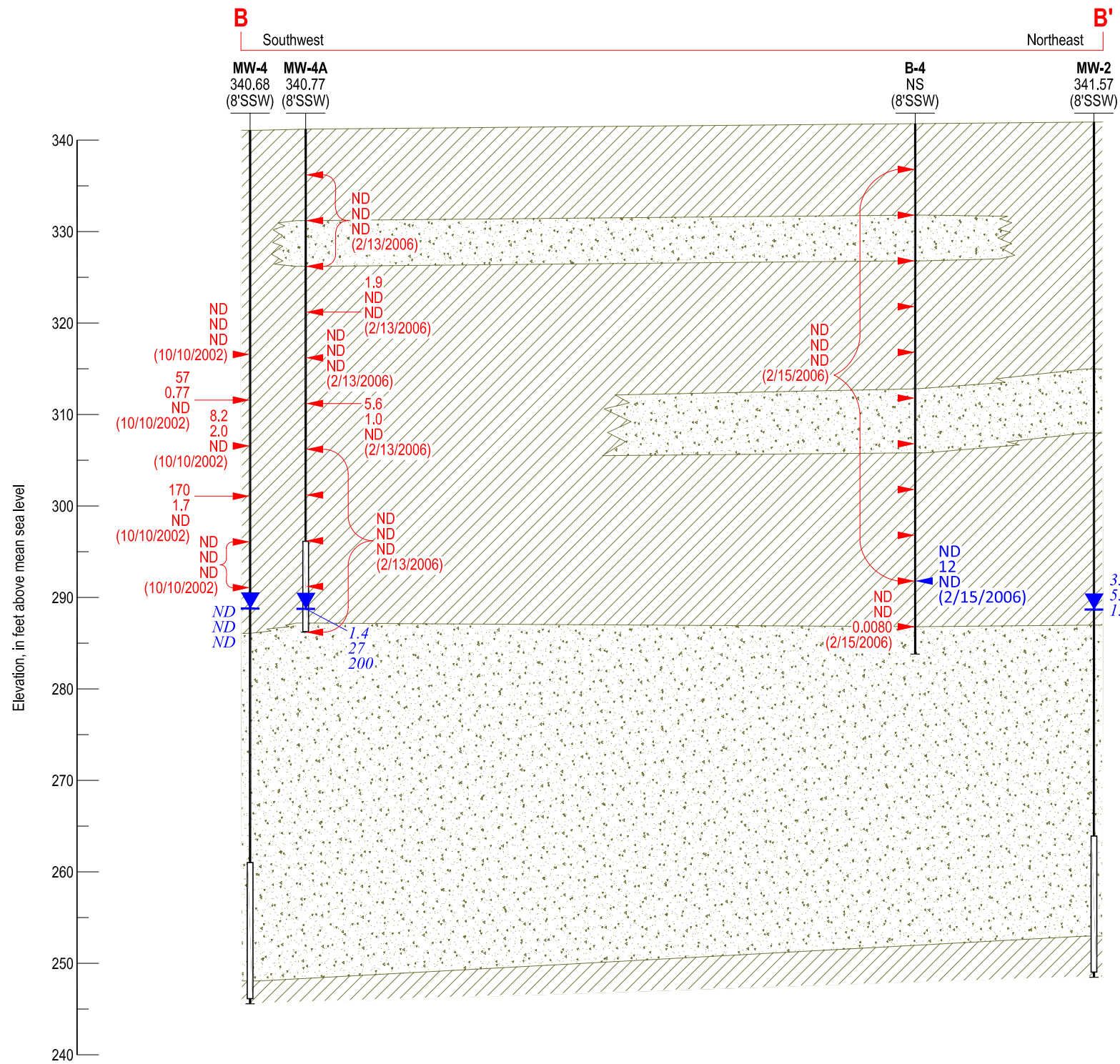
Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California



**MW-4A:**  
 TPHg and TPHd Concentrations  
 and Groundwater Elevation







### EXPLANATION

<b>ID</b>	Well or boring designation		Depth to static groundwater (7/7/2011)
<b>Elev.</b>	Top of casing elevation, in feet above mean sea level (where available)		Groundwater well concentrations, in micrograms per liter (7/7-8/2011)
<b>(offset)</b>	Offset distance and direction to cross-section line		Not detected
<b>NS</b>	Not surveyed		Approximate discrete grab groundwater sample location, concentrations in micrograms per liter, and sample date
	Groundwater monitoring well or soil boring		Not detected
	Well screen interval		Approximate soil sample location, concentrations in milligrams per kilogram, and sample date
	Bottom of boring		Not detected
	Fine-Grained Soils		
	Coarse-Grained Soils		

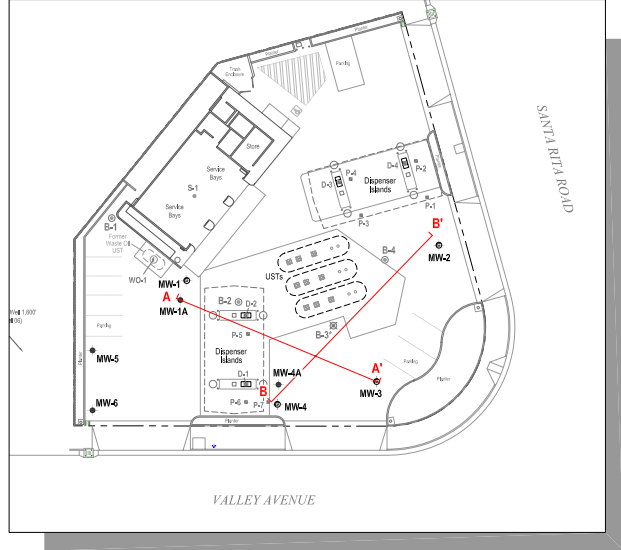
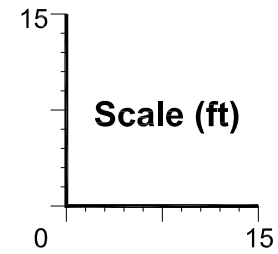
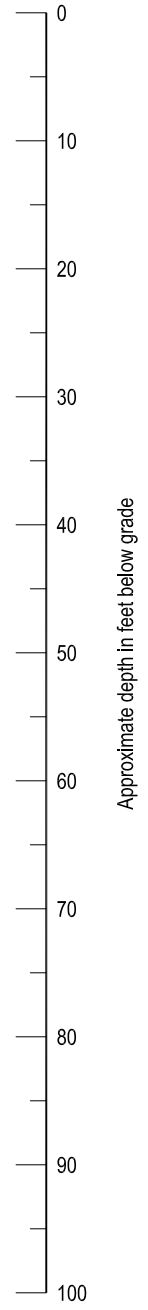


Figure 8  
 Geologic Cross Section B-B'  
 Shell-branded Service Station  
 1801 Santa Rita Road  
 Pleasanton, California



## TABLES

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (ftg)	O&G	O&G	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	VOCs (mg/kg)	PNAAs (mg/kg)	PCP (mg/kg)	PCBs (mg/kg)
			Petroleum (mg/kg)	Total (mg/kg)																	
MW-1	10/15/2002	28.5	---	---	---	420	<0.050	1.5	5.1	37	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-1	10/15/2002	30	---	---	---	3.2	0.023	0.13	0.094	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-1	10/16/2002	35	---	---	---	<1.0	<0.005	<0.005	<0.005	0.014	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	24.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	29.5	---	---	---	57	0.77	3.7	0.25	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	34.5	---	---	---	8.2	2.0	0.61	0.26	0.41	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	40	---	---	---	170	1.7	0.39	2.3	9.6	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	45	---	---	---	<1.0	0.0069	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
MW-4	10/10/2002	50	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.010	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
D-1	11/15/2002	3	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
D-2	11/15/2002	3.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
D-3	11/15/2002	3.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
D-4	11/15/2002	2.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-1	11/15/2002	3.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-2	11/15/2002	3	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-3	11/15/2002	5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-4	11/15/2002	3	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-5	11/15/2002	4	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-6	11/15/2002	3	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
P-7	11/15/2002	3	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---
S-1	4/19/2005	8.5	7,900 b	11, 000 b	18,000 a	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---
MW-1A	2/13/2006	5	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	10	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	15	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	20	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.010	0.0066	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	25	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.029	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	30	---	---	1.7 a	3.5	0.058	0.28	0.12	0.73	<0.0050	0.0054	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	35	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	40	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	45	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	50	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-1A	2/15/2006	55	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-4A	2/13/2006	5	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-4A	2/16/2006	10	---	---	<0.99	<0.96	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	---	---	---	---
MW-4A	2/16/2006	15	---	---	<0.99	<0.97	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	---	---	---	---
MW-4A	2/16/2006	20	---	---	<1.0	<0.99	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0099	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	---	---	---	---



**HISTORICAL SOIL ANALYTICAL DATA - ORGANICS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Sample ID	Date	Depth (fbg)	O&G	O&G	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	VOCs (mg/kg)	PNAs (mg/kg)	PCP (mg/kg)	PCBs (mg/kg)	
			Petroleum (mg/kg)	Total (mg/kg)																		
B-4	2/15/2006	40	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
B-4	2/15/2006	45	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
B-4	2/15/2006	50	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
B-4	2/15/2006	55	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.0080	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---
MW-6	8/14/2007	15	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	---	---	---	---	---	---	---	---	---	---
MW-6	8/14/2007	35	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	---	---	---	---	---	---	---	---	---	---
MW-6	8/14/2007	50	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	---	---	---	---	---	---	---	---	---	---
MW-6	8/14/2007	55	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	---	---	---	---	---	---	---	---	---	---
WO-1	2/13/2003	12	---	<500 c	6.5	0.19	<0.00096	<0.00096	<0.00096	<0.0019	<0.0019	<0.019	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	ND	ND	<0.83	<0.099
<i>Shallow Soil (≤10 fbg) ESL<sup>d</sup>:</i>			NA	NA	83	83	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA	NA	0.0045	0.00033	Varies	Varies	5.0	0.74	
<i>Deep Soil (&gt;10 fbg) ESL<sup>d</sup>:</i>			NA	NA	83	83	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA	NA	0.0045	0.00033	Varies	Varies	99	6.3	

**Notes:**

O&amp;G = Oil &amp; grease

TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015M

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

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

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

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

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B

EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B

VOCs = Volatile organic compounds analyzed by EPA Method 5030B/8260B; see laboratory analytical report for a complete list of specific constituents

PNAs = Polynuclear aromatics by EPA Method 8270C; see laboratory analytical report for a complete list of specific constituents

PCP = Pentachlorophenol by EPA Method 8270C

PCBs = Polychlorinated biphenyls by EPA Method 8082; see laboratory analytical report for a complete list of specific constituents

fbg = Feet below grade

mg/kg = Milligrams per kilogram

&lt;x = Not detected at reporting limit x

--- = Not analyzed

ND = Not detected; see laboratory analytical report for detection limits.

ESL = Environmental screening level

Results in **bold** equal or exceed applicable ESL

NA = No applicable ESL

a = Hydrocarbon reported does not match the diesel standard

b = Analyzed by EPA Method 1664M

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS  
 SHELL-BRANDED SERVICE STATION  
 1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth	O&G Petroleum (fbg)	O&G Total (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	VOCs (mg/kg)	PNAs (mg/kg)	PCP (mg/kg)	PCBs (mg/kg)
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c = Analyzed by EPA Method 413.1 (Modified)

d = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is a potential source of drinking water (Tables A and C *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 2

**HISTORICAL SOIL ANALYTICAL DATA - METALS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>Cd (mg/kg)</i>	<i>Cr (mg/kg)</i>	<i>Pb (mg/kg)</i>	<i>Ni (mg/kg)</i>	<i>Zn (mg/kg)</i>
D-1	11/15/2002	3	---	---	10.9	---	---
D-2	11/15/2002	3.5	---	---	11.6	---	---
D-3	11/15/2002	3.5	---	---	11.3	---	---
D-4	11/15/2002	2.5	---	---	21.6	---	---
P-1	11/15/2002	3.5	---	---	19.5	---	---
P-2	11/15/2002	3	---	---	8.33	---	---
P-3	11/15/2002	5	---	---	6.73	---	---
P-4	11/15/2002	3	---	---	12.5	---	---
P-5	11/15/2002	4	---	---	10.7	---	---
P-6	11/15/2002	3	---	---	10.5	---	---
P-7	11/15/2002	3	---	---	12.4	---	---
S-1	4/19/2005	8.5	0.98	23	17	36	40
MW-1A	2/13/2006	5	---	---	6.8	---	---
MW-1A	2/15/2006	10	---	---	4.8	---	---
MW-1A	2/15/2006	15	---	---	6.6	---	---
MW-1A	2/15/2006	20	---	---	6.3	---	---
MW-1A	2/15/2006	25	---	---	7.5	---	---
MW-1A	2/15/2006	30	---	---	6.1	---	---
MW-1A	2/15/2006	35	---	---	8.4	---	---
MW-1A	2/15/2006	40	---	---	7.9	---	---
MW-1A	2/15/2006	45	---	---	7.9	---	---
MW-1A	2/15/2006	50	---	---	5.1	---	---
MW-1A	2/15/2006	55	---	---	5.1	---	---
MW-4A	2/13/2006	5	---	---	7.1	---	---
MW-4A	2/16/2006	10	---	---	5.2	---	---
MW-4A	2/16/2006	15	---	---	7.3	---	---
MW-4A	2/16/2006	20	---	---	6.6	---	---
MW-4A	2/16/2006	25	---	---	6.7	---	---
MW-4A	2/16/2006	30	---	---	7.5	---	---
MW-4A	2/16/2006	35	---	---	8.1	---	---
MW-4A	2/16/2006	40	---	---	7.7	---	---
MW-4A	2/16/2006	45	---	---	7.5	---	---
MW-4A	2/16/2006	50	---	---	5.6	---	---
MW-4A	2/16/2006	55	---	---	1.9	---	---
MW-5	2/13/2006	5	---	---	7.6	---	---
MW-5	2/13/2006	10	---	---	5.9	---	---
MW-5	2/13/2006	15	---	---	5.4	---	---
MW-5	2/13/2006	20	---	---	5.3	---	---
MW-5	2/13/2006	25	---	---	7.5	---	---
MW-5	2/13/2006	30	---	---	8.2	---	---

**HISTORICAL SOIL ANALYTICAL DATA - METALS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>Cd (mg/kg)</i>	<i>Cr (mg/kg)</i>	<i>Pb (mg/kg)</i>	<i>Ni (mg/kg)</i>	<i>Zn (mg/kg)</i>
MW-5	2/13/2006	35	---	---	8.1	---	---
MW-5	2/13/2006	40	---	---	7.3	---	---
MW-5	2/13/2006	45	---	---	6.0	---	---
MW-5	2/13/2006	50	---	---	3.7	---	---
B-1	2/9/2006	5	---	---	5.9	---	---
B-1	2/13/2006	10	---	---	3.5	---	---
B-1	2/13/2006	15	---	---	6.3	---	---
B-1	2/13/2006	20	---	---	6.0	---	---
B-1	2/13/2006	25	---	---	5.8	---	---
B-1	2/13/2006	30	---	---	4.6	---	---
B-1	2/13/2006	35	---	---	6.3	---	---
B-1	2/13/2006	40	---	---	7.4	---	---
B-1	2/13/2006	45	---	---	6.1	---	---
B-1	2/13/2006	50	---	---	3.1	---	---
B-1	2/13/2006	55	---	---	7.4	---	---
B-2	2/9/2006	5	---	---	7.1	---	---
B-2	2/9/2006	10	---	---	4.8	---	---
B-2	2/9/2006	15	---	---	4.8	---	---
B-4	2/15/2006	5	---	---	7.5	---	---
B-4	2/15/2006	10	---	---	5.8	---	---
B-4	2/15/2006	15	---	---	5.8	---	---
B-4	2/15/2006	20	---	---	6.1	---	---
B-4	2/15/2006	25	---	---	7.0	---	---
B-4	2/15/2006	30	---	---	5.2	---	---
B-4	2/15/2006	35	---	---	8.5	---	---
B-4	2/15/2006	40	---	---	7.4	---	---
B-4	2/15/2006	45	---	---	7.9	---	---
B-4	2/15/2006	50	---	---	6.0	---	---
B-4	2/15/2006	55	---	---	4.3	---	---
WO-1	2/13/2003	12	<0.50	62	6.2	91	42
<i>Shallow Soil (≤10 fbg) ESL<sup>a</sup>:</i>			7.4	750	750	150	600
<i>Deep Soil (&gt;10 fbg) ESL<sup>a</sup>:</i>			39	5,000	750	260	5,000

Notes:

Cd = Cadmium by EPA Method 6010B

Cr = Chromium by EPA Method 6010B

Pb = Lead by EPA Method 6010B

Ni = Nickel by EPA Method 6010B

Zn = Zinc by EPA Method 6010B

fbg = Feet below grade



**HISTORICAL SOIL ANALYTICAL DATA - METALS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth</i> <i>(fbg)</i>	<i>Cd</i> <i>(mg/kg)</i>	<i>Cr</i> <i>(mg/kg)</i>	<i>Pb</i> <i>(mg/kg)</i>	<i>Ni</i> <i>(mg/kg)</i>	<i>Zn</i> <i>(mg/kg)</i>
------------------	-------------	------------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------

mg/kg = Milligrams per kilogram

<x = Not detected at reporting limit x

--- = Not analyzed

ESL = Environmental screening level

a = San Francisco Bay Regional Water Quality Control Board  
commercial/industrial ESL for soil where groundwater is a potential source  
of drinking water (Tables A and C of *Screening for Environmental Concerns at  
Sites With Contaminated Soil and Groundwater*, California Regional Water  
Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Well ID	Date	Total O&G (mg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TDS (mg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)
MW-1	12/12/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	85.83	---
MW-1	12/20/2002	---	<50 c	<50	<0.50	<0.50	<0.50	0.71	<0.50	<50	<2.0	<2.0	<2.0	---	---	---	---	85.60	---
MW-1	03/31/2003	---	75 c	<50	<0.50	<0.50	<0.50	<1.0	<5.0	---	---	---	---	---	---	---	342.10	77.36	264.74
MW-1	06/26/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	72.48	269.62
MW-1	09/15/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	79.03	263.07
MW-1	12/31/2003	---	<50 c	<50	<0.50	0.99	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	70.57	271.53
MW-1	03/08/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	65.95	276.15
MW-1	06/16/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	66.50	275.60
MW-1	04/14/2005	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	55.97	286.13
MW-1	10/20/2005	---	330 k/190 k	<50	0.86	<0.50	<0.50	1.2	0.87	<5.0	<2.0	<2.0	<2.0	---	---	---	342.10	56.51	285.59
MW-1	02/27/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	342.10	45.93	296.17
MW-1	04/19/2006	---	<47.2	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	342.10	43.15	298.95
MW-1	07/12/2006	---	53.1	<50.0	<0.500	<0.500	<0.500	<1.5	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	342.10	44.80	297.30
MW-1	10/06/2006	---	76 a	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	342.10	44.65	297.45
MW-1	01/19/2007	---	71	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	---	---	---	342.10	39.39	302.71
MW-1	04/03/2007	---	150 a	51 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	36.12	305.98
MW-1	07/06/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	44.15	297.95
MW-1	10/25/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	40.39	301.71
MW-1	01/10/2008	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	36.57	305.53
MW-1	04/17/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	36.51	305.59
MW-1	07/02/2008	---	84 a	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	41.90	300.20
MW-1	10/14/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	666	342.10	48.71	293.39
MW-1	01/05/2009	---	300 a	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	45.40	296.70
MW-1	04/14/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	342.10	42.92	299.18
MW-1	10/06/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	342.10	60.70	281.40
MW-1	04/02/2010	---	<50	<50	<0.50	<1.0	<1.0	<1.0	1.1	<10	---	---	---	---	---	---	342.10	54.91	287.19
MW-1	10/13/2010	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	342.10	59.77	282.33
MW-1	04/26/2011	---	<47	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	342.10	51.34	290.76
MW-1	07/07/2011	---	97 k	<50	0.94	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	342.10	53.35	288.75
MW-1	10/03/2011	---	130	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	342.10	65.35	276.75
MW-1A	02/23/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.72	46.95	294.77
MW-1A	02/27/2006	---	55.9	<50.0	4.04	<0.500	<0.500	2.02	3.32	12.5	<0.500	<0.500	<0.500	---	---	---	341.72	45.56	296.16
MW-1A	04/19/2006	---	119	<50.0	1.05	0.990	<0.500	<0.500	1.41	<10.0	<0.500	<0.500	<0.500	---	---	---	341.72	42.78	298.94
MW-1A	07/12/2006	<5.21	79.6	<50.0	<0.500	<0.500	<0.500	<1.5	9.82	19.1	<0.500	<0.500	<0.500	---	---	---	341.72	44.41	297.31
MW-1A	10/06/2006	3.7	90 a	<50.0	<1.00	<1.00	<1.00	<3.00	7.27	<10.0	<1.00	<1.00	<1.00	---	---	---	341.72	44.22	297.50
MW-1A	01/19/2007	<2.4	64	<50	<0.50	<0.50	<0.50	<0.50	15	24	<0.50	<0.50	<0.50	---	---	---	341.72	38.94	302.78

TABLE 3

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>Total O&amp;G (mg/L)</i>	<i>TPHd (µg/L)</i>	<i>TPHg (µg/L)</i>	<i>B (µg/L)</i>	<i>T (µg/L)</i>	<i>E (µg/L)</i>	<i>X (µg/L)</i>	<i>MTBE (µg/L)</i>	<i>TBA (µg/L)</i>	<i>DIPE (µg/L)</i>	<i>ETBE (µg/L)</i>	<i>TAME (µg/L)</i>	<i>1,2-DCA (µg/L)</i>	<i>EDB (µg/L)</i>	<i>TDS (mg/L)</i>	<i>TOC (ft MSL)</i>	<i>Depth to Water (ft TOC)</i>	<i>GW Elevation (ft MSL)</i>
MW-1A	04/03/2007	2.3	210	<50 i	0.74	<1.0	<1.0	<1.0	14	<10	<2.0	<2.0	<2.0	---	---	---	341.72	35.67	306.05
MW-1A	07/06/2007	1.3	68	<50 i	0.76	<1.0	<1.0	<1.0	38	63	<2.0	<2.0	<2.0	---	---	---	341.72	43.72	298.00
MW-1A	10/25/2007	<1.0	<50	<50 i	<0.50	<1.0	<1.0	<1.0	30	29	<2.0	<2.0	<2.0	---	---	---	341.72	39.89	301.83
MW-1A	01/10/2008	<1.0	100 a	<50 i	<0.50	<1.0	<1.0	<1.0	23	<10	<2.0	<2.0	<2.0	---	---	---	341.72	36.06	305.66
MW-1A	04/17/2008	<1.0	<50	<50 i	<0.50	<1.0	<1.0	<1.0	38	24	<2.0	<2.0	<2.0	---	---	---	341.72	36.13	305.59
MW-1A	07/02/2008	3.0	200 a	110	<0.50	<1.0	<1.0	<1.0	65	75	<2.0	<2.0	<2.0	<0.50	<1.0	---	341.72	41.28	300.44
MW-1A	10/14/2008	2.6	<50	440	<0.50	<1.0	<1.0	<1.0	210	300	<2.0	<2.0	<2.0	1.5	<1.0	1,000	341.72	48.16	293.56
MW-1A	01/05/2009	1.5	<50	430	<0.50	<1.0	<1.0	<1.0	290	710	<2.0	<2.0	<2.0	2.3	<1.0	---	341.72	44.85	296.87
MW-1A	04/14/2009	2.4	<50	180	<1.0	<2.0	<2.0	<2.0	80	120	<4.0	<4.0	<4.0	<1.0	<2.0	---	341.72	42.40	299.32
MW-1A	10/06/2009	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.72	57.10	284.62
MW-1A	04/02/2010	---	<50	94	<0.50	<1.0	<1.0	<1.0	65	<10	---	---	---	---	---	---	341.72	54.55	287.17
MW-1A	10/13/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.72	56.94	284.78
MW-1A	04/26/2011	<5.0	<47	<50	<0.50	<0.50	<0.50	<1.0	11	<10	---	---	---	---	---	---	341.72	50.98	290.74
MW-1A	07/07/2011	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.72	52.81	288.91
MW-1A	07/08/2011	<5.0	<47	58 k	0.65	1.9	<0.50	2.2	63	<10	---	---	---	---	---	---	341.72	---	---
<b>MW-1A</b>	<b>10/03/2011</b>	<b>Insufficient water</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>341.72</b>	<b>56.87</b>	<b>284.85</b>
MW-2	12/12/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	85.15	---
MW-2	12/20/2002	---	<50 c	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<50	<2.0	<2.0	<2.0	---	---	---	---	85.00	---
MW-2	03/31/2003	---	63 c	<50	<0.50	0.71	<0.50	<1.0	<5.0	---	---	---	---	---	---	---	341.57	76.63	264.94
MW-2	06/26/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	71.94	269.63
MW-2	09/15/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	78.41	263.16
MW-2	12/31/2003	---	120 a,c	<50	<0.50	1.3	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	69.96	271.61
MW-2	03/08/2004	---	110 a,c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	65.34	276.23
MW-2	06/16/2004	---	90 a,c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	65.86	275.71
MW-2	04/14/2005	---	77 a,c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	55.35	286.22
MW-2	10/20/2005	---	75 a/<50	<50	<0.50	<0.50	<0.50	<1.0	0.54	<5.0	<2.0	<2.0	<2.0	---	---	---	341.57	55.89	285.68
MW-2	02/27/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	45.30	296.27
MW-2	04/19/2006	---	80.1	<50.0	<0.500	<0.500	<0.500	<0.500	0.630	<10.0	<0.500	<0.500	<0.500	---	---	---	341.57	42.56	299.01
MW-2	07/12/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	44.20	297.37
MW-2	10/06/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	44.07	297.50
MW-2	01/19/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	38.79	302.78
MW-2	04/03/2007	---	190	<50 i	<0.50	<1.0	<1.0	<1.0	0.77 j	<10	<2.0	<2.0	<2.0	---	---	---	341.57	35.54	306.03
MW-2	07/06/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	43.54	298.03
MW-2	10/25/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	39.77	301.80
MW-2	01/10/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	35.95	305.62
MW-2	04/17/2008	---	57	<50	<0.50	<1.0	<1.0	<1.0	1.2	<10	<2.0	<2.0	<2.0	---	---	---	341.57	35.90	305.67

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>Total O&amp;G (mg/L)</i>	<i>TPHd (µg/L)</i>	<i>TPHg (µg/L)</i>	<i>B (µg/L)</i>	<i>T (µg/L)</i>	<i>E (µg/L)</i>	<i>X (µg/L)</i>	<i>MTBE (µg/L)</i>	<i>TBA (µg/L)</i>	<i>DIPE (µg/L)</i>	<i>ETBE (µg/L)</i>	<i>TAME (µg/L)</i>	<i>1,2-DCA (µg/L)</i>	<i>EDB (µg/L)</i>	<i>TDS (mg/L)</i>	<i>TOC (ft MSL)</i>	<i>Depth to Water (ft TOC)</i>	<i>GW Elevation (ft MSL)</i>
MW-2	07/02/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	41.20	300.37
MW-2	10/14/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	48.03	293.54
MW-2	01/05/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	44.67	296.90
MW-2	04/14/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	1.0	<10	<2.0	<2.0	<2.0	---	---	---	341.57	42.25	299.32
MW-2	10/06/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	59.94	281.63
MW-2	04/02/2010	---	67	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	341.57	54.31	287.26
MW-2	10/13/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.57	59.15	282.42
MW-2	04/26/2011	---	75 k	<50	<0.50	<0.50	<0.50	<1.0	1.0	<10	---	---	---	---	---	---	341.57	50.91	290.66
MW-2	07/07/2011	---	230 k	<50	3.9	4.8	<0.50	3.6	5.5	15	---	---	---	---	---	---	341.57	52.90	288.67
<b>MW-2</b>	<b>10/03/2011</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>341.57</b>	<b>64.98</b>	<b>276.59</b>
MW-3	12/12/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	85.49	---
MW-3	12/20/2002	---	<50 c	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<50	<2.0	<2.0	<2.0	---	---	---	---	85.25	---
MW-3	03/31/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<5.0	---	---	---	---	---	---	---	341.65	76.81	264.84
MW-3	06/26/2003	---	80 a,c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	72.05	269.60
MW-3	09/15/2003	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	78.52	263.13
MW-3	12/31/2003	---	<50 c	<50	<0.50	1.2	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	70.15	271.50
MW-3	03/08/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	65.46	276.19
MW-3	06/16/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	65.87	275.78
MW-3	04/14/2005	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	55.50	286.15
MW-3	10/20/2005	---	55 a/<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	341.65	55.97	285.68
MW-3	02/27/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	45.45	296.20
MW-3	04/19/2006	---	200	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	20.2	<0.500	<0.500	<0.500	---	---	---	341.65	42.67	298.98
MW-3	07/12/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	44.32	297.33
MW-3	10/06/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	44.19	297.46
MW-3	01/19/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	38.98	302.67
MW-3	04/03/2007	---	140	<50 i	0.21 j	<1.0	<1.0	<1.0	0.29 j	<10	<2.0	<2.0	<2.0	---	---	---	341.65	35.72	305.93
MW-3	07/06/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	43.69	297.96
MW-3	10/25/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	39.90	301.75
MW-3	01/10/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	36.12	305.53
MW-3	04/17/2008	---	95	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	341.65	36.02	305.63
MW-3	07/02/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	41.35	300.30
MW-3	10/14/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	48.24	293.41
MW-3	01/05/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	44.79	296.86
MW-3	04/14/2009	---	73	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	341.65	42.35	299.30
MW-3	10/06/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	60.08	281.57
MW-3	04/02/2010	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	341.65	54.47	287.18

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>Total O&amp;G (mg/L)</i>	<i>TPHd (µg/L)</i>	<i>TPHg (µg/L)</i>	<i>B (µg/L)</i>	<i>T (µg/L)</i>	<i>E (µg/L)</i>	<i>X (µg/L)</i>	<i>MTBE (µg/L)</i>	<i>TBA (µg/L)</i>	<i>DIPE (µg/L)</i>	<i>ETBE (µg/L)</i>	<i>TAME (µg/L)</i>	<i>1,2-DCA (µg/L)</i>	<i>EDB (µg/L)</i>	<i>TDS (mg/L)</i>	<i>TOC (ft MSL)</i>	<i>Depth to Water (ft TOC)</i>	<i>GW Elevation (ft MSL)</i>
MW-3	10/13/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341.65	59.25	282.40
MW-3	04/26/2011	---	91 k	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	341.65	51.23	290.42
MW-3	07/07/2011	---	130 k	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	341.65	52.94	288.71
<b>MW-3</b>	<b>10/03/2011</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>341.65</b>	<b>64.90</b>	<b>276.75</b>
MW-4	12/12/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	84.36	---
MW-4	12/20/2002	---	69 c	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<50	<2.0	<2.0	<2.0	---	---	---	---	84.15	---
MW-4	03/31/2003	---	70 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	---	---	---	---	---	340.68	75.90	264.78
MW-4	06/26/2003	---	86 a,c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	71.01	269.67
MW-4	09/15/2003	---	120 a,c	<50	1.0	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	77.57	263.11
MW-4	12/31/2003	---	<50 c	<50	<0.50	0.64	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	69.15	271.53
MW-4	03/08/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	64.51	276.17
MW-4	06/16/2004	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	65.04	275.64
MW-4	04/14/2005	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	54.53	286.15
MW-4	10/20/2005	---	<50 c	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	---	340.68	55.05	285.63
MW-4	02/27/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.68	44.49	296.19
MW-4	04/19/2006	---	265	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.68	41.72	298.96
MW-4	07/12/2006	---	652	<50.0	<0.500	<0.500	<0.500	<1.5	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.68	43.34	297.34
MW-4	10/06/2006	---	320 a	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.68	43.23	297.45
MW-4	01/19/2007	---	79	<50	<0.50	<0.50	<0.50	0.88	<0.50	<20	<0.50	<0.50	<0.50	---	---	---	340.68	38.12	302.56
MW-4	04/03/2007	---	1,200 a	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	34.55	306.13
MW-4	07/06/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	42.75	297.93
MW-4	10/25/2007	---	1,400 a	<50 i	<0.50	0.30 j	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	38.92	301.76
MW-4	01/10/2008	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	35.22	305.46
MW-4	04/17/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	35.03	305.65
MW-4	07/02/2008	---	59 a	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	40.53	300.15
MW-4	10/14/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	686	340.68	47.43	293.25
MW-4	01/05/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	44.00	296.68
MW-4	04/14/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.68	41.43	299.25
MW-4	10/06/2009	---	72 a	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	340.68	59.10	281.58
MW-4	04/02/2010	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	340.68	53.57	287.11
MW-4	10/13/2010	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	---	---	---	---	---	---	340.68	58.30	282.38
MW-4	04/26/2011	---	71	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	340.68	50.02	290.66
MW-4	07/07/2011	---	88 k	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	340.68	51.89	288.79
<b>MW-4</b>	<b>10/03/2011</b>	---	<b>91</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;10</b>	---	---	---	---	---	---	<b>340.68</b>	<b>63.85</b>	<b>276.83</b>
MW-4A	02/23/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.77	46.55	294.22

TABLE 3

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Well ID	Date	Total O&G (mg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TDS (mg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)
MW-4A	02/27/2006	---	246	3,280	232	135	27.2	306	10.2	<10.0	<0.500	<0.500	<0.500	---	---	---	340.77	44.61	296.16
MW-4A	04/19/2006	---	967	15,000	2,620	1,280	518	1,460	34.9	<10.0	<0.500	<0.500	<0.500	---	---	---	340.77	41.82	298.95
MW-4A	07/12/2006	---	<47.2	25,900	3,720	749	728	1,770	37.6	32.2	<0.500	<0.500	<0.500	---	---	---	340.77	43.48	297.29
MW-4A	10/06/2006	---	560 a	4,340	573	14.9	193	132	16.4	<10.0	<1.00	<1.00	<1.00	---	---	---	340.77	43.42	297.35
MW-4A	01/19/2007	---	420	3,700	1,300 e,f,g	150	350	400	40	<100	<2.5	<2.5	<2.5	---	---	---	340.77	38.03	302.74
MW-4A	04/03/2007	---	1,200	2,200 i	240	5.0	240	9.4	41	44	<2.0	<2.0	<2.0	---	---	---	340.77	34.78	305.99
MW-4A	07/06/2007	---	290	1,300 i	130	6.5	130	40.7	29	72	<2.0	<2.0	<2.0	---	---	---	340.77	42.91	297.86
MW-4A	10/25/2007	---	220 a	400 i	3.8	0.50 j	3.7	1.37 j	34	200	<2.0	<2.0	<2.0	---	---	---	340.77	39.12	301.65
MW-4A	01/10/2008	---	150 a	200 i	8.8	0.75 j	2.4	0.37 j	40	310	<2.0	<2.0	<2.0	---	---	---	340.77	35.20	305.57
MW-4A	04/17/2008	---	150 a	400 i	31	3.4	5.6	1.9	60	220	<2.0	<2.0	<2.0	---	---	---	340.77	35.21	305.56
MW-4A	07/02/2008	---	110 a	570	5.1	<1.0	<1.0	<1.0	120	640	<2.0	<2.0	<2.0	7.6	<1.0	---	340.77	40.48	300.29
MW-4A	10/14/2008	---	<50	70	<0.50	<1.0	<1.0	<1.0	6.4	14	<2.0	<2.0	<2.0	<0.50	<1.0	814	340.77	47.50	293.27
MW-4A	01/05/2009	---	93 a	660	1.5	<1.0	<1.0	<1.0	250	1,300	<2.0	<2.0	<2.0	4.7	<1.0	---	340.77	44.04	296.73
MW-4A	04/14/2009	---	<50	1,900	91	30	61	130	200	1,200	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.77	41.55	299.22
MW-4A	06/17/2009	---	<50	170	<0.50	<1.0	<1.0	<1.0	88	470	<2.0	<2.0	<2.0	2.6	<1.0	---	340.77	46.62	294.15
MW-4A	10/06/2009	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.77	54.41	286.36
MW-4A	04/02/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.77	53.65	287.12
MW-4A	10/13/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.77	54.35	286.42
MW-4A	04/26/2011	---	130 k	670	42	<0.50	<0.50	<1.0	11	51	---	---	---	---	---	---	340.77	50.12	290.65
MW-4A	07/07/2011	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.77	52.02	288.75
MW-4A	07/08/2011	---	340	350	1.4	<0.50	<0.50	<1.0	27	200	---	---	---	---	---	---	340.77	---	---
<b>MW-4A</b>	<b>10/03/2011</b>	<b>Insufficient water</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>340.77</b>	<b>54.34</b>	<b>286.43</b>
MW-5	02/23/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.86	45.10	295.76
MW-5	02/27/2006	---	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.86	44.69	296.17
MW-5	04/19/2006	---	<47.2	<50.0	0.810	0.810	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.86	41.95	298.91
MW-5	07/12/2006	---	71.6	<50.0	<0.500	<0.500	<0.500	<1.5	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	---	340.86	43.44	297.42
MW-5	10/06/2006	---	260 a	<50.0	<1.00	<1.00	<1.00	<3.00	<1.00	<10.0	<1.00	<1.00	<1.00	---	---	---	340.86	43.46	297.40
MW-5	01/19/2007	---	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	---	---	---	340.86	38.09	302.77
MW-5	04/03/2007	---	120 a	<50 i	<0.50	<1.0	<1.0	<1.0	0.34 j	<10	<2.0	<2.0	<2.0	---	---	---	340.86	34.91	305.95
MW-5	07/06/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	1.3	<10	<2.0	<2.0	<2.0	---	---	---	340.86	42.95	297.91
MW-5	10/25/2007	---	<50	<50 i	<0.50	0.34 j	<1.0	<1.0	1.7	<10	<2.0	<2.0	<2.0	---	---	---	340.86	39.16	301.70
MW-5	01/10/2008	---	82	<50 i	<0.50	<1.0	<1.0	<1.0	1.1	<10	<2.0	<2.0	<2.0	---	---	---	340.86	35.30	305.56
MW-5	04/17/2008	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.86	35.42	305.44
MW-5	07/02/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	3.2	<10	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.86	40.66	300.20
MW-5	10/14/2008	---	<50	59	<0.50	<1.0	<1.0	<1.0	22	<10	<2.0	<2.0	<2.0	<0.50	<1.0	963	340.86	47.60	293.26
MW-5	01/05/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.86	44.16	296.70

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Well ID	Date	Total O&G (mg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TDS (mg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)
MW-5	04/14/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.86	41.73	299.13
MW-5	10/06/2009	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.86	54.21	286.65
MW-5	04/02/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.86	53.68	287.18
MW-5	10/13/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.86	54.02	286.84
MW-5	04/26/2011	---	<48	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	340.86	50.18	290.68
MW-5	07/07/2011	---	61 k	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	340.86	52.11	288.75
<b>MW-5</b>	<b>10/03/2011</b>	<b>Insufficient water</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>340.86</b>	<b>54.05</b>	<b>286.81</b>
MW-6	09/12/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42.20	---
MW-6	09/19/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	2.5	<10	---	---	---	---	---	---	---	41.85	---
MW-6	10/25/2007	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	<1.0	<10	<2.0	<2.0	<2.0	---	---	---	340.34	38.63	301.71
MW-6	01/10/2008	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	0.86 j	<10	<2.0	<2.0	<2.0	---	---	---	340.34	35.29	305.05
MW-6	04/17/2008	---	<50	<50 i	<0.50	<1.0	<1.0	<1.0	1.8	<10	<2.0	<2.0	<2.0	---	---	---	340.34	34.95	305.39
MW-6	07/02/2008	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.34	---	---
MW-6	10/14/2008	---	<50	<50	<0.50	<1.0	<1.0	<1.0	12	<10	<2.0	<2.0	<2.0	<0.50	<1.0	903	340.34	47.21	293.13
MW-6	01/05/2009	---	<50	<50	<0.50	<1.0	<1.0	<1.0	15	<10	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.34	43.86	296.48
MW-6	04/14/2009	---	<50	81	<0.50	<1.0	<1.0	<1.0	25	13	<2.0	<2.0	<2.0	<0.50	<1.0	---	340.34	41.30	299.04
MW-6	10/06/2009	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.34	54.16	286.18
MW-6	04/02/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.34	53.65	286.69
MW-6	10/13/2010	Insufficient water	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.34	54.12	286.22
MW-6	04/26/2011	---	<47	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	---	---	---	---	---	---	340.34	49.78	290.56
MW-6	07/07/2011	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340.34	51.74	288.60
MW-6	07/08/2011	---	93 k	<50	1.2	2.2	<0.50	1.8	<1.0	<10	---	---	---	---	---	---	340.34	---	---
<b>MW-6</b>	<b>10/03/2011</b>	<b>Well dry</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>340.34</b>	---	---

Notes:

Total O&amp;G = Total oil and grease analyzed by EPA Method 1664A

TPHd = Total petroleum hydrocarbons as diesel analyzed by modified EPA Method 8015 with silica gel cleanup unless otherwise noted

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B, unless otherwise noted

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

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

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

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

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B

EDB = 1,2-Dibromoethane, analyzed by EPA Method 8260B

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Well ID	Date	Total															Depth to Water (ft TOC)	GW Elevation (ft MSL)
		O&G (mg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TDS (mg/L)		

TDS = Total dissolved solids

TOC = Top of casing elevation, in feet relative to mean sea level

GW = Groundwater

µg/L = Micrograms per liter

mg/L = Milligrams per liter

ft = Feet

MSL = Mean sea level

<x = Not detected at reporting limit x

--- = Not analyzed or not available

n/n = TPHd/TPHd w/silica gel clean-up

a = Hydrocarbon does not match pattern of laboratory's standard.

c = Analysis without silica gel clean-up.

e = Initial analysis within holding time. Reanalysis for the required dilution or confirmation was past holding time.

f = The sample, as received, was not preserved in accordance to the referenced analytical method (pH = 7).

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

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

k = Hydrocarbon result partly due to individual peak(s) in quantitation range.

Site wells surveyed January 14, 2003 by Mid Coast Engineers.

February 23, 2006 survey data for wells MW-1A, MW-4A, and MW-5 provided by Delta Environmental.

October 5, 2007 survey data for well MW-6 provided by Delta Environmental.



**HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>TPHd (µg/L)</i>	<i>TPHg (µg/L)</i>	<i>B (µg/L)</i>	<i>T (µg/L)</i>	<i>E (µg/L)</i>	<i>X (µg/L)</i>	<i>MTBE (µg/L)</i>	<i>TBA (µg/L)</i>	<i>DIPE (µg/L)</i>	<i>ETBE (µg/L)</i>	<i>TAME (µg/L)</i>	<i>1,2-DCA (µg/L)</i>	<i>EDB (µg/L)</i>
B-1	2/13/2006	<50	<50	<0.50	0.83	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	<0.50	<0.50
B-4	2/15/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>12</b>	<5.0	<0.50	<0.50	<0.50	<b>3.9</b>	<0.50
<i>Groundwater (≤10 fbg) ESL <sup>a</sup>:</i>		100	100	1.0	40	30	20	5.0	12	NA	NA	NA	0.50	0.050

Notes:

TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015M

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

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

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

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

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B

EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B

µg/L = Micrograms per liter

&lt;x = Not detected at reporting limit x

ESL = Environmental screening level

NA = No applicable ESL

Results in **bold** equal or exceed applicable ESL

a = San Francisco Bay Regional Water Quality Control Board ESL for groundwater where groundwater is a source of drinking water (Tables A and C of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 5

**GROUNDWATER MONITORING WELL CONSTRUCTION DATA  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Well</i>	<i>Date Installed</i>	<i>Depth (feet)</i>	<i>Screened Interval (feet)</i>	<i>Sand Pack Interval (feet)</i>	<i>TOC (ft MSL)</i>
MW-1	10/15/2002	92	77 to 92	75 to 92	342.10
MW-1A	2/15/2006	57	47 to 57	45 to 57	341.72
MW-2	10/14/2002	93.5	78 to 93	76 to 93.5	341.57
MW-3	10/11/2002	97	82 to 97	80 to 97	341.65
MW-4	10/9/2002	95	80 to 95	78 to 95	340.68
MW-4A	2/16/2006	55	45 to 55	43 to 55	340.77
MW-5	2/14/2006	55	45 to 55	43 to 55	340.86
MW-6	8/14/2007	55	40 to 55	38 to 55	340.34

Notes:

TOC = Top of casing elevation

ft MSL = Elevation in feet relative to mean sea level

**HISTORICAL VERTICAL GROUNDWATER FLOW DIRECTIONS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

<i>Date</i>	<i>Groundwater Elevation (ft MSL)</i>	<i>Groundwater Elevation (ft MSL)</i>	<i>Vertical Gradient</i>	<i>Direction</i>
<i>MW-1 Well Cluster</i>				
	<u>MW-1A</u>	<u>MW-1</u>		
2/27/2006	296.16	296.17	0.0003	Up
4/19/2006	298.94	298.95	0.0003	Up
7/12/2006	297.31	297.3	-0.0003	Down
10/6/2006	297.5	297.45	-0.001	Down
1/19/2007	302.78	302.71	-0.002	Down
4/3/2007	306.05	305.98	-0.002	Down
7/6/2007	298.00	297.95	-0.001	Down
10/25/2007	301.83	301.71	-0.003	Down
1/10/2008	305.66	305.53	-0.004	Down
4/17/2008	305.59	305.59	0.000	Even
7/2/2008	300.44	300.2	-0.007	Down
10/14/2008	293.56	293.39	-0.005	Down
1/5/2009	296.87	296.7	-0.005	Down
4/14/2009	299.32	299.18	-0.004	Down
10/6/2009	284.62 a	281.4	NA	NA
4/2/2010	287.17	287.19	0.001	Up
10/13/2010	284.78 a	282.33	NA	NA
4/26/2011	290.74	290.76	0.001	Up
7/7/2011	288.91	288.75	-0.005	Down
10/3/2011	284.85 a	276.75	NA	NA
<i>MW-4 Well Cluster</i>				
	<u>MW-4A</u>	<u>MW-4</u>		
2/27/2006	296.16	296.19	0.001	Up
4/19/2006	298.95	298.96	0.0002	Up
7/12/2006	297.29	297.34	0.001	Up
10/6/2006	297.35	297.45	0.002	Up
1/19/2007	302.74	302.56	-0.005	Down
4/3/2007	305.99	306.13	0.003	Up
7/6/2007	297.86	297.93	0.002	Up
10/25/2007	301.65	301.76	0.003	Up
1/10/2008	305.57	305.46	-0.003	Down
4/17/2008	305.56	305.65	0.002	Up
7/2/2008	300.29	300.15	-0.004	Down
10/14/2008	293.27	293.25	-0.0005	Down
1/5/2009	296.73	296.68	-0.001	Down
4/14/2009	299.22	299.25	0.001	Up
6/17/2009	294.15	NA	NA	NA
10/6/2009	286.36 a	281.58	NA	NA
4/2/2010	287.12	287.11	-0.0002	Down
10/13/2010	286.42 a	282.38	NA	NA
4/26/2011	290.65	290.66	0.0003	Up
7/7/2011	288.75	288.79	0.001	Up
10/3/2011	286.43 a	276.83	NA	NA

**HISTORICAL VERTICAL GROUNDWATER FLOW DIRECTIONS  
SHELL-BRANDED SERVICE STATION  
1801 SANTA RITA ROAD, PLEASANTON, CALIFORNIA**

Notes:

GW El = Groundwater elevation

TD = total depth

Vertical gradient = (GW El deeper well - GW El shallow well) / (TD deeper well - TD shallow well)

ft MSL = Elevation in feet relative to mean sea level

NA = Not available

a = Measured depth to water less than 1 foot from total depth of the well, likely not representative of static groundwater elevation

APPENDIX A

SITE HISTORY

## SITE HISTORY

**2002 Subsurface Investigation:** In October 2002, KHM Environmental Management, Inc. (KHM) installed four groundwater monitoring wells (MW-1 through MW-4) as part of Shell Oil Products US's Groundwater Assessment Program (GRASP). Soil samples from the wells contained up to 420 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg), 2.0 mg/kg benzene, 3.7 mg/kg toluene, 5.1 mg/kg ethylbenzene, and 31 mg/kg xylenes. No methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), or tertiary-amyl methyl ether (TAME) was detected in the soil samples. Based on these concentrations, Shell submitted an Underground Storage Tank Unauthorized Release (Leak)/Site Contamination Report (Unauthorized Release Report) on October 31, 2002. Delta Consultants' (Delta's) February 14, 2003 *Site Assessment Report* provides details of the GRASP investigation.

**2002 Upgrades:** In November 2002, Armer-Norman & Associates, Inc. upgraded the station fuel system. KHM collected soil samples from beneath four dispensers and seven soil samples from the piping trenches. The soil samples contained up to 21.6 mg/kg lead. No TPHg, benzene, toluene, ethylbenzene, and total xylenes (BTEX), MTBE, DIPE, ETBE, TAME, or TBA was detected in the soil samples. Approximately 150 cubic yards of soil were excavated during the upgrade activities for off-site disposal. KHM's November 20, 2002 *Soil Sampling Report* provides details of this soil sampling event.

**2005 Hoist Replacement:** In April 2005, Able Maintenance Inc. replaced a below-ground hydraulic hoist. Delta collected one soil sample from beneath the hoist. The soil sample contained 11,000 mg/kg oil and grease, 18,000 mg/kg total petroleum hydrocarbons as diesel (TPHd), 0.98 mg/kg cadmium, 23 mg/kg chromium, 17 mg/kg lead, 36 mg/kg nickel, and 40 mg/kg zinc. No TPHg or BTEX was detected in the soil sample. Based on these concentrations, Shell submitted an Unauthorized Release Report on May 5, 2005. Delta's September 30, 2005 *Soil Sampling Report* details this investigation.

**2006 Subsurface Investigation:** In February 2006, Delta installed three groundwater monitoring wells (MW-1A, MW-4A, and MW-5) and drilled three soil borings (B-1, B-2, and B-4) to further assess the extent of petroleum hydrocarbon impacts in soils and to assess the extent of petroleum hydrocarbon impacts in shallow groundwater. Soil samples from the well borings and soil borings contained up to 1.7 mg/kg TPHd, 5.6 mg/kg TPHg, 1.0 mg/kg benzene, 6.2 mg/kg toluene, 0.24 mg/kg ethylbenzene, 3.5 mg/kg xylenes, 0.01 mg/kg MTBE, 0.029 mg/kg TBA, and 8.5 mg/kg lead. No DIPE, ETBE, or TAME was detected in the soil samples. Grab groundwater samples

collected from borings B-1 and B-4 contained up to 0.83 micrograms per liter ( $\mu\text{g}/\text{L}$ ) toluene, 12  $\mu\text{g}/\text{L}$  MTBE, and 3.9  $\mu\text{g}/\text{L}$  1,2-dichloroethane. Delta's May 19, 2006 *Updated Site Conceptual Model* provides details of this investigation.

**2006 Well Survey:** In 2006, Delta field verified three drinking water supply wells within a ½-mile radius of the site. City of Pleasanton Well 6 is located approximately 1,530 feet south of the site. City of Pleasanton Wells 4 and 5 are located approximately 1,795 and 1,848 feet southeast of the site, respectively. According to information supplied by Zone 7 Water Agency, the depth to the top of the first well screen in Well 6 is 165 feet below grade (fbg), and the depth to the top of the first well screen in Well 5 is 149 fbg. Both wells are located cross-gradient from the site. In addition, two private wells located approximately 2,312 feet west of the site and 2,323 feet northwest of the site were field verified by Delta. Delta's May 19, 2006 *Updated Site Conceptual Model* provides details of the well survey.

**2007 Waste Oil UST Removal:** In February 2007, Wayne Perry, Inc. removed one 550-gallon single-wall fiberglass waste oil UST. Cambria Environmental Technology, Inc. collected one soil sample (WO-1-12) from the bottom of the UST excavation. The soil sample collected from the UST excavation contained 6.5 mg/kg TPHd, 0.19 mg/kg TPHg, 62 mg/kg chromium, 6.2 mg/kg lead, 91 mg/kg nickel, and 42 mg/kg zinc. Based on these concentrations, Shell submitted an Unauthorized Release Report on March 7, 2007. Conestoga-Rovers & Associates' April 30, 2007 *Underground Storage Tank Removal Report* provides details of the UST removal.

**2007 Subsurface Investigation:** In August 2007, Delta installed one groundwater monitoring well (MW-6) to further investigate the horizontal extent of shallow groundwater impacts. No TPHg, BTEX, MTBE, or TBA was detected in soil samples from the well boring. Delta's October 15, 2007 *Well Installation Report (MW-6)* provides investigation details.

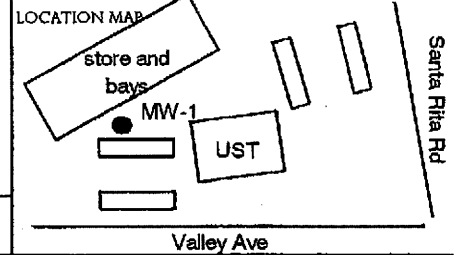
**Groundwater Monitoring:** Groundwater monitoring has been conducted at the site since December 2002. Depth to water in the shallow wells (MW-1A, MW-4A, MW-5, and MW-6) has ranged from 34.78 to 57.10 fbg. Groundwater levels were below the bottom of the shallow wells from the fourth quarter 2009 through the fourth quarter of 2010, with the exception of MW-1A in the second quarter of 2010. Depth to water in the deeper wells (MW-1 through MW-4) has ranged from 34.55 to 85.83 fbg.

APPENDIX B  
BORING LOGS





PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS BORING/WELL NO: MW-1  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasonton, CA PAGE 1 OF 5  
 DRILLER: Gregg DATE DRILLED: 10/15/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 92.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 92'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A



Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	ELEVATION		NORTHING		EASTING		LITHOLOGY / DESCRIPTION
Backfill	Casing					Depth (feet)	Sample Recovery Interval	Soil Type				
			damp									AF Asphalt ~3" thick Air knifed to 7' on 10/3/02
			damp			1						ML Gravelly SILT; medium to grey brown, 65% silt, 35% gravel ~2" diameter
			damp			2						CH Fat CLAY; dark grey, medium stiff
			damp			3						ML SILT; dark grey, trace gravel and cobbles
			damp	2.5		4						CL Lean CLAY; grey brown
			damp			5						
			damp			6						
			damp			7						
			damp	1.4	3	8						ML SILT; light olive brown, medium stiff
			damp		4	9						
			damp			10						
			damp	1.4	3	11						
			dry/damp		5	12						
			dry/damp		8	13						(trace of gravel 1/4" diameter)
			dry/damp			14						
			dry/damp			15						
			dry/damp	1.4	3	16						
			dry/damp		5	17						
			dry/damp		8	18						
			dry/damp			19						CL Lean CLAY; medium brown, medium stiff
			dry/damp	2.0	3	20						
			dry/damp		4	21						
			dry/damp		6	22						

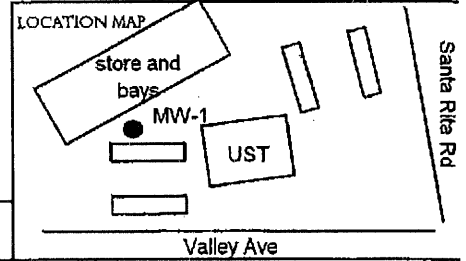
# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita  
 LOGGED BY: J. Pearson  
 DRILLER: Gregg  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 CASING TYPE: PVC  
 SLOT SIZE: 0.010"  
 GRAVEL PACK: 2-12

CLIENT: Shell OPUS  
 LOCATION: 1801 Santa Rita Rd, Pleasonton, CA  
 DATE DRILLED: 10/15/02  
 HOLE DIAMETER: 10"  
 HOLE DEPTH: 92.5'  
 WELL DIAMETER: 4"  
 WELL DEPTH: 92'  
 CASING STICKUP: N/A

BORING/WELL NO: MW-1  
 PAGE 2 OF 5



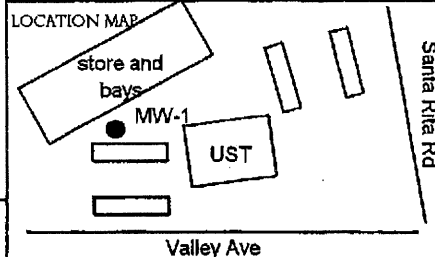
Well Completion		Static Water Level	ELEVATION			NORTHING		EASTING		LITHOLOGY / DESCRIPTION
Backfill	Casing		Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type		
Backfill	Casing		damp	6.2	4 7 9	23 24 25		CL	continued	
			damp	1523	4	28				
			damp	31.4	7	29		SP	Poorly Graded SAND; brown, fine-grained	
						30		CL	Lean CLAY; medium brown, stiff	
						31				
						32				
						33				
			damp	11.1	4 5 6	34				(trace olive mottling)
						35				
						36				
						37				
						38				
			damp	4.5	3 5 7	39				
						40				
						41				
						42				
						43				
			damp	5.9	3 5	44				

# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasonton, CA  
 DRILLER: Gregg DATE DRILLED: 10/15/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 92.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 92'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-1  
PAGE 3 OF 5



ELEVATION                      NORTHING                      EASTING

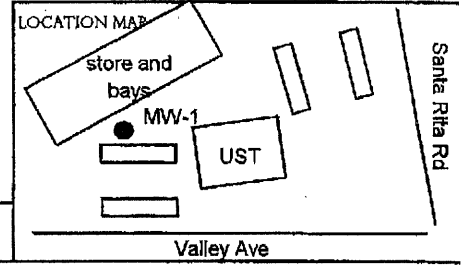
Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION		
Backfill	Casing										
Gravel	-	-	damp	2.9	6	45		CL	continued		
						46					
						47					
						48					
						49			(very stiff)		
						50					
						51					
						52					
						53					
						54					
			damp	-	-	3.9	4	54		SW-SC	Well Graded SAND with Clay; medium to grey brown, fine to medium grained sand, 10% clay, very dense
								55			
								56			
								57			
								58			
								59			(10% gravel)
								60			
								61			
								62			
								63			
			moist	-	-	3.3	21	64			(gravel up to 3/4" diameter)
								26			
								30			
								65			
			66								

# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/15/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 92.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 92'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

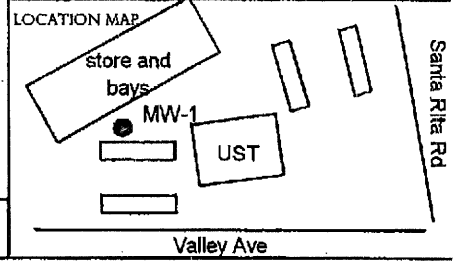
BORING/WELL NO: MW-1  
PAGE 4 OF 5



Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
						67		SW-SC	continued
			moist	1.9	24 36 39	68 69 70		SW-SC	(5% gravel 1/4-1/2")
			moist	3.0	22 50/5	71 72 73 74		SW-SC	(10% gravel)
			moist	2.3	28 22 24	75 76 77 78 79 80		SW	Well Graded SAND; 60% coarse grained sand, 10% gravel 1/4" diameter, trace of clay, dense
			moist	2.1	12 18 26	81 82 83 84 85			
		▽	wet			86 87 88			



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS BORING/WELL NO: MW-1  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasonton, CA PAGE 5 OF 5  
 DRILLER: Gregg DATE DRILLED: 10/15/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 92.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 92'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A



ELEVATION                      NORTHING                      EASTING

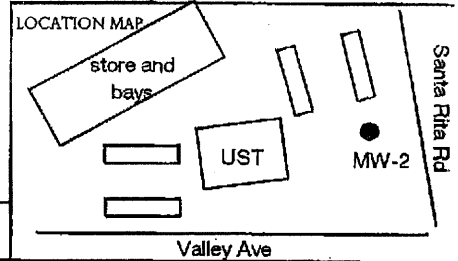
Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing						Recovery	Interval		
Sand			wet  damp		6	89			GP	<b>Poorly Graded GRAVEL with Sand;</b> medium to grey brown, 1/4" diameter gravel.
					10	90				
					13	91				
					9	92				
					14	93				
					19	94				
						95				
						96				
						97				
						98				
						99				
	100									
	101									
	102									
	103									
	104									
	105									
	106									
	107									
	108									
	109									
	110									

**BOTTOM OF BORING @ 92.5 ft**



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/14/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 93.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 93'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-2  
 PAGE 1 OF 5



ELEVATION	NORTHING	EASTING
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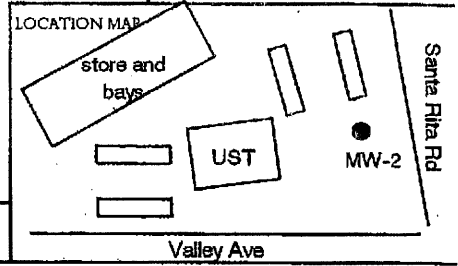
Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
									AF Asphalt ~6" thick (airknifed to 7 ft on 10/3/02)
						1			GC Gravelly CLAY; brown, fine to coarse gravel
						2			CL Lean CLAY with Gravel; ~35% gravel, 15-20% fine to coarse sand, medium plasticity
						3			( <5% sand, low plasticity)
						4			
						5			
						6			
						7			
						8			
						9			
						10		ML	SILT; medium to olive brown, medium stiff
						11			
						12			
						13			
						14			(clay content increasing with depth)
						15			
						16		CL	Lean CLAY; medium brown with trace olive mottling,
						17			
						18			
						19			(stiff)
						20			
						21			
						22			

# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/14/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 93.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 93'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-2  
PAGE 2 OF 5



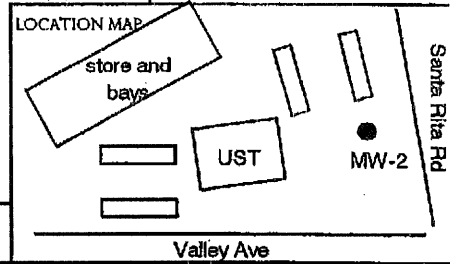
ELEVATION                      NORTHING                      EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION			
Backfill	Casing											
[Cross-hatched pattern]	[Vertical line pattern]		damp	2.2	3 4 5	23	[Shaded box]	CL	Continued			
						24						
						25						
						moist	4.3	2 4 6	26	[Shaded box]	SC	(4" layer of clayey sand)
									27			
									28			
									29			
									30			
									31			
						damp	2.5	3 3 6	32	[Shaded box]	CL	Lean CLAY; as above
									33			
									34			
35												
36												
37												
			moist	2.1	3 5 6	38	[Shaded box]		(medium brown)			
						39						
						40						
						41						
						42						
						43						
			damp	1.2	5 7	44	[Shaded box]					



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/14/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 93.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 93'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-2  
 PAGE 3 OF 5



ELEVATION NORTHING EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing						Recovery	Interval		
			damp	1.6	5	45			CL	Continued
						46				
						47				
						48				
						49				
						50				
						51				
						52				
						53				
						54				
						55				
						56				
						57				
						58				
						59				
						60				
						61				
						62				
						63				
						64				
						65				
						66				
			damp	1.9	14	54			SC	Clayey SAND; brown, 75% fine sand, 25% clay trace gravel (1/4" diameter), very dense
			damp	1.3	18	59			GP	Poorly Graded GRAVEL with Sand; grey, 65% gravel (1/4" diameter), 35% fine grained sand, very dense
			damp	2.2	13	64			SW	Well Graded SAND with Gravel; grey, dense





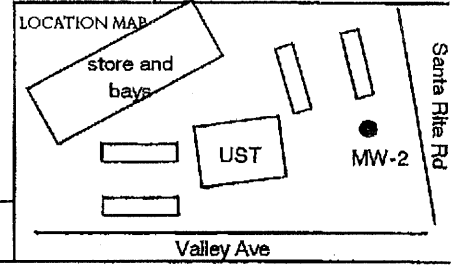
PROJECT NO: C81-1801 Santa Rita	CLIENT: Shell OPUS	BORING/WELL NO: MW-2
LOGGED BY: J. Pearson	LOCATION: 1801 Santa Rita Rd, Pleasonton, CA	PAGE 4 OF 5
DRILLER: Gregg	DATE DRILLED: 10/14/02	
DRILLING METHOD: HSA	HOLE DIAMETER: 10"	
SAMPLING METHOD: Split Spoon	HOLE DEPTH: 93.5'	
CASING TYPE: PVC	WELL DIAMETER: 4"	
SLOT SIZE: 0.010"	WELL DEPTH: 93'	
GRAVEL PACK: 2-12	CASING STICKUP: N/A	

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
			damp	2.6	15 21 37	67 68 69 70 71 72 73		SW	Continued
			damp	0.9	20 50 29	74 75			(trace FeO mottling)
			moist	0.8	18 30 33	79 80			(grades coarser, medium to coarse grained, 40% gravel up to 1" diameter, trace clay)
			moist/wet	0.6	18 31 34 22 31 34 45 50/3	84 85 86 87			(40% 1/4" diameter gravel)
									(decrease in gravel content to 25%)
								SP	Poorly Graded SAND; medium brown, fine grained
								SP	Poorly Graded SAND with Gravel, fine grained sand lens
					12	88			



**ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED**

PROJECT NO: C81-1801 Santa Rita	CLIENT: Shell OPUS	BORING/WELL NO: MW-2
LOGGED BY: J. Pearson	LOCATION: 1801 Santa Rita Rd, Pleasanton, CA	PAGE 5 OF 5
DRILLER: Gregg	DATE DRILLED: 10/14/02	
DRILLING METHOD: HSA	HOLE DIAMETER: 10"	
SAMPLING METHOD: Split Spoon	HOLE DEPTH: 93.5'	
CASING TYPE: PVC	WELL DIAMETER: 4"	
SLOT SIZE: 0.010"	WELL DEPTH: 93'	
GRAVEL PACK: 2-12	CASING STICKUP: N/A	

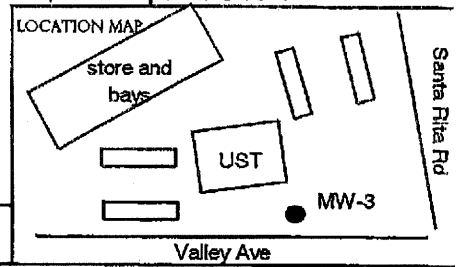


ELEVATION	NORTHING	EASTING
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Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION	
Backfill	Casing									
			wet		13	89		SP	continued, (coarse grained)	
					15			CL	Lean CLAY; medium brown	
					9	90				(occasional FeO <sub>3</sub> and greyish white mottling)
					11					
					16	91				
				wet	10					
					14	92				(olive green)
					19					
							93			
							94			<b>BOTTOM OF BORING @ 93.5 ft</b>
							95			
					96					
					97					
					98					
					99					
					100					
					101					
					102					
					103					
					104					
					105					
					106					
					107					
					108					
					109					
					110					



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS BORING/WELL NO: MW-3  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA PAGE 1 OF 5  
 DRILLER: Gregg DATE DRILLED: 10/11/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 97.5'  
 CASING TYPE: PVC WELL DIAMETER: 4'  
 SLOT SIZE: 0.010" WELL DEPTH: 97'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A



ELEVATION                      NORTHING                      EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
			moist			1		AF	Asphalt ~6" thick (airknifed to 7 ft on 10/3/02) Fill ~5" thick
						2		CL	Lean CLAY with Gravel; tan brown, 25% gravel 1/4-1/2" diameter, low plasticity
						3			(dark grey, fine to coarse sand, gravel 1/8"-1/4" diameter)
						4			
						5			(15% sand and gravel)
						6			
						7			
						8			
			damp	3.9	3	9		SP	Poorly Graded SAND; medium brown, 85% fine grained sand, 10% fines
					3	10			
					4	10		CL	Lean CLAY with Sand; orange brown, moderate plasticity
						11			
						12			
						13			
			damp	1.9	4	14			(stiff)
					4	15			
					5	15			
						16			
						17			
						18			
			damp	4.7	4	19			
					6	20			
					9	20			
						21			
						22			

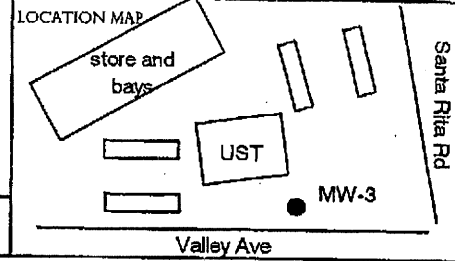
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# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/11/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 97.5'  
 CASING TYPE: PVC WELL DIAMETER: 4'  
 SLOT SIZE: 0.010' WELL DEPTH: 97'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-3  
PAGE 2 OF 5

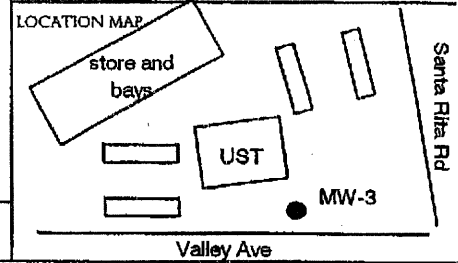


ELEVATION NORTHING EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
			moist	3.9	3 4 5	23 24 25	CL	Continued	
			damp	3.0	5 5 8	29 30	SP CL	Poorly Graded SAND; medium brown, fine grained Lean CLAY; medium brown	
			damp	2.6	2 6 6	34 35		(stiff)	
			damp	3.6	4 5 8	39 40			
				1.9	4 6	44		(medium brown with FeO mottling)	



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA BORING/WELL NO: MW-3  
 DRILLER: Gregg DATE DRILLED: 10/11/02 PAGE 3 OF 5  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 97.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 97'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A



ELEVATION                      NORTHING                      EASTING

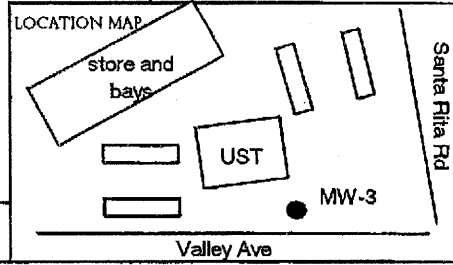
Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
Gravel	Casing		damp	1.7	7	45		CL	Continued
						46			
						47			
						48			
						49			
						50			
						51			
						52			
						53			
						54			
						55			
						56			
						57			
						58			
						59			
						60			
						61			
						62			
						63			
						64			
						65			
						66			
			damp	1.6	21 36 45	54 55	SP	Poorly Graded SAND with Gravel; 60% grey to orange brown medium grained sand, 40% light to dark grey gravel 1/4" to 1/2" diameter	
			damp	1.0	28 38 45	59 60	GP	Poorly Graded GRAVEL with Sand; 60% gravel, 40% coarse sand, very dense	
			damp	3.0	22 29 38	64 65	SW	Well Graded SAND; grey brown, orange and olive brown, 10% gravel	

# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/11/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 97.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 97'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-3  
PAGE 4 OF 5



ELEVATION NORTHING EASTING

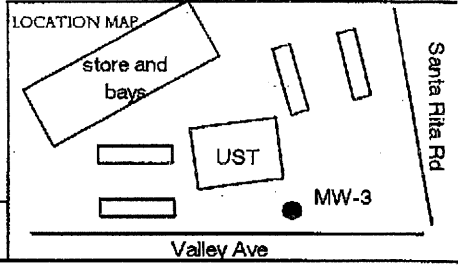
Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill Casing					67		SW	continued
		damp	1.3	20 42 50/5	68 69 70			(trace clay @ 70')
		dry/ damp	1.0	35 41 49	74 75		SP	Poorly Graded SAND with Gravel; orange to grey brown fine grained sand, 15% gravel 1/4" diameter
		moist	1.3	29 34 42	79 80		SP/ GP	Poorly Graded SAND and GRAVEL; light grey to dark grey, and medium brown, 50% medium grained sand, 50% gravel ~1/4" diameter
		moist	0.8	25 28 32	84 85		GW	Well Graded GRAVEL; grey to grey brown, 10% coarse sand, poorly sorted, gravel 1/8 - 1/2" diameter
	▽	wet			86 87 88			





PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/11/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 10"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 97.5'  
 CASING TYPE: PVC WELL DIAMETER: 4"  
 SLOT SIZE: 0.010" WELL DEPTH: 97'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-3  
 PAGE 5 OF 5



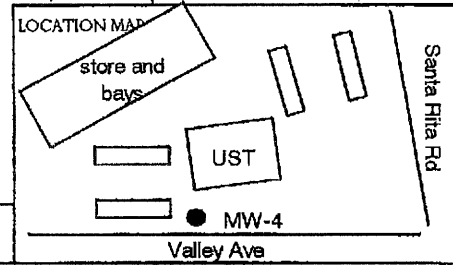
ELEVATION                      NORTHING                      EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
			wet		5	89	GW	continued	
					8	GC			
					12				
					6		ML		
					6				
					10				
					6	ML			
					7				
					9				
					6	ML			
					9				
					13				
					8	ML			
					12				
17									
24	ML								
28									
33									
					98			BOTTOM OF BORING @ 97.5 ft	
					99				
					100				
					101				
					102				
					103				
					104				
					105				
					106				
					107				
					108				
					109				
					110				



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/10/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 95.5'  
 CASING TYPE: PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.010" WELL DEPTH: 95'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-4  
 PAGE 1 OF 5



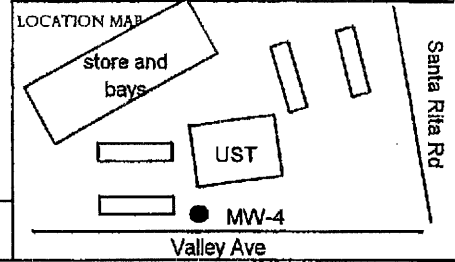
Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
			dry/damp		↑ Air Knifed ↓	1		AF	Asphalt ~6" thick (air knifed to 7' on 10/3/02) Fill ~6" thick
			damp/moist			2		SC	Clayey SAND with Gravel; tan brown, ~20% gravel, ~30% fines, fine to coarse grained sand
						3		CL	Lean CLAY; dark grey, <5% sand, low plasticity
						4			
						5			
						6			
			damp	0.3		7			
						8			(medium brown)
						9		ML	SILT; olive green, medium stiff
						10			
						11			
						12			
			damp	5.3		13			
						14			
						15		CL	Lean CLAY; olive green, distinctive zones of orange brown medium grained sand
						16			
						17			
						18			
			damp	1.2		19			
						20			(FeO mottling)
						21			
						22			





PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasonton, CA  
 DRILLER: Gregg DATE DRILLED: 10/10/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 95.5'  
 CASING TYPE: PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.010" WELL DEPTH: 95'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-4  
 PAGE 2 OF 5



		ELEVATION	NORTHING	EASTING
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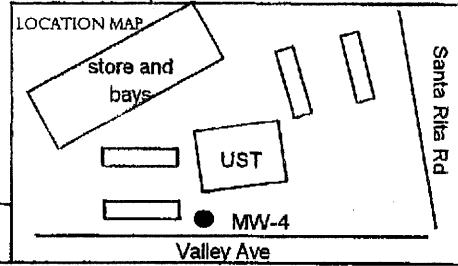
Well Completion		Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing							
		damp	27.6	3 4 7	23 24 25		CL	Continued  (olive green, stiff)
		damp	105	3 5 5	29 30			(orange brown with occasional FeO mottling)
		damp	73.5	2 4 6	34 35			
		damp	655		39 40			
			11.8	5 9	43 44			

# KHM

ENVIRONMENTAL  
MANAGEMENT  
INCORPORATED

PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasonton, CA  
 DRILLER: Gregg DATE DRILLED: 10/10/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 95.5'  
 CASING TYPE: PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.010" WELL DEPTH: 95'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-4  
PAGE 3 OF 5

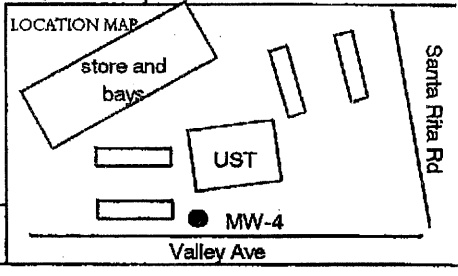


ELEVATION                      NORTHING                      EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
				11.8	11	45		CL	Continued
			damp	10.3	4	46			
					6	47			
					8	48			
						49			(mottled, grey-green)
			damp	1.8	16	50			
					19	51			
					25	52			
						53			
						54			
						55		SP	Poorly Graded SAND with Gravel; brown, 75% medium sand, 25% gravel up to 2" in diameter
			dry/damp	1.0	8	56			
					17	57			
					23	58			(10% gravel, poorly sorted sand, grey, trace of clay)
						59			
						60			
						61			
						62			
			dry/damp	0.1	15	63			
					29	64			(70% sand, 30% gravel up to 1.5" diameter)
					33	65			
						66			



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA BORING/WELL NO: MW-4  
 DRILLER: Gregg DATE DRILLED: 10/10/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 95.5'  
 CASING TYPE: PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.010" WELL DEPTH: 95'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A



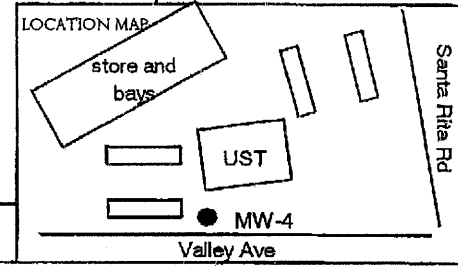
ELEVATION      NORTHING      EASTING

Well Completion		Static Water Level	Moisture Content#	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION			
Backfill	Casing											
			dry/damp	0.1	31 48 50	67		SP	Continued			
						68						
						69						
						70						
						71						
						72						
						73						
						74		SW	Well Graded SAND; medium brown, 90% fine to medium grained, very dense			
						75						
						76						
			dry/damp	0.1	21 34 45	74		SW	Well Graded SAND; medium brown, 90% fine to medium grained, very dense			
						75						
						76						
						77						
						78						
						79		GP	Poorly Graded GRAVEL; medium brown, 90% gravel 1/8" to 1/4" diameter, 10% sand, trace clay, very dense			
						80						
						81						
						82						
						83						
			moist	0.1	15 37 46	84						
						85						
						86						
						wet		23 35 45	87		SW	Well Graded SAND with Gravel; medium brown, 80% sand, 20% gravel,
									88			



PROJECT NO: C81-1801 Santa Rita CLIENT: Shell OPUS  
 LOGGED BY: J. Pearson LOCATION: 1801 Santa Rita Rd, Pleasanton, CA  
 DRILLER: Gregg DATE DRILLED: 10/10/02  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: Split Spoon HOLE DEPTH: 95.5'  
 CASING TYPE: PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.010" WELL DEPTH: 95'  
 GRAVEL PACK: 2-12 CASING STICKUP: N/A

BORING/WELL NO: MW-4  
PAGE 5 OF 5



ELEVATION                      NORTHING                      EASTING

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION	
Backfill	Casing									
Sand			wet		21	89		SP	Poorly Graded SAND; medium brown, fine grained	
					35			GP	Poorly Graded GRAVEL; greyish to reddish brown, ~1/4" diameter, trace 2" diameter, coarse grained sand	
					45	90		SP	Poorly Graded SAND; medium brown, medium grained	
					24			GP	Poorly Graded GRAVEL	
					35	91				
				wet		37				
						21				
						26	92			(gravel 1/8-1/4" diameter, occasionally up to 1/2")
						43				
						22	93			(olive, light brown, greyish to reddish, gravel fairly uniform 1/4" diameter)
				wet		34			GC	Clayey GRAVEL; olive, light brown, greyish to reddish, 30% clay, gravel size coarsening with depth
						43	94			
					35					
					44	95				
						96			<b>BOTTOM OF BORING @ 95.5 ft</b>	
						97				
						98				
						99				
						100				
						101				
						102				
						103				
						104				
						105				
						106				
						107				
						108				
						109				
						110				

# Delta

Environmental  
Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-1A
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/15/2006	Location Map  Please see site map	
Drilling Method:	HSA	Hole Diameter:	12"		
Sampling Method:	Split Spoon	Hole Depth:	57.5'		
Casing Type:	PVC schedule 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	57'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Well Completion		Static Water Level	Elevation			Northing			Easting			LITHOLOGY / DESCRIPTION
Backfill	Casing		Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery	Interval	Soil Type			
Neet Cement									AF	Asphalt (~6" thick)		
						1						
						2					(asphalt layer @ ~2')	
						3						
						4						
			dry	0.1		5			CL	Lean CLAY: dark brown; low plasticity; trace coarse grained sand		
						6						
						7						
						8						
						9			SC	Clayey fine grained SAND: low plasticity; medium brown poorly-graded; trace coarse grained sand; 15-25% clay; loose		
				0.1		10						
						11						
						12						
			damp	0.1		13						
						14			CL	Lean CLAY: dark brown; trace gravels (~4mm); trace coarse grained sand; moderate plasticity; very stiff		
						15						
						16						
						17						
						18						
			dry	0.1		19			CL	Lean CLAY with sand: light brown; low plasticity; 15-25% fine grained sand; soft		
						20						
						21						
					22							

# Delta

Environmental Consultants, Inc.

Project No: SJ18-01S-G Client: Shell Oil Products US  
 Logged By: Heather Buckingham Location: 1801 Santa Rita Rd, Pleasanton  
 Driller: Gregg Drilling Date Drilled: 2/15/2006  
 Drilling Method: HSA Hole Diameter: 12"  
 Sampling Method: Split Spoon Hole Depth: 57.5'  
 Casing Type: PVC schedule 40 Well Diameter: 4"  
 Slot Size: 0.01 Well Depth: 57'  
 Gravel Pack: #2/12 Casing Stickup: --

Well No: MW-1A

Page 2 of 3

Location Map

Please see site map

Well Completion		Static Water Level	Elevation			Northing		Easting		Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing		Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery	Interval			
Neef Cement			dry	0.1	2 3 4	23			CL	Lean CLAY with sand: medium brown; 15-25% fine grain- ed and poorly graded sand; low to moderate plasticity; medium stiff	
						24					
						25					
						26					
			moist dry	0.1	5 10 12	27			SC	Clayey SAND: dark brown; poorly graded and fine grained; 35-45% clay; medium dense	
						28					
						29					
						30					
			damp	0.1	4 6 8	31			CL	Lean CLAY: medium reddish brown; moderate plasticity; ~10% fine grained sand; trace gravels; stiff	
						32					
						33					
						34					
				0.1	4 7 11	35				(very stiff)	
						36					
						37					
						38					
			damp	0.1	4 8 6	39			CL	Lean CLAY with sand: same as above; stiff	
						40					
						41					
						42					
						43					
						44					
						45					

Bentonite

# Delta

**Environmental Consultants, Inc.**

Project No: SJ18-01S-G	Client: Shell Oil Products US	Well No: MW-1A
Logged By: Heather Buckingham	Location: 1801 Santa Rita Rd, Pleasanton	Page 3 of 3
Driller: Gregg Drilling	Date Drilled: 2/15/2006	Location Map  Please see site map
Drilling Method: HSA	Hole Diameter: 12"	
Sampling Method: Split Spoon	Hole Depth: 57.5'	
Casing Type: PVC schedule 40	Well Diameter: 4"	
Slot Size: 0.01	Well Depth: 57'	
Gravel Pack: #2/12	Casing Stickup: --	

Elevation	Northing	Easting
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Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing						Recovery	Interval		
#2/12 Sand		▼	damp	0.1	8 10 11	46			CL	Lean CLAY with Sand (continued)
						47				
						48				
						49				
						50				
						51				
						52				
						53				
						54				
						55				
						56				
			57							
			58							
			59							
			60							
			61							
			62							
			63							
64										
65										
66										
67										
68										
			damp	0.1	7				SP	Poorly graded fine to medium grained SAND: medium brown, traces of coarse grained sand; medium dense
					8					
					9				CL	Lean CLAY: same as above
			damp						SP	Poorly graded fine grained SAND: medium brown
			wet						SW	Well graded SAND with gravel: medium brown; 20-30% gravel (~1/2" diameter)
										Boring terminated at 57.5 feet bg

# Delta

**Environmental Consultants, Inc.**

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-4A
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/16/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	12"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	PVC sch. 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	55'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
Neet Cement			dry	0.1	Air-Knifed	1		AF	Asphalt (~6" thick)
						2		CL	Lean CLAY dark brown; low plasticity; trace coarse grained sand
						3			
						4			
						5			
						6			
						7			
			damp	0.1		8			
						9		SP	Poorly-graded fine grained SAND: brown; 10-15% gravels (~4mm) and coarse-grained sands; medium dense
						10			
						11			
			moist	4.4		12			
						13			
						14		CL	Lean CLAY with sand: brownish grey; low to moderate plasticity; 15-20% fine-grained sand; trace coarse-grained sand; stiff
						15			
						16			
						17			
						18			
						19			
						20		ML	SILT with sand: medium grey; slight plasticity; 10-20% fine grained sand; stiff
						21			
						22			



# Delta

**Environmental Consultants, Inc.**

Project No: SJ18-01S-1	Client: Shell Oil Products US	Well No: MW-4A
Logged By: Heather Buckingham	Location: 1801 Santa Rita Rd, Pleasanton	Page 2 of 3
Driller: Gregg Drilling	Date Drilled: 2/16/2006	Location Map  Please see site map
Drilling Method: HSA	Hole Diameter: 12"	
Sampling Method: Split Spoon	Hole Depth: 55'	
Casing Type: PVC sch. 40	Well Diameter: 4"	
Slot Size: 0.01	Well Depth: 55'	
Gravel Pack: #2/12	Casing Stickup: --	

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
						Recovery	Interval		

Neef Cement	[Scale]	damp	0.1	5 6 7	23			CL	Lean CLAY with sand : (same as above)
					24				
					25				
					26				
					27				
					28				
					29				
					30				
					31				
					32				
Neef Cement	[Scale]	dry	123	3 8 10	33			CL	Lean CLAY: medium brown mottled with grey; moderate plasticity; ~10% fine-grained sand; very stiff
					34				
					35				
					36				
Bentonite	[Scale]	dry	0.1	4 6 8	37			CL	(medium brown)
					38				
					39				
					40				
					41				
#2/12 sand	[Scale]	dry	0.1	5 6 7	42			CL	Sandy Lean CLAY: light brown mottled with grey; low to moderate plasticity; 25-35% fine-grained sand; stiff
					43				
					44				
					45				

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-4A
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 3 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/16/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	12"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	PVC sch. 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	55'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill Casing			0.1	6 12 16	46		CL	<b>Sandy Lean CLAY</b> (continued)
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54		SP	<b>Poorly graded fine-grained SAND:</b> medium brown; very dense
		wet	0.1	25 50/5"	55		GW	<b>Well-graded GRAVEL with silt, clay, and sand:</b> tan; clasts up to 0.5" in diameter; subrounded; 10-15% fines; 20-30% coarse grained sand; very dense
					56			Boring terminated at 55 feet bg.
					57			
					58			
					59			
					60			
					61			
					62			
					63			
					64			
					65			
					66			
					67			
					68			

#2/12 sand

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-5
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13 & 2/14/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	12"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	PVC sch. 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	55'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neel Cement		dry	0.1	Air-Knifed & Hand Augered	1		AF	Asphalt (~ 2-3" thick)
					2		GM	<b>Silty GRAVEL:</b> light brown; 20-30% fine silt; 70-80% gravel mostly 1-2" in diameter (poorly-graded)
					3			
					4			
					5		ML	<b>SILT with sand:</b> medium brown; 10-20% fine grained sand; trace coarse grained sand; 80-90% silt
					6			
					7			
			8					
			9		SM	<b>Silty SAND with gravel:</b> tan; fined grained; 10-20% gravel (poorly-graded); ~4mm; 20-30% fines, 50-70% sand; medium dense		
			10					
			11					
			12					
			13					
			14		CL	<b>Lean CLAY with sand:</b> brown; moderate plasticity; 15-25% fine grained sand; trace coarse grained sand; stiff		
			15					
			16					
			17					
			18					
			19		ML	<b>Sandy SILT:</b> brown; very low plasticity; 30-40% fine grained sand; 60-70% silt; presence of root holes; stiff		
			20					
			21					
			22					

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-5
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13 & 2/14/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	12"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	PVC sch. 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	55'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
			0.1	5 9 10	23 24 25	CL	CL	<b>Sandy Lean CLAY:</b> medium brown; 30-40% fine grained sand; moderate plasticity; very stiff
			0.1	1 2 4	29 30	SC	SC	<b>Clayey SAND:</b> medium brown; 25-35% clay; 65-75% fine grained sand (poorly graded); slight plasticity; loose
		damp	0.1	3 6 10	34 35	CL	CL	<b>Lean CLAY:</b> brown; moderate plasticity; trace gravels; stiff
		dry	0.2	3 7 9	39 40			
			0.1	3 7 11	44 45	CL	CL	<b>Sandy Lean CLAY:</b> same as above

Neef Cement

Bentonite

#2/12 sand

# Delta

**Environmental Consultants, Inc.**

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	MW-5
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 3 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13 & 2/14/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	12"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	PVC sch. 40	Well Diameter:	4"		
Slot Size:	0.01	Well Depth:	55'		
Gravel Pack:	#2/12	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill Casing		dry	0.1	3 9 14	46			Sandy Lean Clay continued
					47			
					48			
					49		CL	Lean CLAY: same as above
					50			
					51			
					52			
					53			
					54		SW	No recovery (53.5 - 55 feet) Well graded sand and gravel: tan
					55			
					56			
					57			Boring terminated at 55 feet bg, hole sampled to 56.5 feet bg.
					58			
					59			
					60			
					61			
					62			
					63			
					64			
					65			
					66			
					67			
					68			

#2/12 sand

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-1
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13/2006	Location Map  Please see site map	
Drilling Method:	HSA	Hole Diameter:	8"		
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	-	Well Diameter:	-		
Slot Size:	-	Well Depth:	-		
Gravel Pack:	-	Casing Stickup:	-		

Elevation	Northing	Easting
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Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
							AF	Asphalt surface (~2-3" thick)
		damp			1			
					2		GP	Poorly graded GRAVEL with clay: dark brown; 75-85% gravels up to 2" diameter; 15-25% clay
					3			
					4			(concrete slab @ 3.5' below grade)
		dry	0.1		5		CL	Lean CLAY: medium to dark brown; low plasticity; trace coarse grained sand
					6			
					7			
					8			
		damp	0.1	6 8 13	9			(very stiff)
					10		SP	Poorly graded fine grained SAND with silt and clay: brown; 10% fines; trace coarse grained sand
					11			
					12			
					13			
		dry	0.1	6 9 15	14		CL	Lean CLAY with sand: medium brown mottled with grey; 20-30% fine grained sand; very stiff
					15			
					16			
					17			
					18			
					19			
			0.1	5 10 15	20			
					21			
					22			

Neet Cement

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-1
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	8"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	--	Well Diameter:	--		
Slot Size:	--	Well Depth:	--		
Gravel Pack:	--	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
					23		CL	Lean CLAY with sand continued
		dry	0.1	9 18 20	24			(hard)
					25			
					26			
					27			
					28			
		damp	0.1	6	29			
			0.1	8 18	30		SP	Poorly graded fine-grained SAND with silt and clay: grey; trace coarse grained sand; 10% fines; medium dense
					31			
					32			
					33			
			0.1	4 7 14	34		CL	Lean CLAY with sand: same as above
					35			
					36			
					37			
					38			
			0.1	6 9 12	39			(no mottling, decreased sand)
					40			
					41			
					42			
					43			
			0.1	6 9 8	44			
					45			

Neet Cement



# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-1
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 3 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/13/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	8"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	--	Well Diameter:	--		
Slot Size:	--	Well Depth:	--		
Gravel Pack:	--	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval		Soil Type	LITHOLOGY / DESCRIPTION		
						Recovery	Interval				
Neet Cement		dry	0.1	4 6 12	46			CL	Lean CLAY with Sand continued		
					47						
					48						
					49						
					50						
					51						
					52						
					53						
					54						
					55						
					56						
					57						
				moist	0.1	4 9 12	54			SP	Poorly graded fine grained SAND with silt and clay: brown; trace coarse grained sand; 10-15% fines; medium dense
							55				
							56				
							57				
							58				
							59				
				60							
				61							
				62							
				63							
				64							
				65							
				66							
				67							
				68							
				Boring terminated at 55 feet below grade							



# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-2
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	2/9/2006	Location Map  Please see site map	
Drilling Method:	Hand Auger	Hole Diameter:	3"		
Sampling Method:	Grab	Hole Depth:	15.5'		
Casing Type:	--	Well Diameter:	--		
Slot Size:	--	Well Depth:	--		
Gravel Pack:	--	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION	
Neet Cement		dry	0.1	Air-Knifed	1		AF	Concrete ~6"	
					2			(cobble @ 2')	
					3		CL	Lean CLAY: dark grey; moderate plasticity; trace fine grained sands	
					4				
					5			(medium brown mottling)	
					6				
		moist damp	0.1	Hand Augered	7				
					8				
					9		ML	SILT with sand: medium tan; 70-80% fines; 20-30% fine grained sand	
					10				
					11				
					12				
			0.1			13		CL	Lean CLAY: medium brown; trace fine grained sand; moderate plasticity
						14			
						15			
						16			Boring terminated at 15.5 feet below grade
						17			
						18			
						19			
						20			
						21			
						22			

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-4
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/15/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	8"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	--	Well Diameter:	--		
Slot Size:	--	Well Depth:	--		
Gravel Pack:	--	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neet Cement		dry	0.1		1		AF	Asphalt
					2			
					3			
					4			
					5			
					6		CL	Lean CLAY: dark grey; low to moderate plasticity; 5-10% fine grained sand
					7			
					8			
					9			
					10		SP	Poorly graded fine grained SAND with silt and clay: medium grey; 10-20% fines
					11			
					12			
					13			
					14		CL	Lean CLAY: medium brown; moderate plasticity
					15			10-15% coarse grained sand; stiff
					16			
					17			
					18		CL	Sandy Lean CLAY: light brown; low plasticity; 35-45% fine grained sand; stiff
					19			
					20			
					21			
					22			

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-4
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/15/2006	Location Map  Please see site map	
Drilling Method:	HSA	Hole Diameter:	8"		
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	-	Well Diameter:	-		
Slot Size:	-	Well Depth:	-		
Gravel Pack:	-	Casing Stickup:	-		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neel Cement		damp	0.1	5 8 12	23		CL	Lean CLAY: medium brown; low to moderate plasticity; 10-15% fine grained sand; very stiff
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			
					41			
					42			
					43			
					44			
					45			
		moist	0.1	4 6 7	44 45		CL	Lean CLAY with sand: medium brown; moderate plasticity 15-25% fine grained sand; stiff

# Delta

Environmental Consultants, Inc.

Project No:	SJ18-01S-1	Client:	Shell Oil Products US	Well No:	B-4
Logged By:	Heather Buckingham	Location:	1801 Santa Rita Rd, Pleasanton	Page 3 of 3	
Driller:	Gregg Drilling	Date Drilled:	2/15/2006	Location Map	
Drilling Method:	HSA	Hole Diameter:	8"	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	55'		
Casing Type:	--	Well Diameter:	--		
Slot Size:	--	Well Depth:	--		
Gravel Pack:	--	Casing Stickup:	--		

Elevation	Northing	Easting
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Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
						Recovery	Interval		
Neet Cement		wet	0.1	4 6 7	46			CL	Lean CLAY with Sand (continued)
					47				
					48				
					49				
					50				
					51				
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
66									
67									
68									
			0.1	20 20 5	54			SW	Well-graded SAND with silt, clay, and gravel: tan; 10-15% fines; medium dense
					55				Boring terminated at 55 feet bg.



# BORING LOG

Client **Shell Oil Products US**  
 Project Number **SJ1801S1X**

Well No.  
**MW-6**

Address:  
**1801 Santa Rita Road**  
**Pleasanton, CA**  
 Logged By: **Sean Gehlke**

Drilling Date(s): **8/13-14/07**  
 Drilling Company: **Test America**  
 Drilling Method: **HSA**  
 Boring Depth (ft): **55**

Boring diameter (in.): **10**  
 Sampling Method: **Split Spoon**  
 Well Depth (ft.): **55**  
 Casing Diameter (in.): **4**

Casing Material: **Sch 40 PVC**  
 Screen Interval: **40-55 feet bgs**  
 Screen slot size: **0.010**  
 Sand Pack: **2/12**

